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SAP CUSTOMER EXPERIENCE OF X COMPANY

ABSTRACT

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As the digital age opens doors for retailers and manufacturers to tap into expansive global markets, it simultaneously intensifies competition and heightens the need for a customer-focused and re-sults-oriented approach. Manufacturers operating within both B2B and B2C frameworks continuously seek the most effective digital strategies to enhance the experience for their consumers. For Company X, the key to customer satisfaction lies in trust-building and comfort provision.

To truly optimize customer experience, Company X must delve deep into understanding its customer base. This involves more than just collecting data; it means uncovering the hidden, nuanced expectations that customers themselves may not openly express. With this comprehensive understanding, Company X is better positioned to offer truly personalized customer service.

The crux of this project is the development of a Customer Experience (CX) system designed specifically to meet Company X's unique needs. This system enables the company to aggregate customer information from various touchpoints, creating a 360-degree view of the customer that encompasses a wide range of data, including online behavior, preferences, concerns, and even unexpressed needs. Additionally, the CX system allows for the personalization of the customer experience, identifying the most opportune moments for proactive customer engagement. By leveraging automated features, the system ensures that interactions are timely and relevant. Furthermore, it facilitates a cross-departmental approach to customer service, ensuring a consistently high level of service quality across all interactions.

Drawing upon the experiential knowledge acquired from the successful deployment of the SAP CX project, this thesis has been thoughtfully crafted. Its analytical focus is intentionally narrowed to delve deeply into two central modules: the "Customer" and the "Member." Given the complexity and vastness of the SAP CX framework, zeroing in on these modules allows for a more profound and insightful exploration. To ensure a comprehensive, systematic, and scholarly presentation, the insights and observations have been articulated in a technical file, encapsulating them in the precise, structured conventions of academic writing.

Key words CX, SAP CX, X company

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1 INTRODUCTION

SAP CX offers specialized applications for sales and customer service, designed to meet the needs of businesses of all sizes, from small companies to large enterprises. Their main objective is to support businesses in effectively managing customer relationships throughout the entire customer journey, encompassing various marketing and sales activities. (Phong 2020.)

Through SAP CX, business gains the ability to centrally manage customer information, including email addresses, phone numbers, transaction history, and income details. Moreover, SAP CX provides features that simplify customer segmentation, enabling them to categorize customers based on factors such as income level, geographic location, and more. (Minh 2023.)

These valuable data insights empower businesses to analyze and create customized business and marketing strategies that align with their specific customer base.

By closely monitoring the customer journey and identifying sales opportunities, SAP CX offers comprehensive visibility into the entire customer purchasing process. This valuable information enhances business' understanding of customers, including their interests, concerns, and the specific products or content they are seeking. (Minh 2023.)

Aligning strategies with the customer journey can significantly enhance conversion rates for businesses.

Additionally, this platform assists businesses in identifying sales opportunities by pinpointing the most promising prospects from the pool of potential customers. By focusing efforts on this target group, businesses can optimize their resources and maximize efficiency, rather than allocating resources to unengaged customers. (Minh 2023.)

The scope of project is about practice, design the main functions of the system which is named Customer and Member. All the customization is based on the requirements of Company X to solve the current problem. The content focuses on the designation, user guide of these functions.

Drawing from my firsthand experiences and insights gained post the deployment of the SAP CX project, this thesis is meticulously crafted. The focus of the investigation and analysis is strategically narrowed down to two central modules: "Customer" and "Member". These modules have been chosen due to their significance within the larger SAP CX framework and the potential they offer for a comprehensive study. To ensure clarity, precision, and adherence to scholarly standards, all observations, findings, and discussions have been documented in a technical file, written with a strong commitment to academic conventions and style.

This thesis consists of two main chapters. The first chapter is Solution which is designed the customer function. The second chapter includes the flow which shows user the flow on X company CX system in customer and member function.

1.1 Scope of project

This document contains full to-be business processes of customer management module. These processes are used to describe the management process of X company in the future is applied for X Company now based on a new solution of SAP system. This document is intended to assist users in operating and functioning on the SAP CX system. This document and CX system use 2 languages: English and Vietnamese.

1.2 Terminology

This is the terminology in all documents used in X's SAP CX.

TABLE 1. The definition of terminology

No.	Terminology	Definition
1	X	X CO., LTD
2	CX	Customer Relationship Management Module
3	Field	Data field to input information
4	KHDN	Accounts

TABLE 1 continues

5	KHTN	Prospect
6	KHCT	Customer
7	Work Center	Business Object
8	Tab	Screen code performs the steps on SAP (Work Center can contain more than one Tab)
9	Viewlist	Data List according to Tab

1.3 Symbol definition

This is symbol definition in the SAP CX flow.

Người thực hiện Implementer	

Thực hiện trên hệ thống
Performed in the system

Dữ liệu
Data

Thực hiện bên ngoài hệ thống
Performed outside the system

Điều kiện rẽ nhánh
Condition to divide

Tham chiếu quy trình khác
Refer to other process

Tài liệu bản cứng
Hard copy of document

Bắt đầu/ Kết thúc
Start/ Finish

Trình tự bước xử lý
Process order

Tham chiếu trên trang
On-page reference

Sự kiện phát sinh chứng từ
Accrued document event

Lưu trữ dữ liệu
Save data

Thực hiện trên hệ thống khác
Performed in other the system

FIGURE 1. The definition of symbols

1.4 Naming convention

Business process code includes five characters: AA and BB. AA: is the letter character, describing the first two letters of the module characters. BB: is the number character from 01 to 99 describing the number of processes in the module.

1.5 Searching data rules

The table provided offers a comprehensive breakdown of various symbols related to search data. Each symbol in the table has a unique meaning and function, facilitating users in their quest to locate specific information efficiently. By understanding and utilizing these symbols, users can optimize their search process, making it more intuitive and user-friendly. Whether you are a novice or a seasoned user, familiarizing yourself with these symbols can significantly enhance your searching experience. This table serves as an invaluable guide, detailing the distinct roles and applications of each search data symbol presented.

TABLE 2. Searching symbol

Symbol	Description
Search	Type in the data you want to search for
	Search by filtering specific information
↑↓	Search information by field
▽	Advanced search

1.6 Data display rules

The table in reference meticulously delineates each data display symbol, shedding light on their respective functions and significance. Every symbol included in this table is crucial for conveying specific kinds of information or guiding users in interpreting the data presented.

TABLE 3. Data-display symbol

Symbol	Description
	View data as a list
	View data in tab format
	View data in map format
	View data in calendar format
TEXT	For the Name part in each data will be entered in capital letters, the rest will be entered in lowercase
DATE	Date format DD.MM.YYYY

2 OVERVIEW

In this section, careful consideration has been given to specifically address the requirements and work-flows of three key departments: Sales, Customer Services, and Marketing. These departments play a pivotal role in shaping the customer journey, and as such, their operational demands are critical. The initial component, master data, is foundational, emphasizing the importance of accurate and comprehensive customer information management. This information serves as the backbone, ensuring all subsequent processes are informed and effective. Following this, the focus shifts to the second pivotal area: the management of customer processes. This component is integral to ensuring that every customer interaction is streamlined, effective, and adds value, thereby strengthening the overall customer relationship. (NGSC 2020.)

2.1 Master data

Master Data in SAP Customer Experience (CX) refers to the foundational data that is essential for the operation and functionality of various modules and features within the SAP CX suite. Unlike transactional data, which changes frequently and pertains to day-to-day operations, Master Data is relatively stable and provides the core information upon which transactions and interactions are based. (Pum 2023.)

2.1.1 Master data management on X SAP CX

In the SAP system, the Master Data Hierarchy of X is intricately structured to support various business operations. At the top of the hierarchy, X company functions as the Company Code, serving as the primary organizational unit. This level is crucial for legal reporting and encapsulates all transactions associated with the company. Under X company, departments related to customer management are coordinated and managed. These departments operate under what is termed as the sales organization in SAP, and authorization for different business roles within this segment is provided by X company. Further down the hierarchy, individual stores are organized by their respective departments and are referred to as sales units in the SAP system. This layered approach enables a seamless flow of information and facilitates better management and reporting across different levels of the organization. The

organization of X company within the SAP system is visually represented in a corresponding diagram that details these hierarchical relationships.

2.1.2 Customer management

In the SAP system used by X, the hierarchy and roles are finely tuned to meet diverse business requirements. Within this framework, the marketing department plays a pivotal role, particularly through its team members who are primarily responsible for managing member data. On the retail side, the CS store takes on the duty of recording customer information and generating accounts or individual customer profiles. Customers themselves are categorized into two main groups: Accounts and Individual Customers. Management of each customer is facilitated by unique identifiers—either an Accounts ID or an Individual Customer ID—which are automatically generated by the SAP system. (SAP Solution Guide for SAP Sales Cloud 2023.)

The customer management strategy extends to categorize customers into two distinct roles: Potential Customers, referred to as Prospects, and Official Customers. A Prospect is someone who has registered via the mobile app, providing basic contact information like mobile number, phone, or email, but has not yet made any purchases or received a Member ID. On the other hand, an official customer is one who has completed all required registration information as per X's guidelines and has been assigned a member ID. (SAP Solution Guide for SAP Sales Cloud 2023.)

Additionally, customers can have two types of IDs: the member ID and the mommy card ID, each serving specific functions within the customer journey. The system also allows for sophisticated data analysis, aimed at discerning vital business insights such as revenue patterns, territorial segmentation, and other key metrics. This comprehensive management and categorization scheme provides X with the flexibility and data integrity required for its operations. (SAP Solution Guide for SAP Sales Cloud 2023.)

In X's SAP system, customer information management is a nuanced process that depends on the type of customer—either accounts or individual customers. Depending on this classification, different sets of fields, both invisible and mandatory, are displayed on the SAP screen to tailor the data collection process. (SAP Solution Guide for SAP Sales Cloud 2023.)

The customer information management itself is divided into various information groups, particularly for individual customers. For these customers, Basic Information is mandatory and includes details such as name, identification card, date of birth, gender, mobile, phone, and the store where they registered. Additional optional fields may include email, address, job, marital status, and the date they registered. (SAP Solution Guide for SAP Sales Cloud 2023.)

Transactional information delves into the financial interactions of the customer, detailing member point transactions, including the date, store, and total member points involved. This category also provides insights into voucher redemption activities, including the total points redeemed, voucher handover date, store, and associated bill. (SAP Solution Guide for SAP Sales Cloud 2023.)

Behavior information offers a more qualitative look into customer activity, capturing metrics like the last visit date, visit frequency, average basket size over time, and ABC classification which is provided by the marketing team. It also includes details about the total transactional amount over specified periods and the stores where shopping occurred. (SAP Solution Guide for SAP Sales Cloud 2023.)

Corporate information is geared toward customers associated with businesses and includes the name of the corporation, the date it was established as per the business license, phone and email contact, business license number, tax number, and address. (SAP Solution Guide for SAP Sales Cloud 2023.)

Finally, contact information provides another layer of personal details such as name, identification card, date of birth, gender, mobile, email, and any attachments that may be necessary for record-keeping. (SAP Solution Guide for SAP Sales Cloud 2023.)

Through this comprehensive, layered approach to customer information management, X's SAP system ensures that data is meticulously categorized and made readily accessible, thereby facilitating more targeted customer engagement and more informed business decisions.

In the SAP Cx system used by X, the process of creating a customer record comes with the generation of a unique identifier, referred to as the customer ID. This customer ID serves as a key point of reference for various types of customers within the system. Specifically, accounts ID is the code assigned to corporate customers, whereas individual customer ID is for personal customers. Additionally, there's a contact ID, which is allocated for the representatives of corporate customers.

Customer ID is designed to have a length of 12 numbers and is automatically incremented in the CX system. This standardized, 12-digit length for customer IDs helps maintain data integrity and ensures that each customer is distinctly identifiable within the system. The automatic incrementation feature eliminates the risk of duplication and eases the data management process. These unique codes are essential for efficiently managing customer relationships, transactions, and analytics within the SAP CX environment.

TABLE 4. ID Number Range

Grouping	Number Range	Internal Assignment in CX
Accounts	100000000000 - 199999999999	X
Individual Customer	200000000000 - 299999999999	X
Contact	300000000000 - 399999999999	X

This table meticulously delineates each field, providing a thorough explanation that encompasses various aspects such as field type and the specific rules that govern each one, ensuring users can navigate and utilize the system with ease and precision. Within each distinct tab and group, the fields play a pivotal role, and understanding their functionalities and limitations is paramount for effective operation. By detailing the field type, users gain insights into the data format and characteristics expected, while the inclusion of field rules assists in clarifying the regulatory framework that oversees data input and management within those fields. Consequently, the table serves not merely as a reference but as a vital guide that enables users to interact with the different tabs and groups within the system efficiently and effectively, ensuring data integrity and adherence to established protocols.

TABLE 5. Detailed customer management on CX

No.	Tab	Group	Field	Field Type	Field Rule
1	Accounts	Corporation Information	Name	Text (40)	Mandatory
			Additional Name		
			Additional Name 2	Text (40)	
				Text (40)	

TABLE 5 continues

2	Accounts	Corporation In-formation	Established Date	Date DD.MM.YYYY	Mandatory
3	Accounts	Corporation In-formation	Phone	Numeric	Mandatory
4	Accounts	Corporation In-formation	Email	Email	Mandatory
5	Accounts	Corporation In-formation	Business Lisence No.	Text (40)	
6	Accounts	Corporation In-formation	Tax Number	Text (40)	
7	Accounts	Corporation In-formation	Address Street Ward District State	Text (240) Text (80) Codelist Codelist Codelist	Mandatory
8	Accounts	Contact Infor-mation	Name	Text (40)	Mandatory
9	Accounts	Contact Infor-mation	Identification Card (1)	Text (40)	
10	Accounts	Contact Infor-mation	Issued Date (1)	Date DD.MM.YYYY	
11	Accounts	Contact Infor-mation	Issued Place Date (1)	Codelist	
12	Accounts	Contact Infor-mation	Identification Card (2)	Text (40)	
13	Accounts	Contact Infor-mation	Issued Date (2)	Date DD.MM.YYYY	
14	Accounts	Contact Infor-mation	Issued Place Date (2)	Codelist	
15	Accounts	Contact Infor-mation	Date of Birth	Date DD.MM.YYYY	

16	Accounts	Contact Infor-mation	Gender	Codelist	

TABLE 5 continues

17	Accounts	Contact Infor-mation	Mobile	Numeric	
18	Accounts	Contact Infor-mation	Email	Email	
19	Accounts	Contact Infor-mation	Attachment	Attachment	
20	Individual Customer	Basic Infor-mation	Name	Text (40)	Mandatory
21	Individual Customer	Basic Infor-mation	Identification Card (1)	Text (40)	Mandatory
22	Individual Customer	Basic Infor-mation	Issued Date (1)	Date DD.MM.YYYY	Mandatory
23	Individual Customer	Basic Infor-mation	Issued Place Date (1)	Codelist	Mandatory
24	Individual Customer	Basic Infor-mation	Identification Card (2)	Text (40)	Mandatory
25	Individual Customer	Basic Infor-mation	Issued Date (2)	Date DD.MM.YYYY	Mandatory
26	Individual Customer	Basic Infor-mation	Issued Place Date (2)	Codelist	Mandatory
27	Individual Customer	Basic Infor-mation	Date of Birth	Date DD.MM.YYYY	Mandatory
28	Individual Customer	Basic Infor-mation	Gender	Codelist	Mandatory
29	Individual Customer	Basic Infor-mation	Mobile	Numeric	Mandatory
30	Individual Customer	Basic Infor-mation	Registered Store	OVS	Mandatory

31	Individual Customer	Additional Information	Email	Email	

TABLE 5 continue

32	Individual Customer	Additional Information	Address Street Ward District State	Text (240) Text (80) Codelist Codelist Codelist	
33	Individual Customer	Additional Information	Job	OVS	
34	Individual Customer	Additional Information	Marial Status	Codelist	
35	Individual Customer	Additional Information	Registered Date	Date DD.MM.YYYY	
36	Individual Customer	Behavior Information	Last Visit	Duration	
37	Individual Customer	Behavior Information	Frequency	Numeric	
38	Individual Customer	Behavior Information	ABC Classification	Codelist	
39	Individual Customer	Behavior Information	Total Transaction Amount	Amount	
40	Individual Customer	Behavior Information	Shopping Store	OVS	
41	Accounts Individual Customer	Transaction Information	Transactional Date	Date DD.MM.YYYY	
42	Accounts Individual Customer	Transaction Information	Transactional Store	OVS	

43	Accounts Individual Customer	Transaction Information	Member Point	Numeric	

TABLE 5 continues

44	KHDN Accounts Individual Customer	Transaction Information	Total Member Point	Numeric	
45	Accounts Individual Customer	Transaction Information	Total Earned Point	Numeric	
46	Accounts Individual Customer	Voucher Redemption	Issued-Voucher Date	Date DD.MM.YYYY	
47	Accounts Individual Customer	Voucher Redemption	Issued-Voucher Date	OVS	
48	Accounts Individual Customer	Voucher Redemption	Voucher Value	Amount	
49	Accounts Individual Customer	Voucher Redemption	Redeemed Point	Numeric	
50	Accounts Individual Customer	Voucher Redemption	Voucher Handover Date	Date DD.MM.YYYY	
51	Accounts Individual Customer	Voucher Redemption	Voucher Handover Store	OVS	
52	Accounts		Voucher	OVS	

	Individual Customer	Voucher Redemption	Voucher Handover Bill		

2.2. Business process

In today's rapidly evolving business landscape, efficient customer management is crucial for any organization's success. SAP CX system provides a robust platform for managing different types of customers effectively. This document aims to guide you through four main processes within the SAP CX environment, each serving a critical role in customer management. (FPT Skilling 2023.)

These processes include: 1) the creation of an individual customer, involving steps from initial data capture on a mobile app to the generation and synchronization of a unique member ID; 2) the editing and status-setting of an individual customer, enabling organizations to keep customer information up-to-date and to define their current engagement level; 3) the process of creating an account customer, aimed at corporate clients and involving its own set of data fields and requirements; and 4) the editing and status-setting for account customers, allowing for real-time updates and status changes. Together, these processes form a comprehensive customer management system, designed for both efficiency and scalability. For a visual overview, please refer to the accompanying flow image and described flow table.

2.1.1   Create Individual Customer process

The process of creating an Individual Customer in the SAP Customer Experience (CX) system involves multiple steps, and these are designed to ensure that customer information is accurately captured, managed, and synchronized across different platforms (SAP Solution Guide for SAP Sales Cloud 2023.) Below is a detailed description of each step in the flow:

1.Enter Customer Information on Mobile App: The first step in the customer onboarding process occurs on the mobile app, where prospective customers enter basic information such as name, email, phone number, and possibly other optional details. This serves as the initial data collection point and usually captures information required to classify someone as a prospect.

2.Enter individual customer Information on CX: Following the initial data entry through the mobile app, this information is then input into the CX system, either automatically or manually, depending on the integration. At this stage, additional fields may be available for data input to convert the prospect into an individual customer'. These could include mandatory fields like identification card, date of birth, and gender, as well as optional fields such as address, job, and marital status.

3.Generate member ID for individual customer: Once all the necessary information has been entered into the CX system, a unique member ID is automatically generated for the individual customer. This 12-digit ID serves as a key identifier for the customer within the system and is used for all future transactions and interactions.

4. Sync member ID to mobile app and POS: The final step involves synchronizing this newly generated member ID with the mobile app and the POS system. This ensures that the customer's activities can be tracked seamlessly across both digital and physical touchpoints. Whether the customer makes a purchase online through the app or in a physical store, the member ID ensures that all transactions and interactions are attributed to the correct individual.

5.This comprehensive process ensures that individual customers are accurately identified, categorized, and managed across various platforms, thus enabling more personalized customer experiences and more effective data analytics.

To provide a clear and visual understanding of the steps involved in creating an individual customer within the SAP CX system, included a detailed flowchart and a corresponding template that outlines each phase of the process.
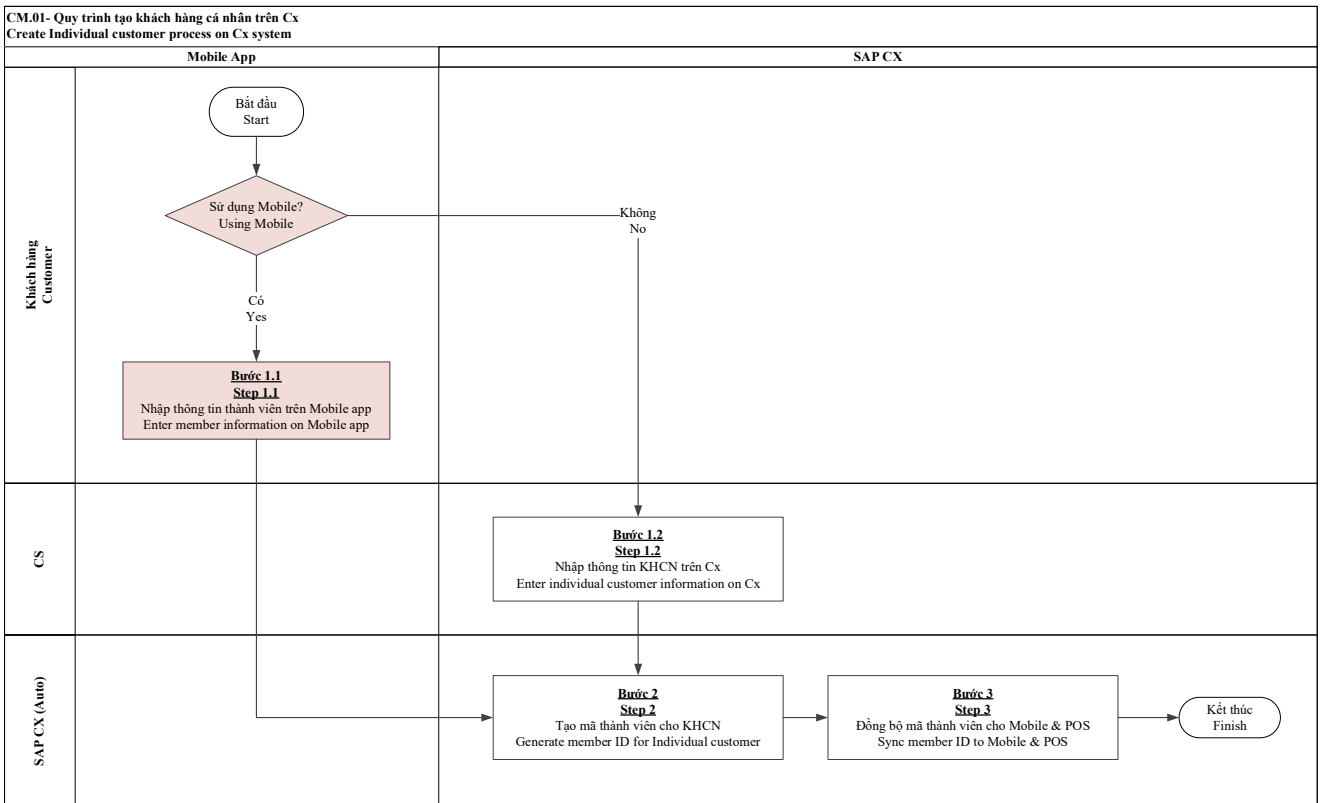
FIGURE 2. Creating Individual Customer flowchart

TABLE 6. Creating individual customer flowchart

Steps of process	Implementer	Description of request	Description of implementation
Step 1.1 – Enter customer information on Mobile app	Customer	Customer data is entered on X Mobile app	***Input:*** The customer information is fully entered on the Mobile app ***Operating on SAP CX:*** X Mobile App receives information and sends it to CX system ***Output:*** Individual customer data is sent to CX System and saved in the CX System

Continues

TABLE 6 continues

Step 1.2 - Enter individual Customer information on SAP CX	CS Department	Customer information is entered on SAP CX	***Input:*** ***Customer's member registration information received by CS*** ***Operating on SAP CX:*** ***CS enters all information of individual customer into the CX System*** ***Output:*** ***Individual customer data is saved***
Step 2 – Generate member ID for Individual customer	CX system (automatic)	Member ID of Individual customer is generated successfully	***Input:*** ***Individual customer data entered by CS on CX system or by Customer on Mobile app*** ***Operating on SAP CX:*** ***CX system automatically generates a member ID according to the generation rules*** ***Output:*** ***Individual customer Member ID is generated***
Step 3 – Sync member ID to Mobile app and POS	CX system (automatic)	Member ID is transferred to Mobile app and POS	***Input:*** Member ID in CX System ***Operating on SAP CX:*** CX system automatically transfers Member ID to Mobile app and POS system and finish process ***Output:*** Member ID is transferred to Mobile app and POS successfully

2.1.2   Edit and set status for individual customer process

The process for editing the details of an Individual Customer within the SAP CX system is meticulously designed to ensure accuracy and synchronization across platforms. Initially, any changes to the customer's details are made within the mobile app, allowing for real-time data capture and user-friendly interaction. Subsequently, these modifications are mirrored in the CX system, wherein individual customer information can be edited to reflect the most recent data. Once these updates are made, the CX system is responsible for refreshing the data of the Individual Customer, ensuring all records are current. To maintain consistency, the newly updated data is then synchronized with both the mobile app and the Point of Sale (POS) system, allowing all touchpoints to have access to the same, accurate information. The final step in this flow involves setting the status for the individual customer, which may vary depending on their engagement level or other organizational criteria. This comprehensive approach ensures seamless data management and enhances the overall customer experience.

For a comprehensive visualization of the process to edit and set the status for an Individual Customer within the SAP CX system, please refer to the accompanying flowchart and its detailed template.
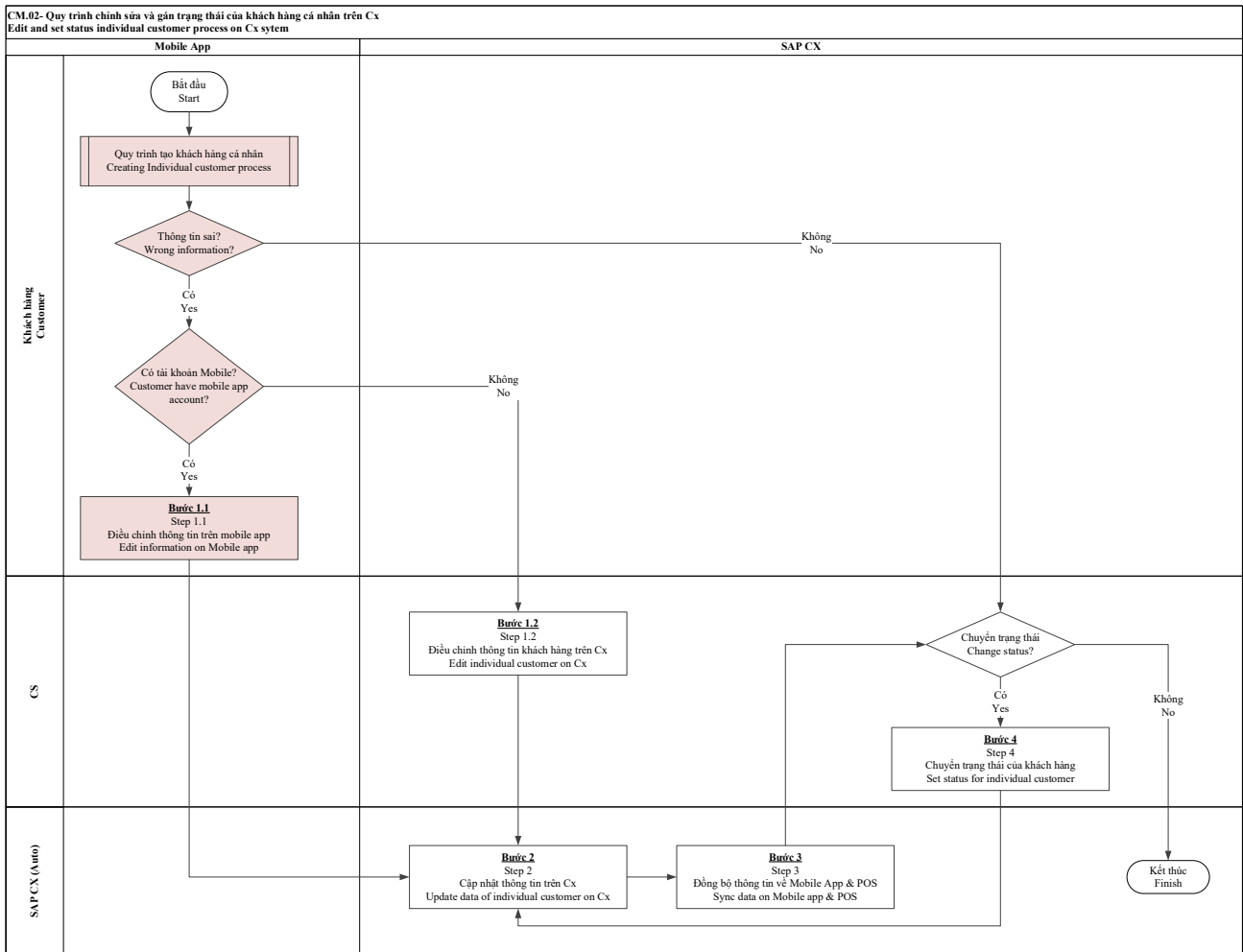
FIGURE 3. Edit and set status for Individual Customer flowchart

TABLE 7. Edit and set status for Individual Customer flowchart

Steps of process	Implementer	Description of request	Description of implementation
Step 1.1 Edit information on Mobile app	Customer	Customer changed data updated on X Mobile app	**_Input:_** Need to be changed Information of customer on mobile app **_Operating on SAP CX:_** X Mobile App receives information and sends it to CX system **_Output:_** Individual customer data is sent to CX System

TABLE 7 continues

Step 1.2 – Edit individual Customer information on CX System	CS Department	Customer information is entered on CX	**Input:** Customer's member need to be changed information received by CS **Operating on SAP CX:** CS edit information of individual customer into the CX System **Output:** Individual customer data is edited
Step 2 – Update data of Individual customer in CX system	CX system (automatic)	Changed data of Individual customer is updated successfully	**Input:** Saved Individual customer data **Operating on SAP CX:** CX system automatically updates information of individual customer **Output:** Individual customer data is updated
Step 3 - Sync data to Mobile app and POS	CX system (automatic)	Changed information is transferred to Mobile app and POS	**Input:** Changed data in CX System **Operating on SAP CX:** CX system automatically transfers changed data to Mobile app and POS system. If CS need to update status of individual customer, move to step 4 If CS don't need to update status of individual customer, finish the process **Output:** Changed data is transferred to Mobile app and POS successfully

Continues

TABLE 7 continues

Step 4 – Set status for individual customer	CS Department	Set status of individual customer successfully	***Input:*** Status updates infomation from operation activities ***Operating on SAP CX:*** CS changes status of individual customer on CX System ***Output:*** Status of individual customer is updated in CX System

2.1.3 Create accounts process

The procedure for creating Accounts in the SAP CX system is tailored to meet the specific needs of corporate or organizational clients. The process initiates with the entry of preliminary customer information through a mobile app, serving as the first point of data collection. Following this, more comprehensive and specialized Account information is then entered directly into the CX system. This could include business-specific details such as Tax ID, Business License Number, and corporate contact information. After these required fields are filled, the system automatically generates a unique Member ID for the Account, serving as the primary identifier for all future transactions and interactions. To ensure data coherence across various platforms, this Member ID is then synchronized with both the mobile app and the Point of Sale (POS) system. This meticulous approach ensures that account information is consistently up-to-date, easily accessible, and aligned across all platforms, thus facilitating smoother transactions and better data analytics.

CM.03- Quy trình tạo khách hàng doanh nghiệp trên Cx
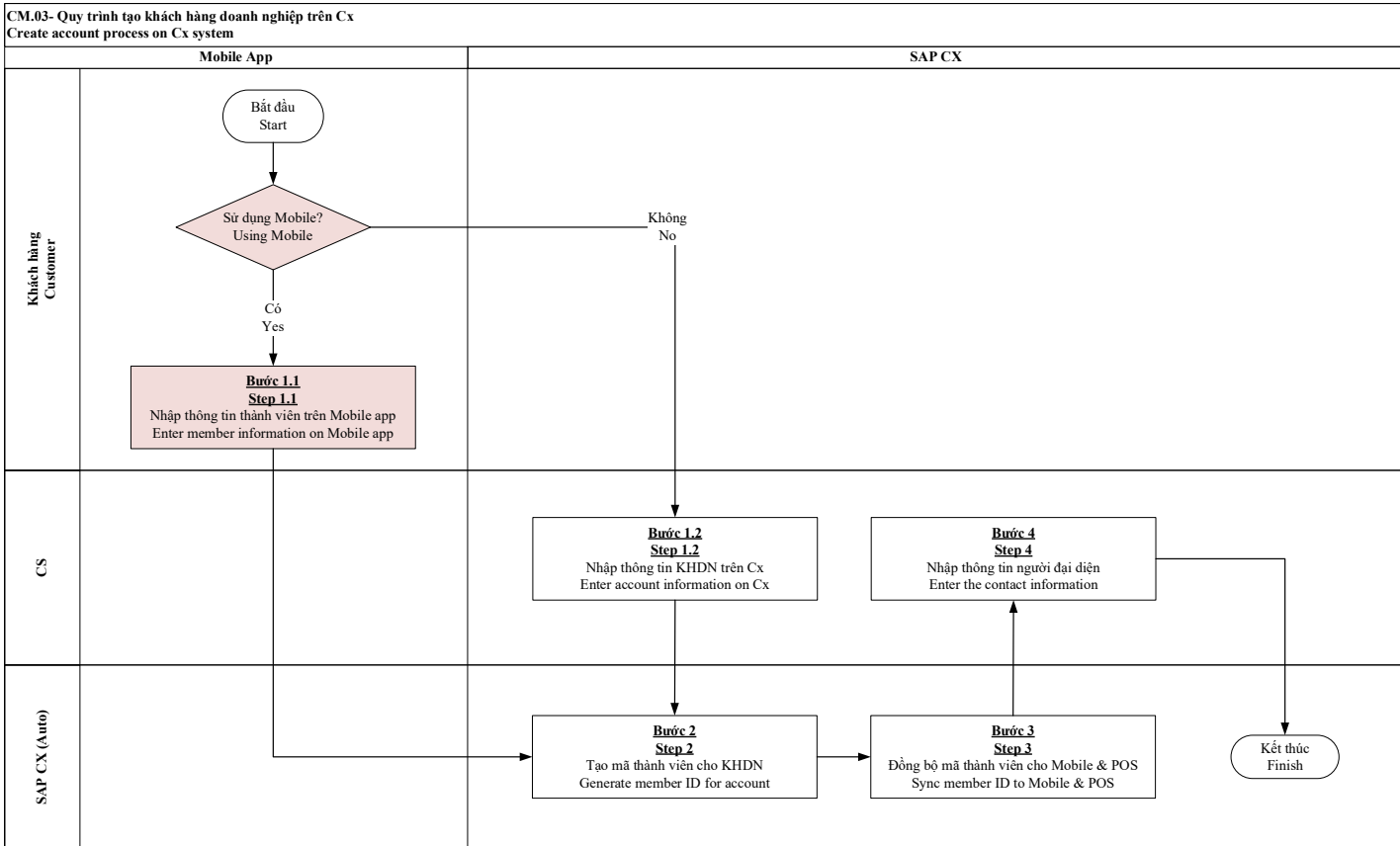**Create account process on Cx system**

FIGURE 4. Create Account on CX process

For a systematic understanding of the "Create an Account" procedure within the SAP CX system, please refer to the accompanying flowchart and its corresponding detailed template.

TABLE 8. Create Account on CX process

Steps of process	Implementer	Description of request	Description of implementation
Step 1.1 – Enter customer information on Mobile app	Customer	Customer data is entered on X Mobile app	*Input:* The customer information is fully entered on the Mobile app *Operating on SAP CX:* X Mobile App receives information and sends it to CX system *Output:* Accounts data is sent to CX System and saved in the CX System

TABLE 8 continues

Step 1.2 - Enter Accounts information on SAP CX	CS Department	Customer information is entered on SAP CX	**_Input:_** Customer's member registration information received by CS **_Operating on SAP CX:_** CS enters all information of Accounts into the CX System **_Output:_** Accounts data is saved
Step 2 – Generate member ID for Accounts	CX system (automatic)	Member ID of Accounts is generated successfully	**_Input:_** Accounts data entered by CS on CX system or by Customer on Mobile app **_Operating on SAP CX:_** CX system automatically generates a member ID according to the generation rules **_Output:_** Accounts Member ID is generated
Step 3 - Sync member ID to Mobile app and POS	CX system (automatic)	Member ID is transferred to Mobile app and POS	**_Input:_** Member ID in CX System **_Operating on SAP CX:_** CX system automatically transfers Member ID to Mobile app and POS system and finish process **_Output:_** Member ID is transferred to Mobile app and POS successfully
Step 4 – Enter the Contact information	CS Department	Add contact information successfully	**_Input:_** Information of contact **_Operating on SAP CX:_** CS enters all information of contact into the CX System

			Output:
			Contact data is saved

2.1.4 Edit and set status for Accounts process

In the context of maintaining optimal customer relationship management, it is imperative to have a streamlined and robust process for editing account information. Our SAP CX system offers a systematic workflow designed to ensure data accuracy, operational efficiency, and seamless synchronization across various customer touchpoints. This document delineates the methodical steps involved in editing Accounts within the CX system. The operational flow comprises five critical steps: initiating edits through the mobile app, refining Account and Contact details in the CX system, updating these changes to ensure data accuracy, synchronizing the revised data with mobile applications and Point of Sale (POS) systems, and, finally, setting the status for the Accounts to align with organizational objectives. This structured approach not only ensures data integrity but also positions the organization for more effective customer engagement and analytics-driven decision-making.

For a detailed overview of how to edit and set the status of an Account in the SAP CX system, consult the flowchart and its corresponding template provided.

CM.04 - Quy trình chỉnh sửa và gán trạng thái của khách hàng doanh nghiệp trên Cx
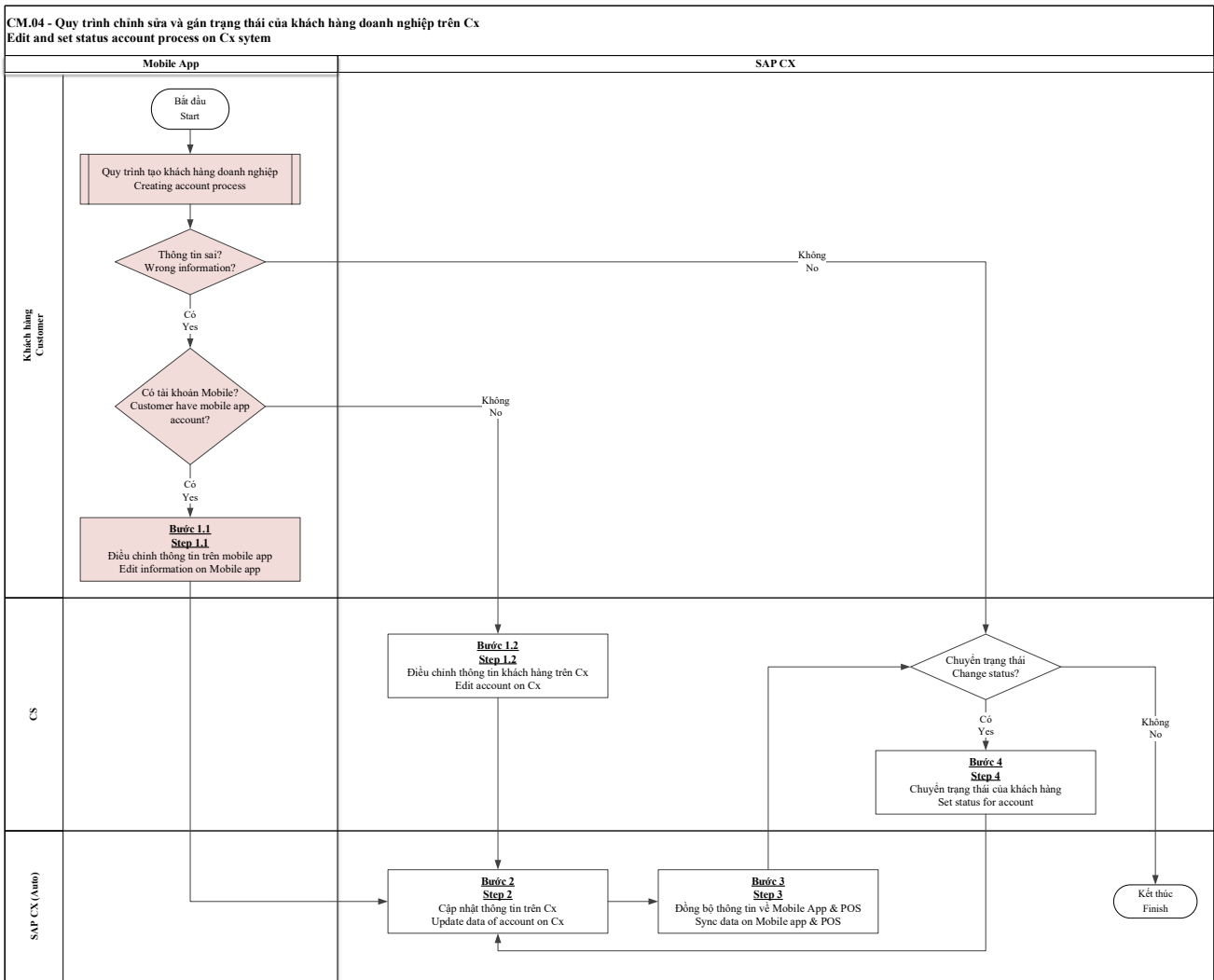**Edit and set status account process on Cx sytem**

FIGURE 4. Edit and set status for Account on CX

For a detailed overview of how to edit and set the status of an Account in the SAP CX system, consult the flowchart and its corresponding template provided.

TABLE 9. Edit and set status for Account on CX

Steps of process	Imple-menter	Description of request	Description of implementation
Step 1.1 **Edit infor-mation on Mobile app**	Customer	Customer changed data updated on X Mobile app	***Input:*** Need to be changed Information of customer on mobile app ***Operating on SAP CX*** X Mobile App receives information and sends it to CX system

TABLE 9 continues

Step 1.2 – Edit Accounts information and contact information on CX System	CS Department	Customer information is entered on CX	***Input:*** Customer's need to be changed information received by CS ***Operating on SAP CX*** CS edit Accounts and contact into the CX System ***Output:*** Accounts data and contact information is edited
Step 2 – Edit Accounts information and Contact information on CX System	CX system (automatic)	Changed data of Accounts and Contact is updated successfully	***Input:*** Saved Accounts and contact data ***Operating on SAP CX*** CX system automatically update information of Accounts and contact ***Output:*** Accounts and contact data is updated
Step 3 - Sync data to Mobile app and POS	CX system (automatic)	Changed information is transferred to Mobile app and POS	***Input:*** Changed data in CX System ***Operating on SAP CX*** CX system automatically transfers changed data to Mobile app and POS system. If CS need to update status of Accounts, move to step 4 If CS don't need to update status of Accounts, finish the process*:* ***Output:*** Changed data is transferred to Mobile app and POS successfully

TABLE 9 continues

Step 4 – Set status for Accounts	CS Department	Set status of Accounts successfully	**_Input:_** Status update infomation from operation activities **_Operating on SAP CX_** CS changes status of Accounts on CX System **_Output:_** Status of Accounts is updated in CX System

3 USER FLOW ON SAP CX SYSTEM

In the SAP CX framework, this section provides an intricate breakdown of the system's process. Users are guided meticulously through two primary entities: the customer, which encompasses the account, individual customer, and contact associated with that account, and the member, which includes both the X member and the kids club member categories. The overarching intent of this section is to elucidate the various interfaces, from search displays and data tracking visuals to platforms designed for data creation and modification.

3.1 Purpose (customer accounts)

Within the parameters of this proficiency, a customer cccounts is explicitly defined as a business Customer. Our emphasis in this section is placed squarely on specific operational tasks pivotal to the management and servicing of these business customers. These tasks encompass the creation of Accounts, meticulous editing of Account information, and the establishment and monitoring of customer-service operations. Additionally, the process entails the recording and management of Member Information to ensure comprehensive and updated data. Together, these concrete operations form the bedrock of effective business customer management within our system. (SAP Solution Guide for SAP Sales Cloud 2023.)

The workflow in our system is designed to optimize customer management, encapsulated by five main focal points that delineate the entire operational flow. Firstly, the tracking customer list serves as a dynamic repository, capturing vital data on customer interactions, account changes, and other essential metrics. This list forms the basis for subsequent actions and is invaluable for analytical and reporting purposes. Secondly, the "Searching for Customer Information" function enables users to quickly locate and retrieve customer data, thereby facilitating timely decision-making and customer engagement. Thirdly, the "Create Customer" step allows for the initialization of new customer profiles, whether they are individual clients or business accounts, ensuring all requisite information is captured at the onset. The fourth point, "Editing Accounts," provides the capability to update existing customer information to reflect any changes or to add new details as they become available. Finally, "Creating the Contact in Customer Accounts" enables the addition of multiple contact points within a single business

account, allowing for more nuanced and targeted communication strategies. Together, these five main points make up the framework for a comprehensive and effective customer management process.

In our customer management system, following a step-by-step approach ensures efficient tracking and data retrieval. Initially, users should navigate to the 'Customers' section and then select 'Accounts' to access the complete list of existing accounts. Once in this view, step two involves a quick tracking feature: simply move your cursor to the 'Name of Accounts' and click to open the customer's detailed interface. Within this interface, users have the option to mark the account as a 'Flag' or 'Favorite' for easier future tracking. Finally, step three provides a consolidated tracking mechanism for all flagged or favorited data. To monitor this data, head to 'Productivity' located in the system's header. By doing so, users can keep tabs on all their priority accounts and data in a streamlined and efficient manner.
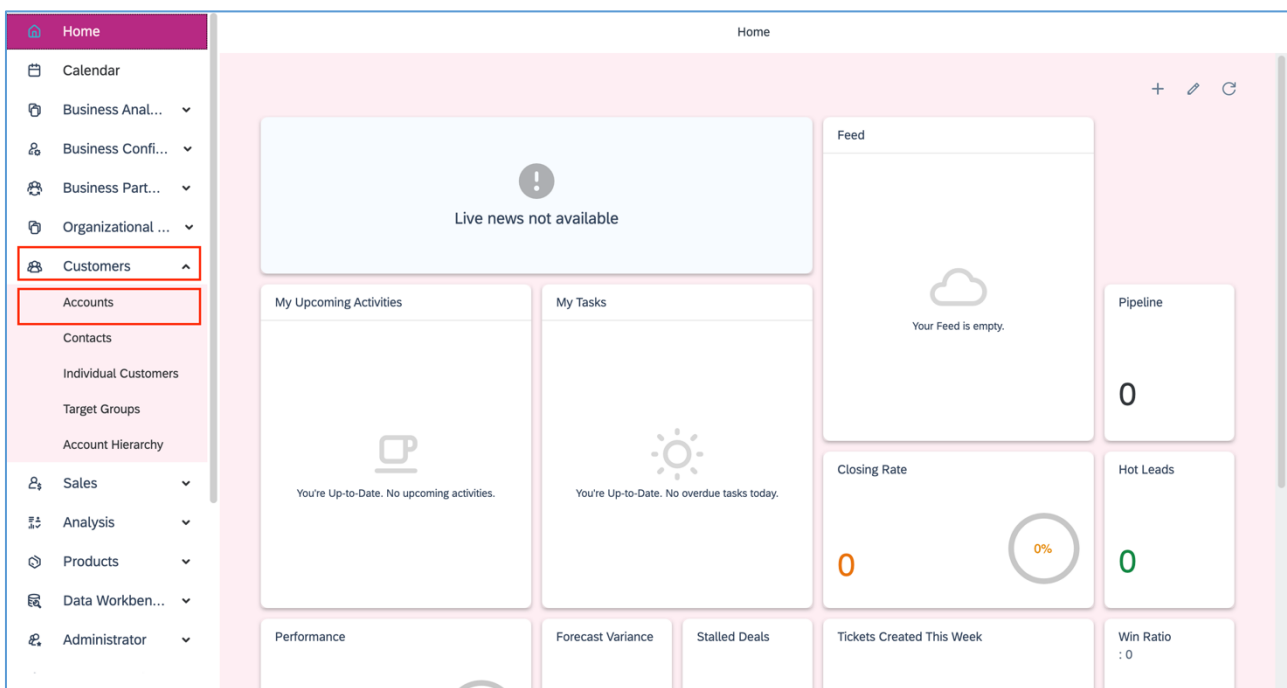
PICTURE 1. Step 1 of tracking customer list process
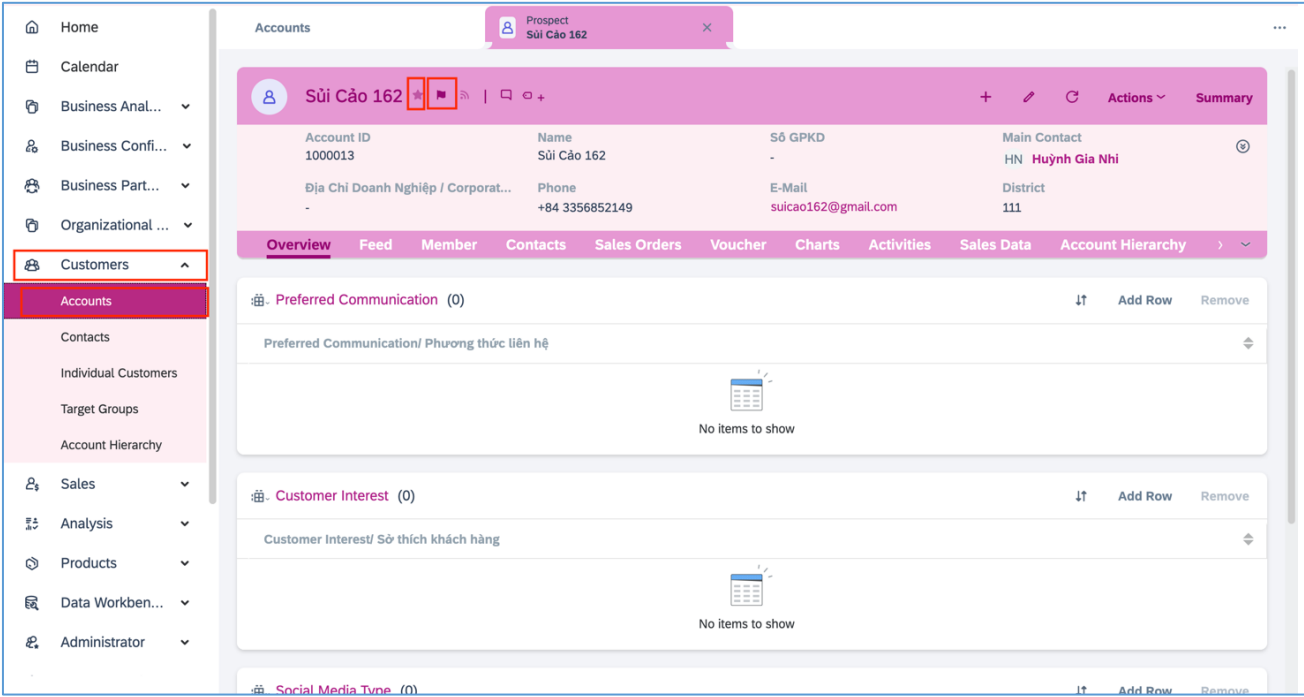
PICTURE 2. Step 2 of tracking customer list process
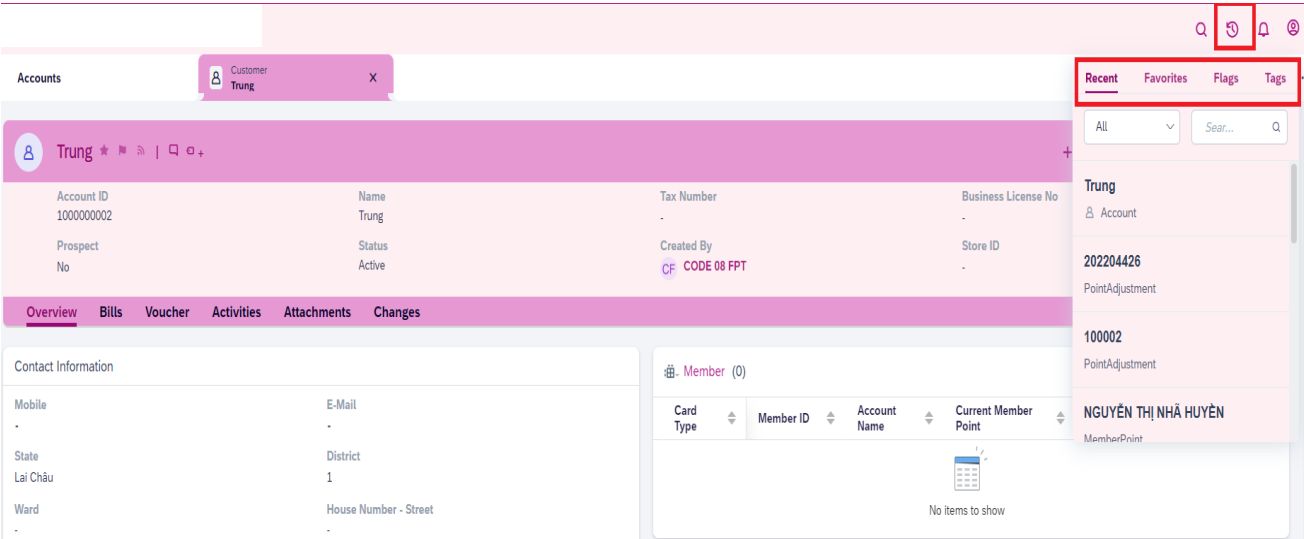
PICTURE 3. Step 3 of tracking customer list process

Navigating the customer management system is streamlined with a sequence of steps designed for optimal user experience. Starting with Step 1, by clicking on 'Customers' and then 'Accounts', users can access a comprehensive list of all existing accounts. Moving to Step 2, for those needing to retrieve basic information such as the customer's code (Accounts ID) or name (Accounts), there is a designated 'Search' symbol available. By clicking this icon, users can easily initiate a basic search. However, for more specific queries, Step 3 introduces a nuanced approach. By utilizing the 'Filter' symbol, users can refine their searches based on particular fields. Once the desired field is selected and the requisite information is entered, simply click 'Go' to initiate the search. For more advanced filtering:

If users wish to incorporate multiple values within one field, they should click on the respective field. This action prompts the system to display a table of potential values. Within this table, the 'Include' section allows users to enter and thus incorporate various values in their search.

Conversely, if the aim is to exclude specific values from the search, the same method applies. Click on the desired field to reveal the table of values, and then navigate to the 'Exclude' section to input the values one wishes to eliminate from the search results.

This systematic approach ensures users can efficiently access and manipulate the data to suit their specific requirements.
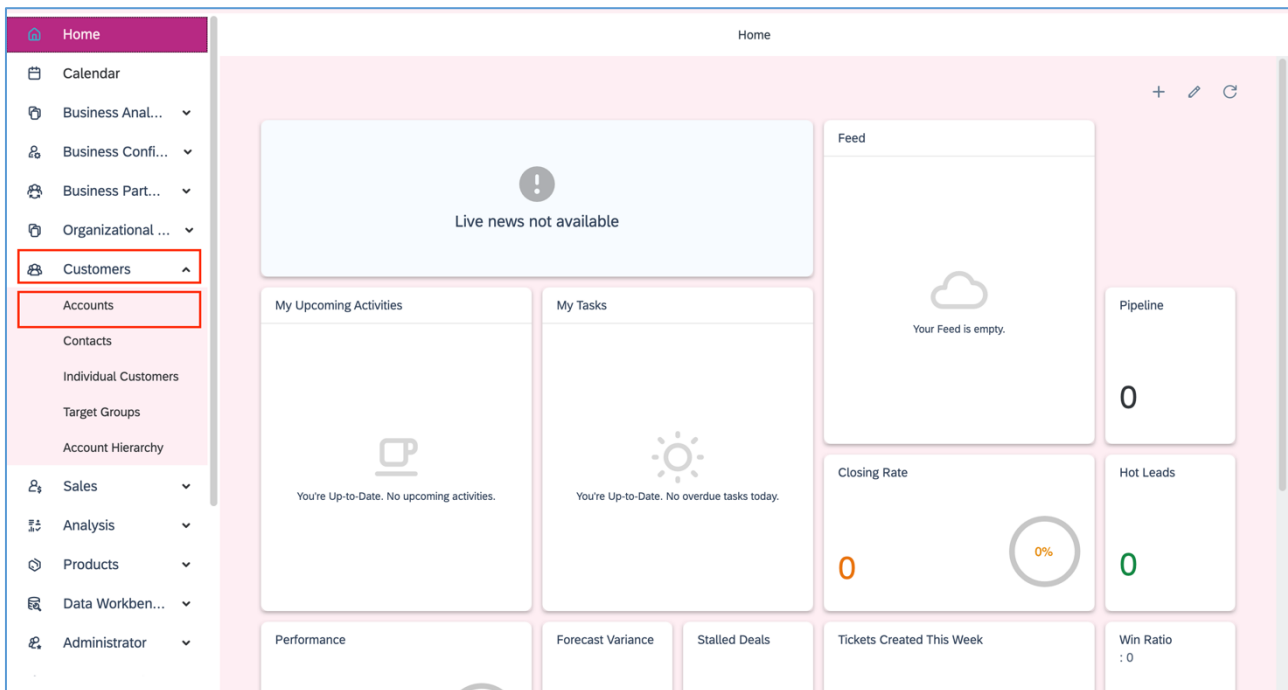
PICTURE 4. Step 1 of searching customer information process

PICTURE 5. Step 2 of searching customer information process

PICTURE 6. Step 3 of searching customer information process

In our customer management system, adding a new business customer account is a simple yet structured process. For Step 1, navigate to the 'Customers' menu and from there, go to 'Accounts'. Once in the Accounts section, click on the '+' symbol to commence the creation of a new Business Customer account. This takes you to Step 2, where you will be prompted to enter various details specific to the

Business Customer. It's imperative to fill in all mandatory fields at this stage to ensure the completeness and accuracy of the account information. By adhering to this two-step procedure, users can efficiently and reliably add new business customer accounts to the system.

PICTURE 7. Step 1 of creating customer

PICTURE 8. Step 2 of creating customer

For Business Customers, users are required to fill out a specific set of fields that capture essential information about the business entity, such as its name, registration number, contact details, and other relevant data.

TABLE 10. The fields of creating customer process

No.	Field name	Field content
1	Prospect	User will tick if the customer need to create is the prospect.
2	Store	User chooses the registered store.
3	Name	User will enter business customer name.
4	Additional Name	User enters the additional name when the name field is not enough space.
5	Established Date	User will enter established date of business.
6	Business License No.	User enter the business license no.
7	Tax Number	User enter tax number of business customer.
8	Owner	System automatically shows creator's Accounts.
9	Mobile	User enter mobile number of business customer.
10	Email	User enter email of business customer.
11	Nationality	System automatically set default is VN – Vietnam.
12	State	User chooses state address of business.
13	District	User chooses district address of business.
14	Ward	User chooses ward address of business.
15	House Number – Street	User enter house number and street of business customer.
16	All	User chooses if customer want to receive news by all.
17	SMS	User chooses if customer want to receive news by SMS.
18	Email	User chooses if customer want to receive news by Email.
19	Maller	User chooses if customer want to receive news by Maller.

Navigating through the customer management system for account modifications is both user-friendly and efficient when following these steps. Initially, step 1 involves locating the desired account through either a basic 'Search' function or utilizing the 'Advanced Filter' for more refined results. Once you've identified the correct account, proceed to step 2 and click on the account's name to access its detailed information. Step 3 allows for account modifications: click on 'Edit' and proceed to update or change any necessary fields found in the Header section. After making all required adjustments, finalize the
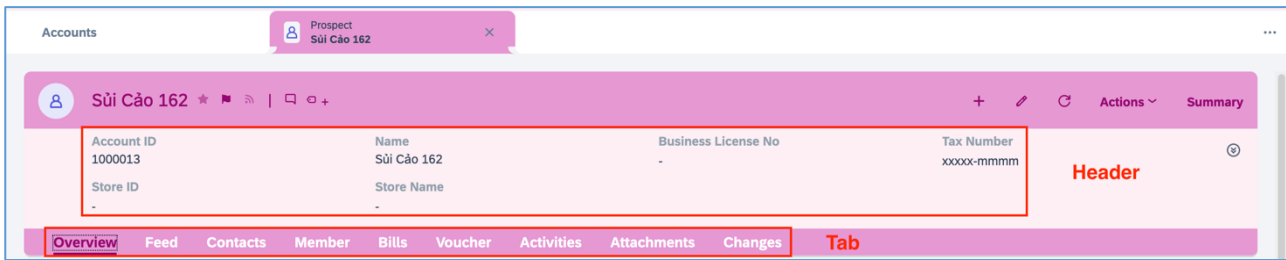
process in step 4 by clicking 'Save.' This four-step process ensures that users can effectively locate, re-view, and modify account information with minimal effort.
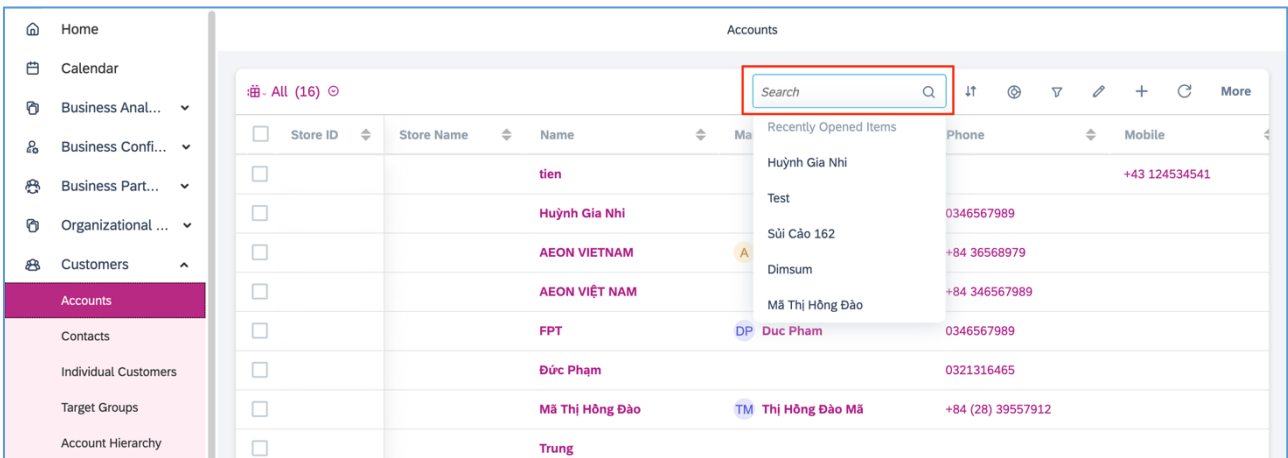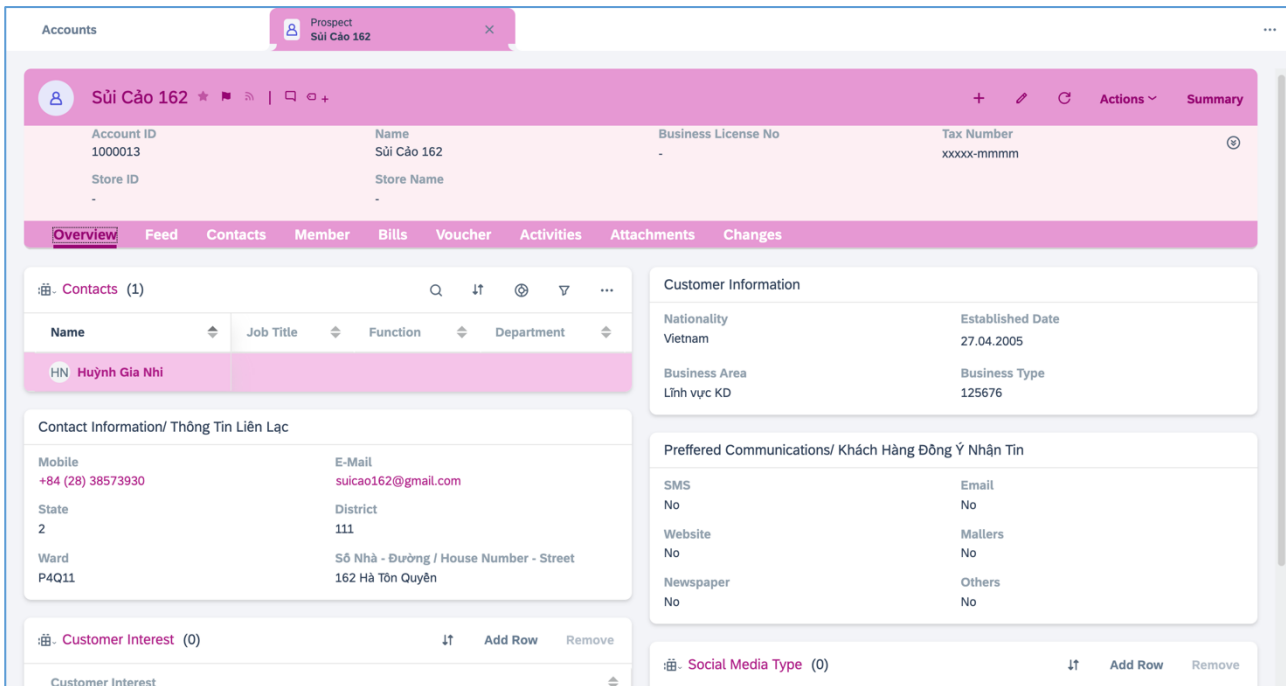

PICTURE 9. Step 1 of editing accounts process
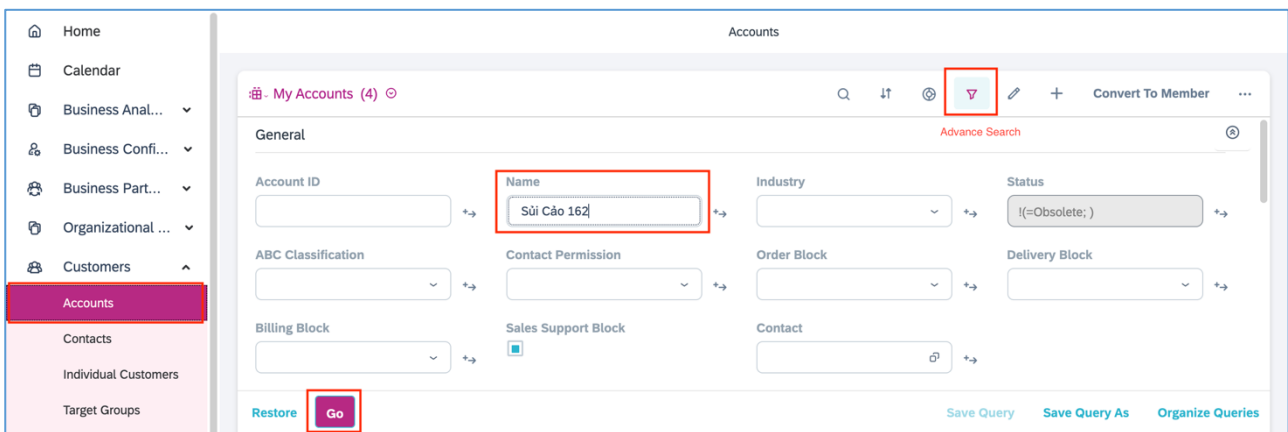
PICTURE 10. Step 2 of editing accounts process

PICTURE 11. Step 3 of editing accounts process

PICTURE 12. Step 4 of editing account process

Accessing and adding new contact information in the customer management system is a streamlined four-step process. Start by navigating to the 'Customer' section and from there, proceed to 'Accounts' as indicated in step 1.

This will provide you with a list of all existing accounts. For step 2, click on the particular account for which you wish to add a new contact. This will open up more detailed information about the selected account. step 3 directs you to the 'Contacts' tab where you can view a list of all existing contacts associated with that account.

Finally, in step 4, you can create a new contact by clicking the "New" button, allowing you to input all the necessary information for the new individual. This four-step process makes it simple and efficient to not only access but also augment the contact information for any given account.

PICTURE 13. Step 1 of creating the contact in Accounts process

PICTURE 14. Step 2 of creating the contact in Accounts process

Users are required to complete these specific fields to ensure that all essential information is accurately captured in the system and then click Save.

TABLE 11. The fields of creating the contact in Accounts process

| No.	Field name	Field content
1	Contact Name	User enter full name of responsibility contact for Accounts.
2	Date of Birth	User chooses date of birth of responsibility contact for Accounts.
3	Gender	User chooses gender of responsibility contact for Accounts.
8	Owner	System will automatically show creator's Accounts.
9	Mobile	User enter responsibility contact 's mobile number.
10	Email	User enter responsibility contact 's email.
11	Nationality	System automatically set default is VN – Vietnam.
12	State	User chooses state address of Contact.
13	District	User chooses district address of Contact

3.2 Purpose (Individual Customer)

In this context, the term customer specifically refers to an individual customer, distinguishing it from other types such as business or corporate customers. This section is concentrated on providing detailed procedures for a variety of operations concerning the individual customer. These operations include creating a new individual customer in the system, editing existing information of an individual customer, and tracking interactions through customer-service operations. Additionally, this part of the documentation will also cover how to create customer requests, which could range from service inquiries to product orders. The focus here is on providing a comprehensive guide for managing all aspects related to individual customers, from their initial creation to ongoing relationship management. (SAP Solution Guide for SAP Sales Cloud 2023.)

This comprehensive guide aims to cover four key aspects crucial to effective customer management in today's competitive business environment. First, "=tracking customer list serves as the foundational step, offering users the ability to monitor and maintain an organized list of individual customers. This is vital for a holistic understanding of your customer base and for targeted communications. Second, searching customer information focuses on the ability to retrieve specific data points swiftly and accurately about individual customers, be it their purchase history, contact information, or other relevant details. This is crucial for personalized customer interactions and informed decision-making. The third point, creating individual customer elaborates on the procedural steps for adding a new customer to the database. This involves capturing all mandatory fields and specifics that tailor the customer experience from the get-go. Finally, editing individual customer addresses the ongoing need for updating and correcting customer details, whether it's a change in contact information or a modification in their preferences. Together, these four components form the backbone of effective and efficient customer management.
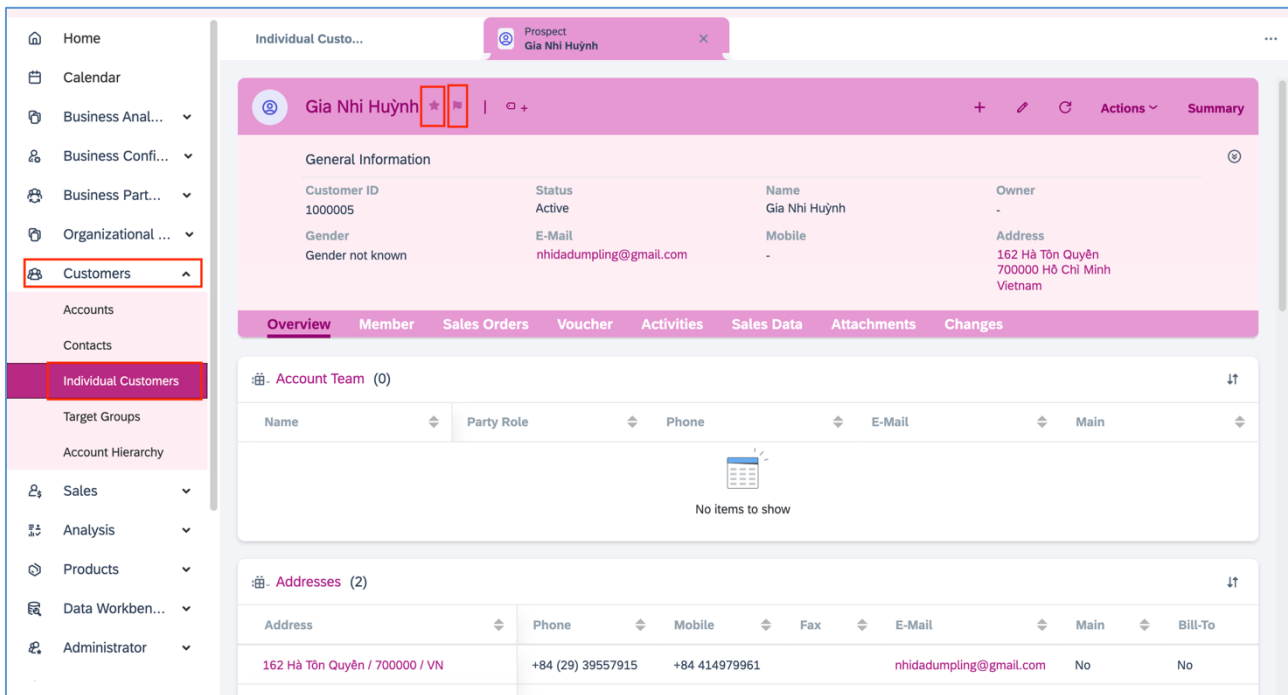
The process of tracking an individual customer list is designed to be both straightforward and efficient, ensuring that users can quickly access important customer data when needed. Start by navigating to the customers section and then select individual customers, as outlined in Step 1. This will display a comprehensive list of all individual customers. In Step 2, to flag a customer for quick future reference, simply move your cursor to the name of the desired individual customer and click. This action will bring up a more detailed information display for that customer.

At this point, users can append a flag or mark the customer as a favorite for easy tracking later on. Finally, in Step 3, to keep tabs on all flagged or favorited data, users can head to the productivity' section located in the header.
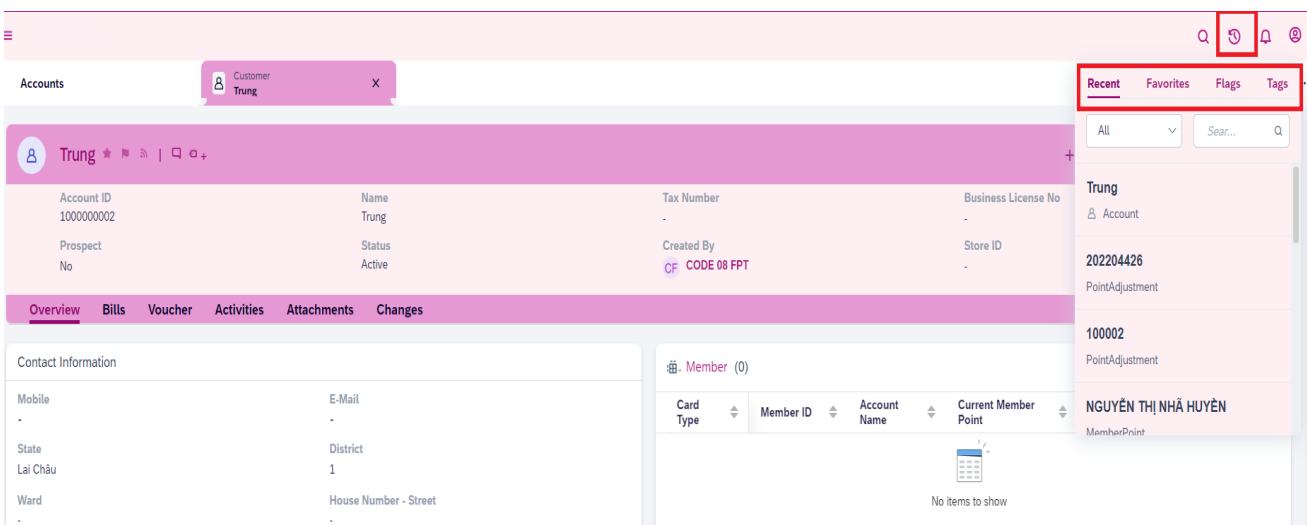
This systematic approach ensures that customer tracking is not just manageable but also organized, thereby aiding in efficient customer relationship management.
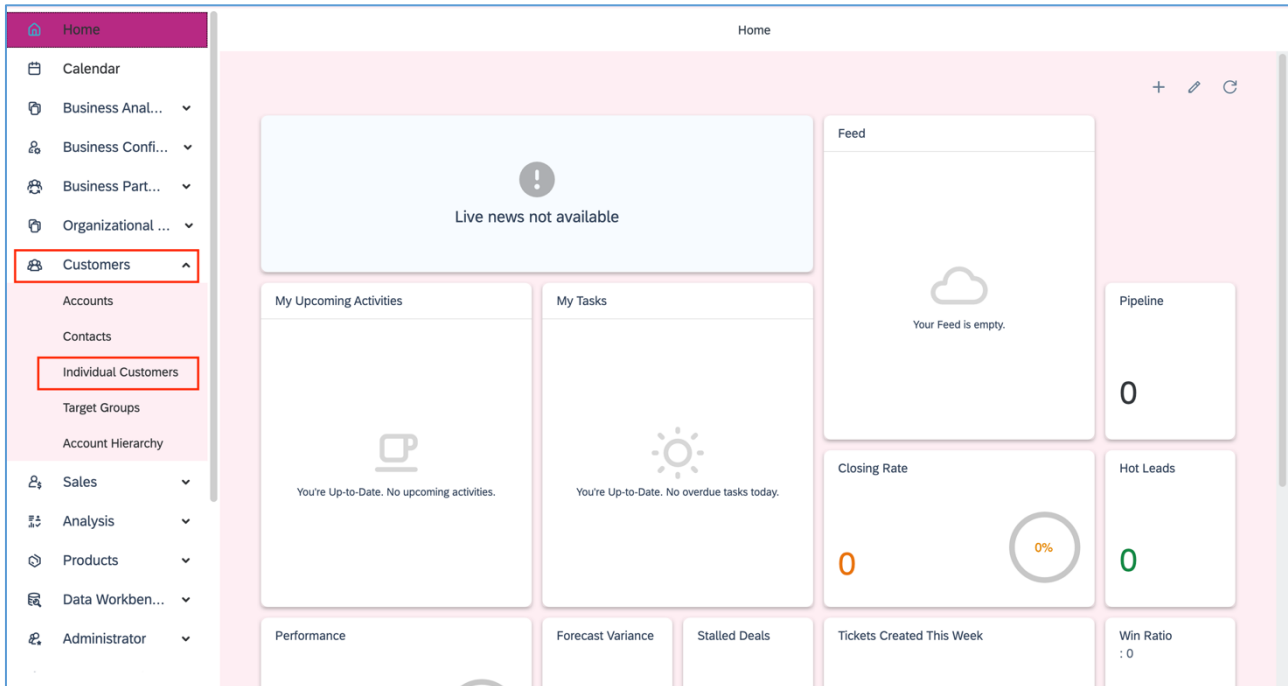
PICTURE 15. Step 1 of tracking individual customer process

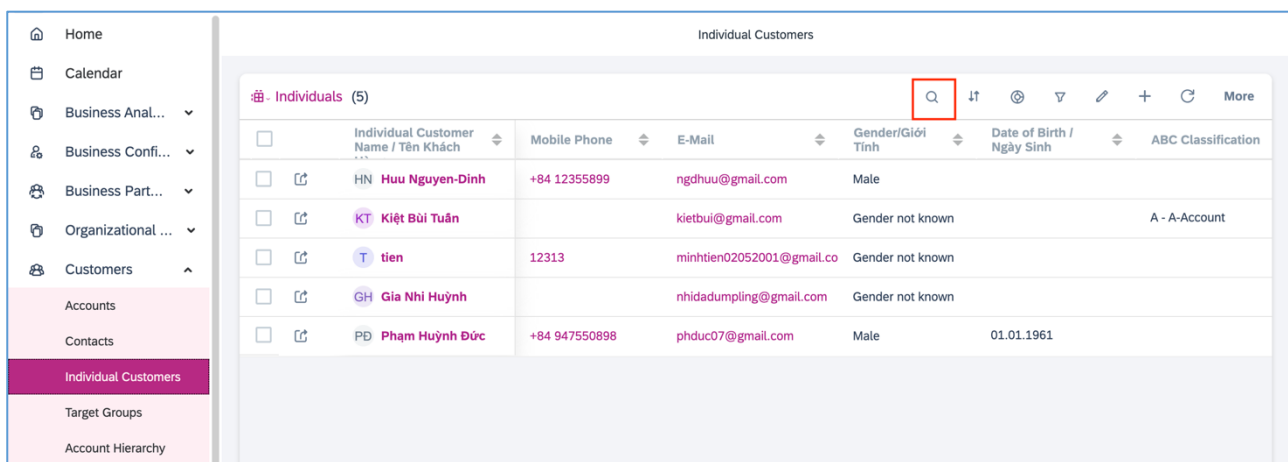PICTURE 16. Step 2 of tracking individual customer process

PICTURE 17. Step 3 of tracking individual customer process

Searching for individual customer information is made simple and customizable through a step-by-step process. To begin, users should navigate to the 'Customers' section and then select 'Individual Customers', as stated in Step 1. This leads to a list of all individual customers in the system.

In Step 2, for a quick search based on basic criteria such as the customer's unique ID or name, users can click on the 'Search' icon to easily locate the needed information. For a more nuanced search based on specific criteria, Step 3 outlines the use of the 'Filter' option. Upon clicking 'Filter', users will be

able to enter the content they wish to search for in the relevant field and then click 'Go.' For more complex filtering options, users have two additional choices. If a user wants to include multiple values within a single search field, they can click on the icon behind the field( ) that needs to be filtered.
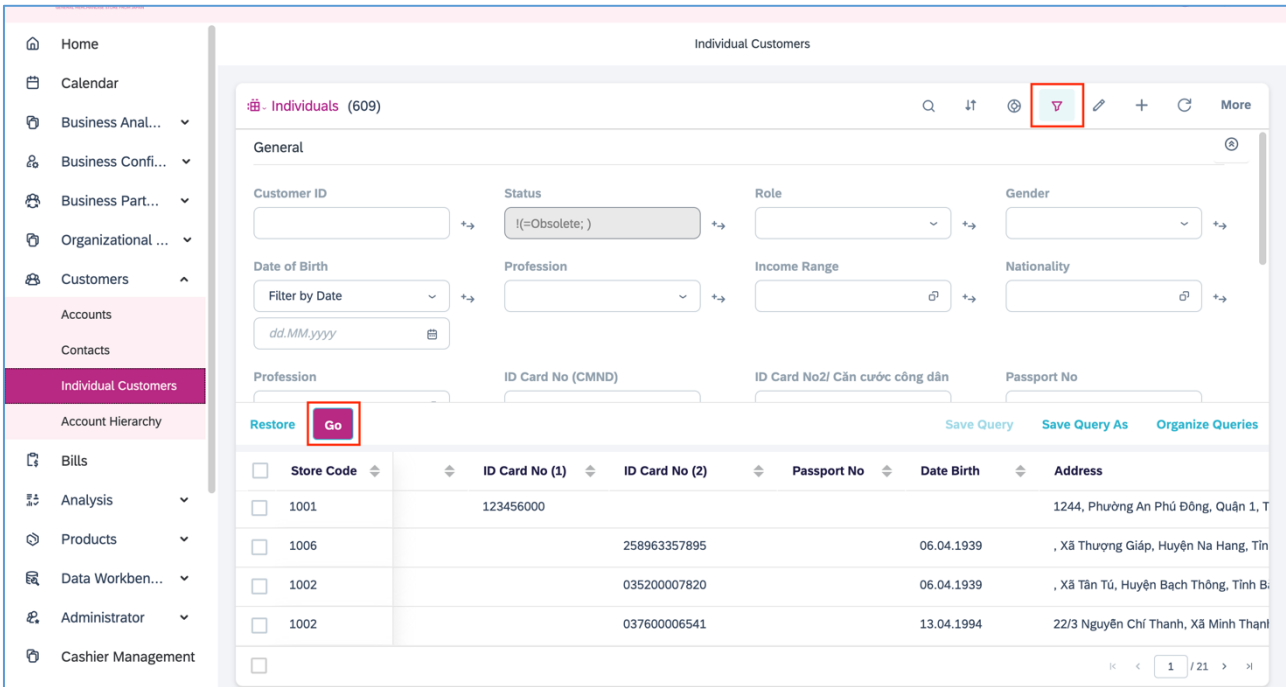
This will display a table of detailed values where users can enter their desired criteria and then click on the 'Include' section. Conversely, to exclude certain values from the search, the user follows the same initial steps, but clicks on the 'Exclude' section instead. After entering the values to be excluded, the customized search or filter is executed. This comprehensive search functionality provides users with the flexibility to locate customer information based on various criteria, making customer relationship management more effective and efficient.

PICTURE 18. Step 1 of searching customer information process

PICTURE 19. Step 2 of searching customer information process
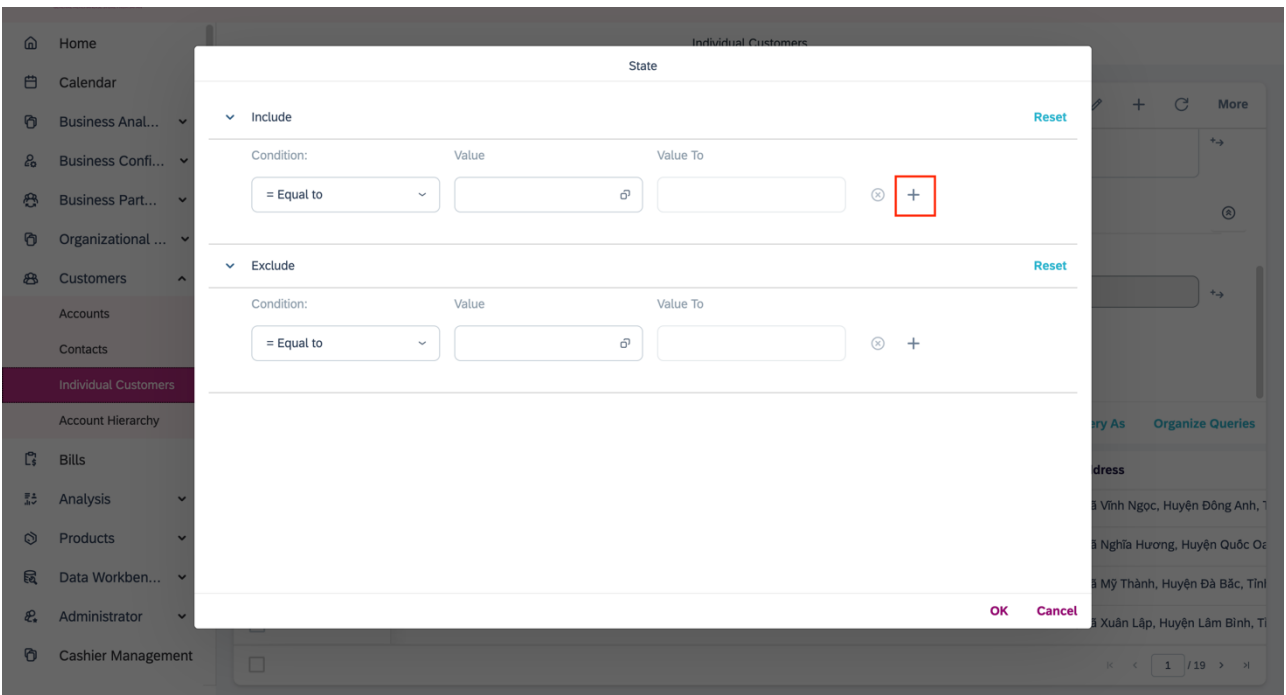
PICTURE 20. Step 3 of searching customer information process

Creating an individual customer in your system is a straightforward yet critical process, designed for optimal data capture and future customer relationship management. To start, users need to navigate to the 'Customers' section and then go to 'Individual Customers', as described in Step 1. Here, they will

find the option to create a new customer profile by clicking on the 'New' + button. Moving on to Step 2, the user is required to input detailed information about the individual customer into the system, ensuring all mandatory fields are completed for the sake of data integrity.

This often begins with filling out a 'General Information' template, which captures essential details that form the basis of the customer's profile. By meticulously following this structured approach, users can ensure that all vital customer information is captured efficiently and consistently, setting the stage for effective customer management.
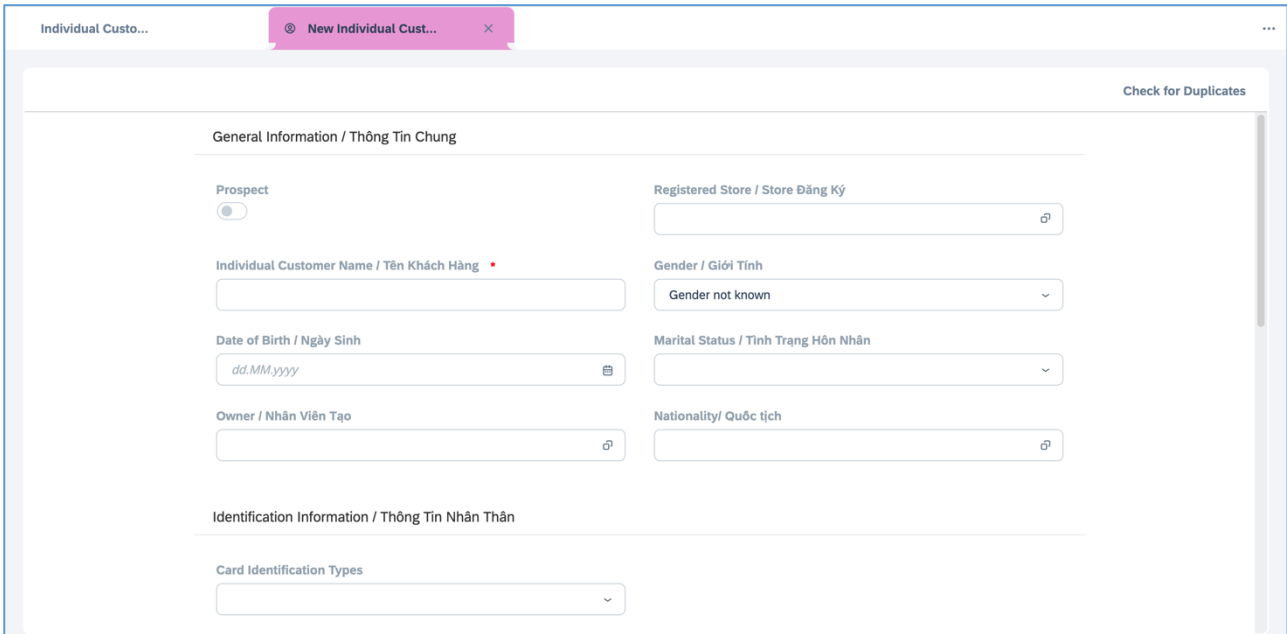
PICTURE 21. Step 1 of creating individual customer process

TABLE 12. The fields of creating individual customer process

No.	Field name	Field content
1	Prospect	There is Yes value if customer is prospect
2	Registered Store	Register customer store
3	Individual Customer Name	Customer's full name
4	Gender	Customer's gender
5	Date of Birth	Customer's birthday

Continues

TABLE 12 continues

6	Marital Status	Customer's marital status
7	Owner	System automatically shows User Accounts who creates
8	Card Identification Types	Users choose card identification types and enter information: - Identity Card 1 - Identity Card 2 - Passport
9	Mobile	Users enter customer's mobile number
10	Email	System automatically shows Email.
11	Nationality	System automatically set default is VN - Vietnam
12	State	System automatically shows state
13	District	System automatically shows district
14	Ward	System automatically shows ward
15	House Number – Street	System automatically shows house number – street.
16	All	User chooses if customer want to receive news by all.
17	SMS	User chooses if customer want to receive news by SMS.
18	Email	User chooses if customer want to receive news by Email.
19	Mailers	User chooses if customer want to receive news by Mailersl.
20	Income Range	User chooses customer's income range.
21	Profession	User chooses customer's profession.

Editing an individual customer's information is also a streamlined process that prioritizes data accuracy and operational efficiency. To begin, users should utilize the 'Search' or 'Advanced Filter' options to locate the specific individual customer they wish to update, as detailed in the first step. Once the relevant customer profile has been found, clicking on the individual customer's name will reveal more details about their account. This takes us to the second step, where all the data associated with the individual is displayed for review. The third step involves clicking the 'Edit' button, typically found at the top or alongside the customer's information, which allows for modifications to be made in various fields. Users can make necessary updates or corrections to the data presented in the Header or other segments of the profile. Finally, to lock in any changes, clicking 'Save' is essential, ensuring that the updated data is stored correctly within the system. This four-step process is designed to make editing individual customer profiles an efficient and error-free experience.

3.3 Purpose (member)

Creating a member profile is a strategic process aimed at fulfilling customer demands and enhancing engagement. These profiles are not just a digital placeholder for a customer; they serve a multitude of functions that benefit both the business and the customer. Primarily, they act as an integrated platform where customers can earn, transact, adjust, and redeem points for various vouchers and gifts. This adds a layer of interactivity and value to the customer's shopping experience, encouraging long-term loyalty. Beyond this, the member profiles serve as a valuable data resource for the Marketing team. With detailed information like birth months, birthdays, and participation in special 'double day' promotions, the team can craft highly personalized and targeted campaigns to drive customer engagement further. All in all, the system also facilitates efficient management of member data, ensuring that the information remains up-to-date and relevant for both operational and marketing endeavors. (SAP Solution Guide for SAP Sales Cloud 2023.)

3.3.1 Detail

The two critical functions that significantly improve data management and user experience in a digital system are the search and sort features. The search function serves as the gateway to quickly and efficiently finding specific data or records in a vast database. This feature is indispensable in real-world applications where time and accuracy are of the essence. By using various algorithms, the search function can pull up results by matching text, numbers, or other criteria within milliseconds. This not only streamlines user interaction but also improves operational efficiency as users don't have to manually sift through data. On the other hand, the Sort function complements the Search feature by allowing users to organize data values in a specific order, be it ascending, descending, or even category-based. Sorting data makes it easier to analyze patterns, make comparisons, and draw insightful conclusions. This is particularly useful in business analytics, data science, or any field where understanding the order and hierarchy of data can lead to better decision-making. Together, these two functions form the backbone of effective data navigation and utilization.

In SAP CX, there are typically various ways to locate specific member information. Step 1 offers a quick solution; from the home display, the user can click on the search symbol and directly enter the member ID to find the relevant details. Alternatively, step 2 allows for a more refined approach. The

user navigates to the member section and from the member list display, chooses the filter symbol. This action prompts the system to display a list of searchable fields. Users have the option to apply one or multiple filters to narrow down their search results before clicking 'go' to execute the search. Both methods are designed to make data retrieval quick and convenient.
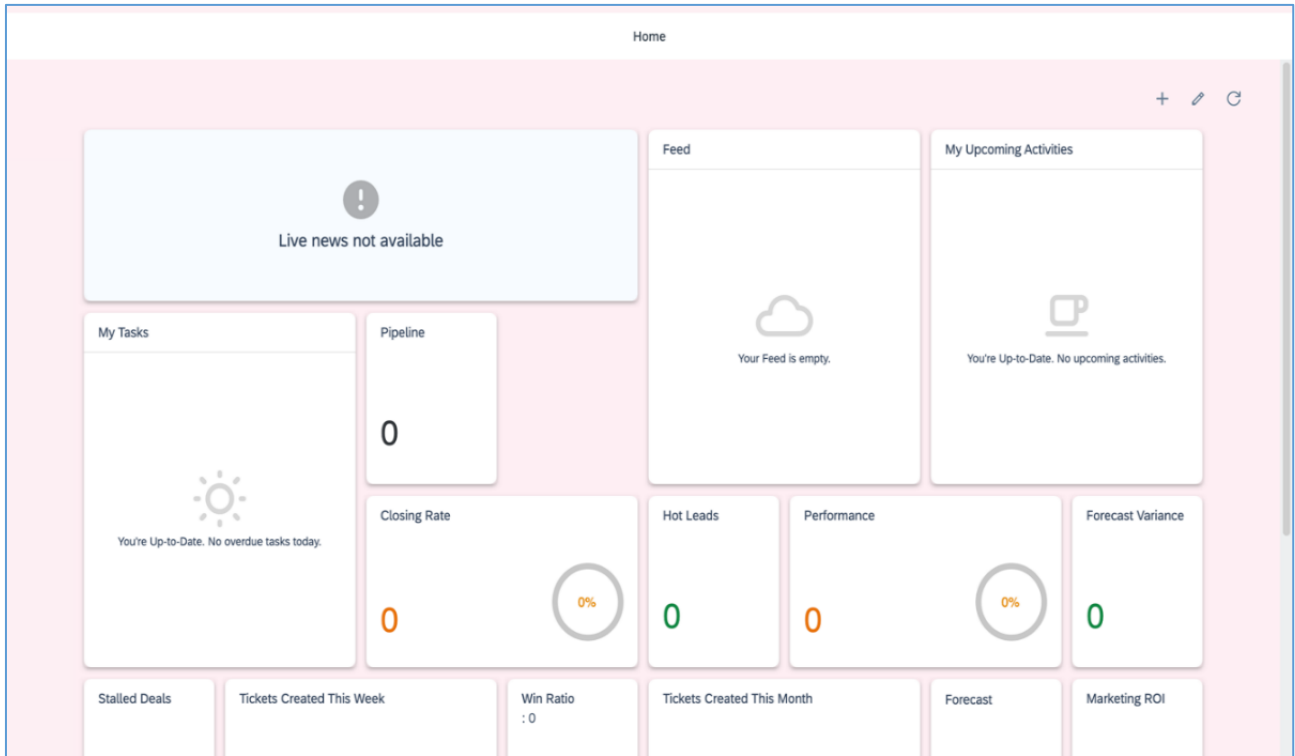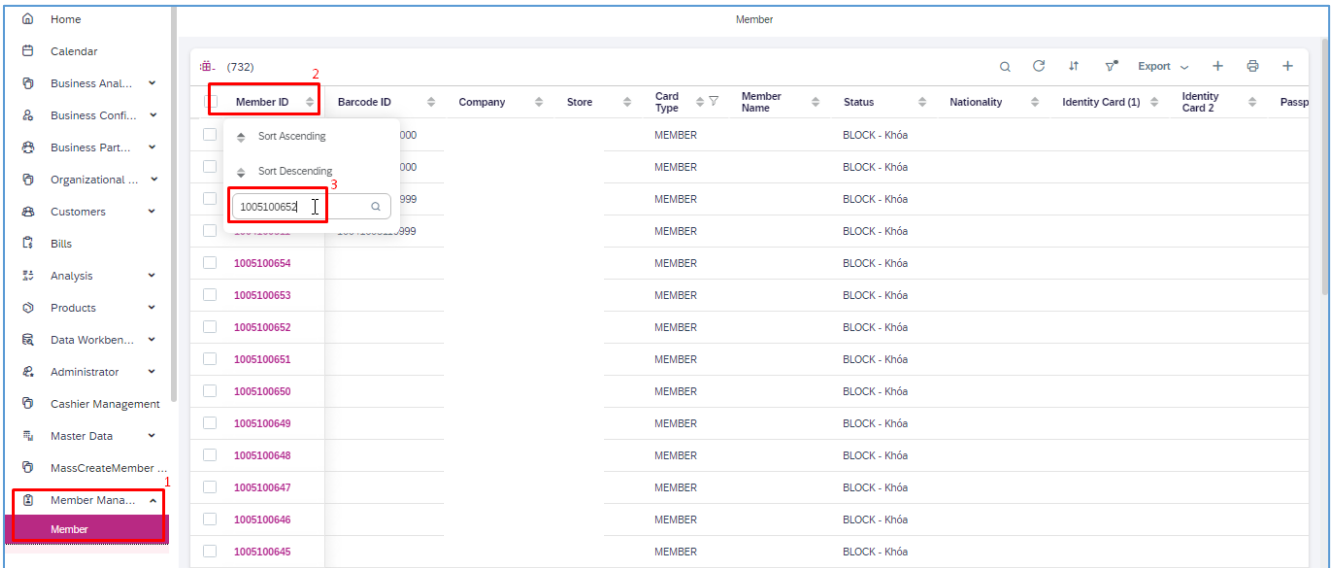

PICTURE 22. Step 1 searching member process
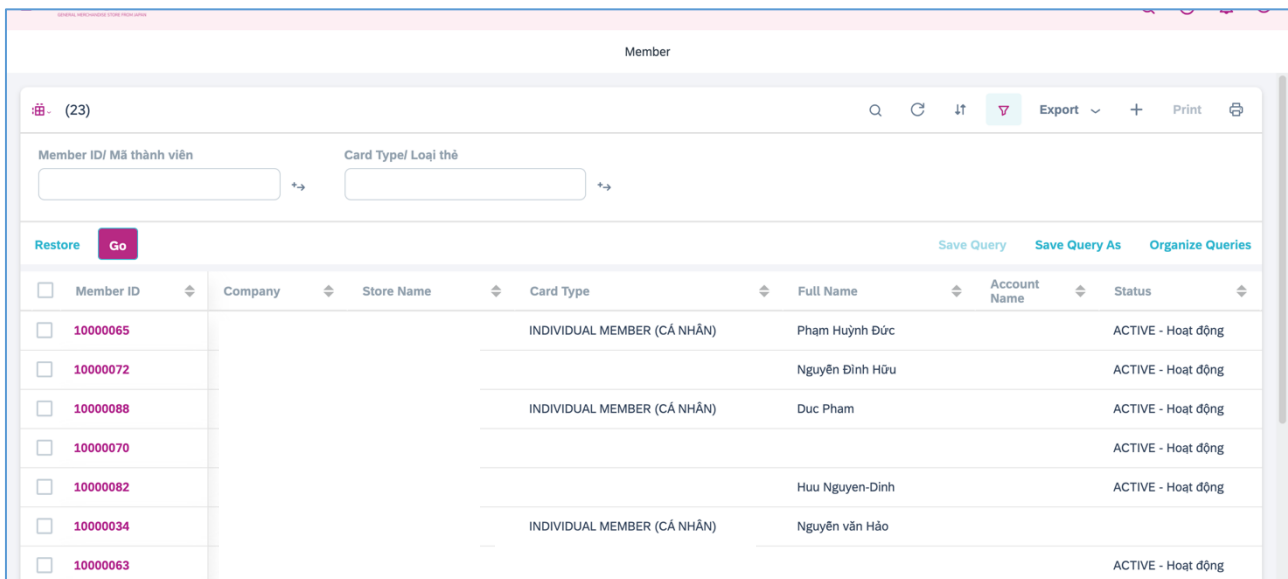
PICTURE 23. Step 2 searching member process

Users can also sort the member list according to specific conditions, offering yet another layer of convenience in data handling. To do this, the user navigates to the 'member' section and accesses the 'member list display'. From there, the user selects the sort option, represented by a specific symbol or icon. Upon selection, the system presents various sorting conditions such as ascending/descending order or sorting by specific attributes like name, ID, or date. Once the desired sorting criteria are chosen, the user clicks 'OK' to apply the sorted mode. Alternatively, if the user decides not to proceed with sorting, they can click 'Cancel' to exit the sorting menu. This feature simplifies data management, making it easier to locate and analyze member information.

3.3.2 Create member from blank card

Creating a new member for a customer who hasn't yet been registered in the system involves associating their information with a blank membership card. This process ensures that the new member can start earning points and receiving benefits immediately. Here's how to go about it:

The process of adding a new customer member to the system begins with locating an unused blank card. The User initiates this by navigating to the 'Work Center Member Management' section, and from there, selecting the 'Member' option. In the 'Member' interface, the User then clicks on the 'Member ID' column and types in the blank card code they wish to search for, hitting 'Enter' to execute the search. Upon locating the desired blank card, the User clicks on its corresponding 'Member ID', which redirects them to a 'Member detail display'. Within this screen, the User selects the 'Edit' option. This action opens up various fields where the User inputs the new customer's information, including but not limited to their name, contact details, and other essential data to create a comprehensive member profile.

PICTURE 24. Step 1 of creating member process
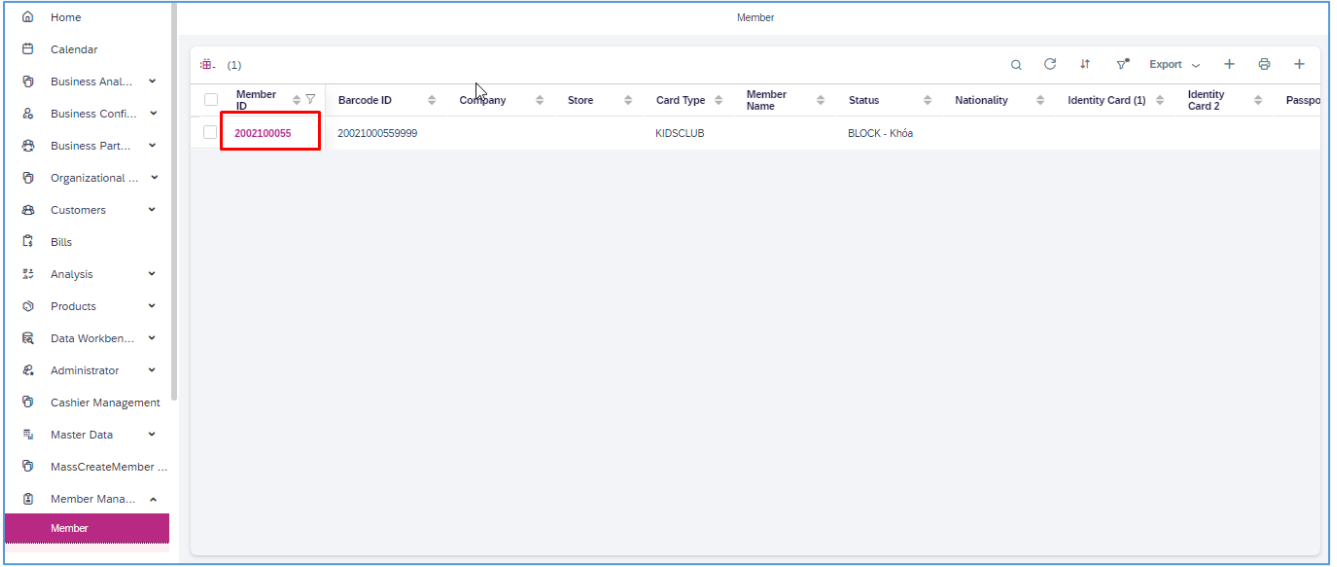
PICTURE 25. Step 2 of creating member process
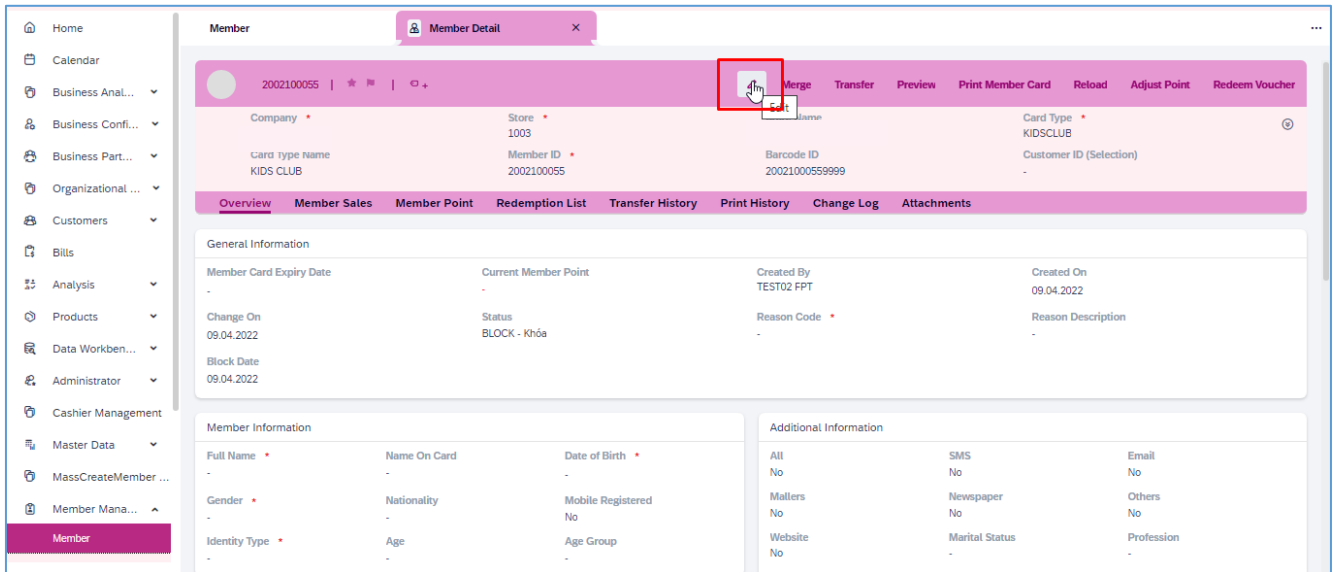
PICTURE 26. Step 3 of creating member process

TABLE 13. The fields of creating member process

No	Field name	Field content
Member Information		
1	Full Name	Enter the customer's name.
2	Name On Card	Enter the name on card of customer
3	Date of Birth	Enter the Date of birth of customer. Format of Date is DD.MM.YYYY
4	Gender	Chose the gender of customer from the list below: - Male - Female
5	Nationality	Choose the nationality of customer from the declared nationality list.
6	Identity Type	Chose the identity type from the list below: - Identity Card 1 - Identity Card 2 - Passport

Continues

TABLE 13 continues

7	**Identity Card 1 Number**	**When selecting the Identity Type as Identity Card 1, select Enter, the system will display this field to enter the ID number. The ID number must contain 9 numbers, if it is not correct or the same number is already on the system, the system will alert the notification to adjust.**
8	Identity Card 2 Number	When selecting the Identity Type as Identity Card 2, select Enter, the system will display this field to enter the ID number. The ID number must contain 12 numbers, if it is not correct or the same number is already on the system, the system will alert the notification to adjust.
9	Passport Number	When selecting the Identity Type as Passport, select Enter, the system will display this field to enter the ID number. If it is the same number is already on the system, the system will alert the notification to adjust.
10	Age	The system calculates the age base on the Date of birth field.
11	Age Group	The system automatically displays the age group bay on the Date of birth field.
	Contact	
12	Mobile	User enters the phone number of the customer. In case the phone number has been declared on the system, the system will alert the user to adjust.
13	Email	User enters the email of customer.
14	Address	The system automatically displays the customer's address based on the fields declared below.
15	State	User selectes the state from the state list.
16	District	User selectes the district from the district list.
17	Ward	User selectes the ward from the ward list

TABLE 13 continues

| 18	Street	**User enteres the street number.**
Additional Information		
19	All	Tick Yes if customer wants to receive information of X through all channels.
20	SMS	Tick Yes if customer wants to receive information of X through SMS channels.
21	Email	Tick Yes if customer wants to receive information of X through email channels.
22	Mallers	Tick Yes if customer wants to receive information of X through mallers channels.
23	Marital Status	Select the customer's marital status from the following list: - MARRIAGED - SINGLE
24	Profession	Select from the list of pre-declared professions.
25	Income Range	Select from the list of pre-declared income ranges.
	Introducer Information	
26	Introducer ID	Select member who introduced this member from the list of existing members on the system.
27	Name	The system automatically displays the name of the referral members according to the selected Introducer ID.
28	Identity Card Number	The system automatically displays the ID number / ID / passport of the referral member according to the selected Introducer ID
29	Mobile	The system automatically displays the phone number of the referral member according to the selected Introducer ID.
Children Group		

Continues

TABLE 13 continues

30	**Children Group**	**Select a child group from the reported child groups.**
31	Description	The system automatically displays the Child Group Name selected in the Children Group.
32	No of Children	The user manually enters the number of children according to each customer group.
33	Baby Is	User selectes from the lists: - 1STCHILD - 2NDCHILD - 3RDCHILD
34	Full Name	The user enters the full name of the customer's child.
35	Birthday	The user enters the customer children's date of birth. The format of date of birth is DD.MM.YYYY
36	Gender	User selectes the gender of the baby in the list: - Male - Female
37	Age Until Register Date	The system automatically calculates the baby's age on register date based on the entered date of birth.
38	Age	The system automatically calculates the baby's age based on the entered date of birth.
39	Age Group	The system automatically displays the baby's age group based on the entered date of birth.

### 3.3.3 Create member of existing customer from blank card

Creating an X member or kids club member for a customer who already has their information in the system is a straightforward process that begins with a blank card. This approach allows for an efficient way to upgrade existing customers to a specialized membership tier. By using a blank card, the system can easily link the physical card to the existing digital customer profile. This enables the business to enrich its customer data and loyalty program offerings without requiring the customer to fill out

repetitive information. The process is not only beneficial for enhanced customer engagement but also provides additional avenues for targeted marketing strategies.

To facilitate the process of creating an X member or kids club member for an existing customer using a blank card, a series of systematic steps have been outlined. The first step involves searching for the blank card within the system by navigating to work center member management, selecting the member option, and then using the member ID column to input the blank card code. Press enters to initiate the search. Upon finding the desired blank card, click on the corresponding member ID to proceed to the next step. In the member detail window, select the customer ID (selection) option. Here, you will enter the name or ID of the customer for whom you wish to create a membership in the Search box and then press enter. The next action is to select the customer's data from the search results. Finally, the system will automatically populate the customer's information in the relevant fields. Users have the option to add or adjust this information before clicking save to finalize the new membership. By following this workflow, users can effectively link an existing customer to a new specialized membership, thereby enriching the customer experience and enhancing loyalty program offerings.
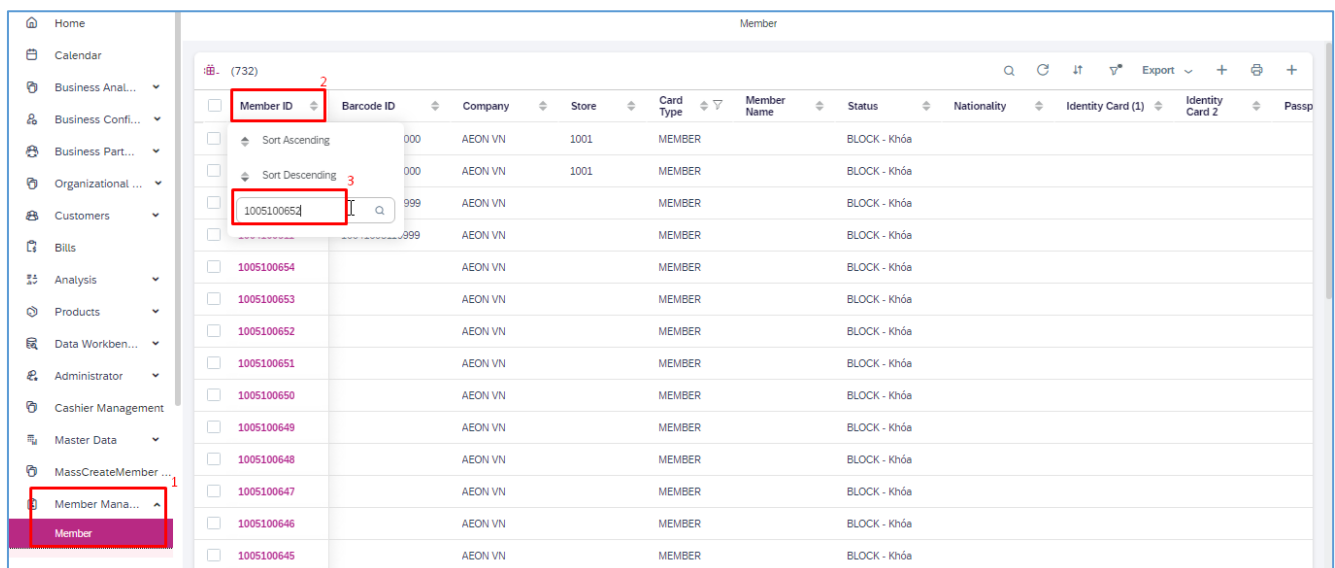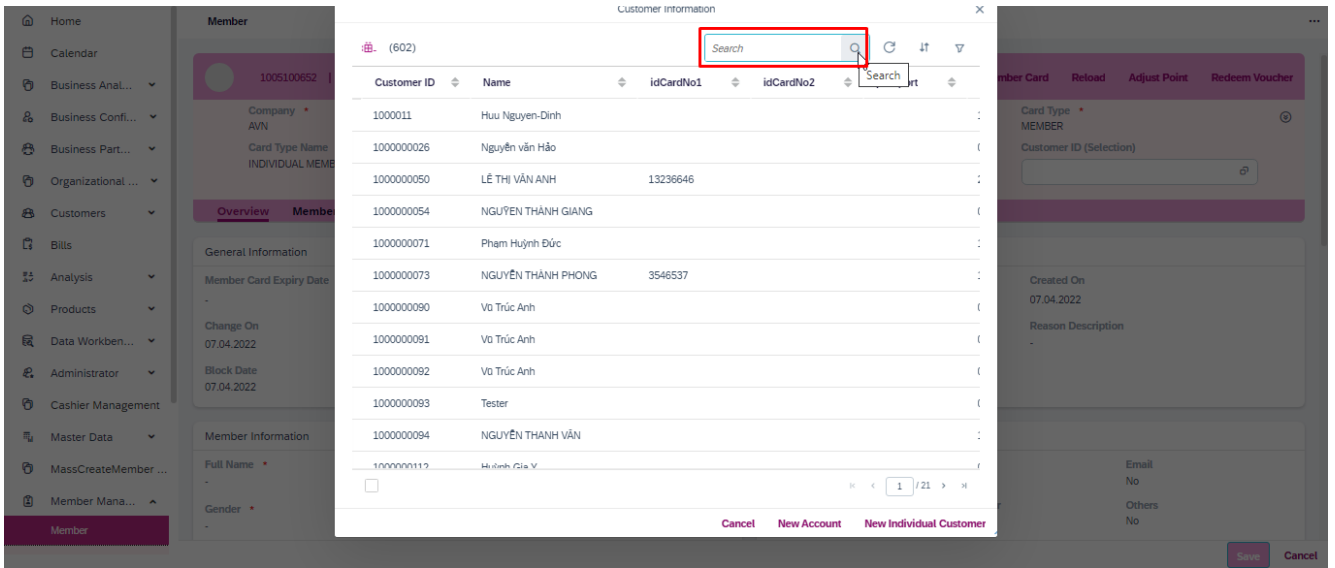

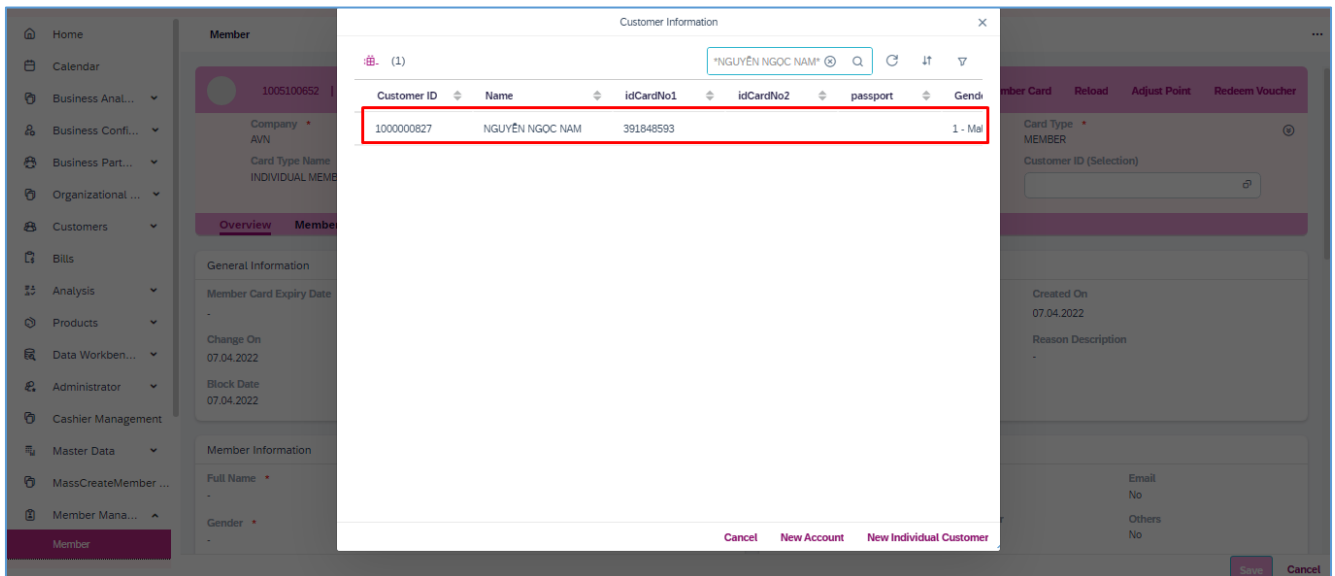PICTURE 27. Step 1 of creating member with customer ID process
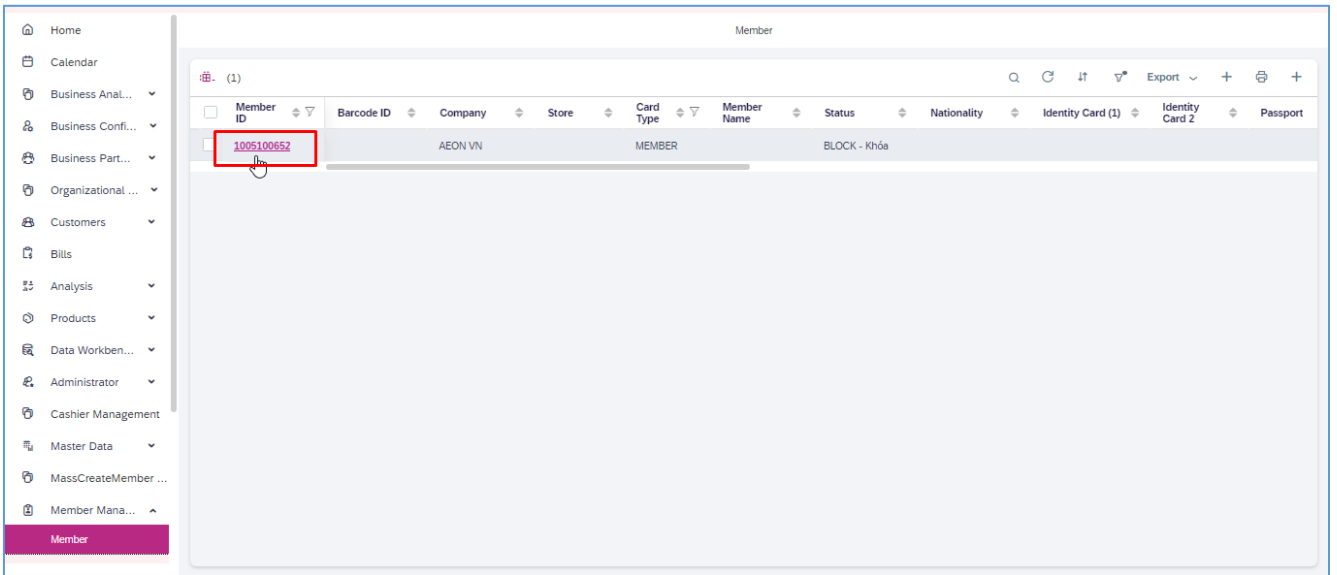
PICTURE 28. Step 2 of creating member with customer ID process
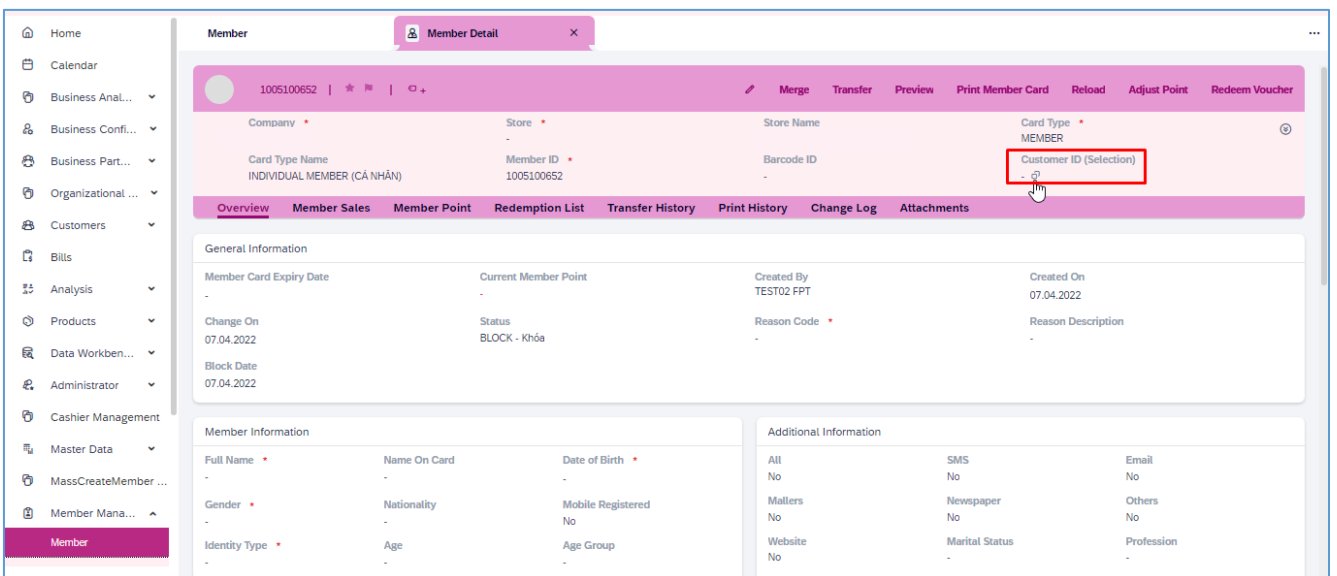
PICTURE 29. Step 3 of creating member with customer ID process

PICTURE 30. Step 4 of creating member with customer ID process

PICTURE 31. Step 5 of creating member with customer ID process

PICTURE 32. Step 6 of creating member with customer ID process

3.3.4 Manage Member data

The objective of managing member data on SAP CX is to centralize, streamline, and optimize customer membership information for enhanced customer engagement and business decision-making. This feature serves as a robust platform that offers a myriad of functionalities ranging from basic data storage to complex data analysis. With a user-friendly interface, it allows businesses to track critical membership data such as personal details, transaction history, loyalty points, and customer preferences. By having this data readily accessible, organizations can effectively implement loyalty programs, initiate targeted marketing campaigns, and offer personalized services. Moreover, the management of member data is designed to be highly secure and compliant with data protection regulations, ensuring that customer information is safeguarded. The system is also built to be flexible, supporting various types of memberships such as X member or kids club member, each with its own set of rules and benefits. Furthermore, SAP CX enables seamless integration with other enterprise modules and systems, such as CRM and POS, providing a holistic approach to customer management. Through diligent member data management on SAP CX, businesses can expect to achieve higher customer retention rates, improved customer satisfaction, and ultimately, increased profitability. (SAP Solution Guide for SAP Sales Cloud 2023.)

In the SAP CX system, a user can easily access comprehensive member data for analysis or update. To do this, navigate to the member section and proceed to the member list display. Here, you'll see a list

of all member accounts. Simply clicking on any member's account will prompt the system to automatically display complete information related to that particular member. This feature not only streamlines the process of data retrieval but also enables the user to have quick and efficient access to member details for various operational needs, such as marketing initiatives, customer service, or loyalty program adjustments.

In the SAP CX platform, the member header information plays a pivotal role in consolidating and displaying essential data about individual members in an easily accessible manner. Typically situated at the top of the member details screen, the header contains crucial fields such as member ID, membership status, and points balance, among other identifiers. This section serves as a summary dashboard that gives a quick overview of the member's account, allowing users to understand the member's status and interaction with the platform at a glance. Besides essential details, the member header often incorporates actionable buttons or icons, such as edit, delete, or view transactions, providing users with immediate access to perform various functions. Users can also find navigation tabs or links to related sub-sections like transaction history, membership plans, or activity logs. The header's design is tailored to improve navigation and task efficiency, enabling users to manage member data seamlessly and make informed decisions rapidly. Depending on the user roles and permissions, the visibility and interactivity of these header options can be customized, thereby ensuring that users have the precise tools they need for effective member management.
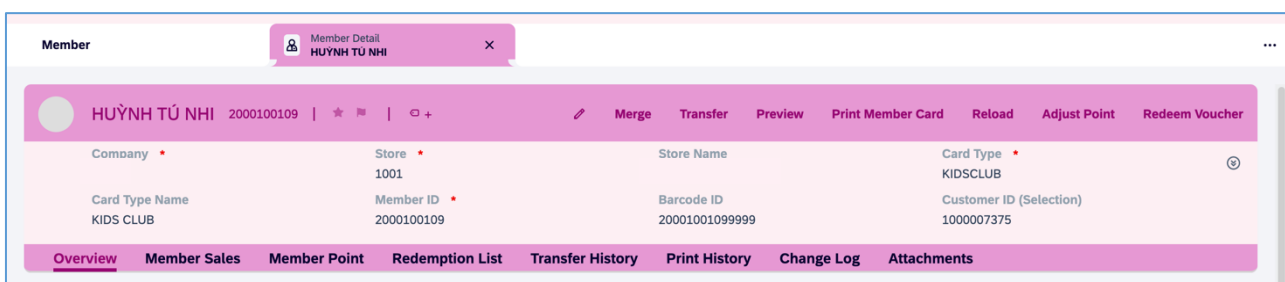
PICTURE 33. Header information

General information serves as a comprehensive data repository that holds key details about each individual member. This section typically includes fundamental data points such as member ID, customer ID, full name, contact information, and other identifiable statistics. In addition, more nuanced fields may capture elements like membership type, membership status, join date, point balance, and eligibility for special programs or offers. (SAP Solution Guide for SAP Sales Cloud 2023.)

The system often allows for customization so that companies can include fields that are particularly relevant to their business model or customer engagement strategy. Users can access this information by navigating to the Member list display, where clicking on a specific member's account reveals the complete range of data. All of this contributes to an extensive, centralized source of information that facilitates better customer management, targeted marketing efforts, and ultimately, a more personalized customer experience.
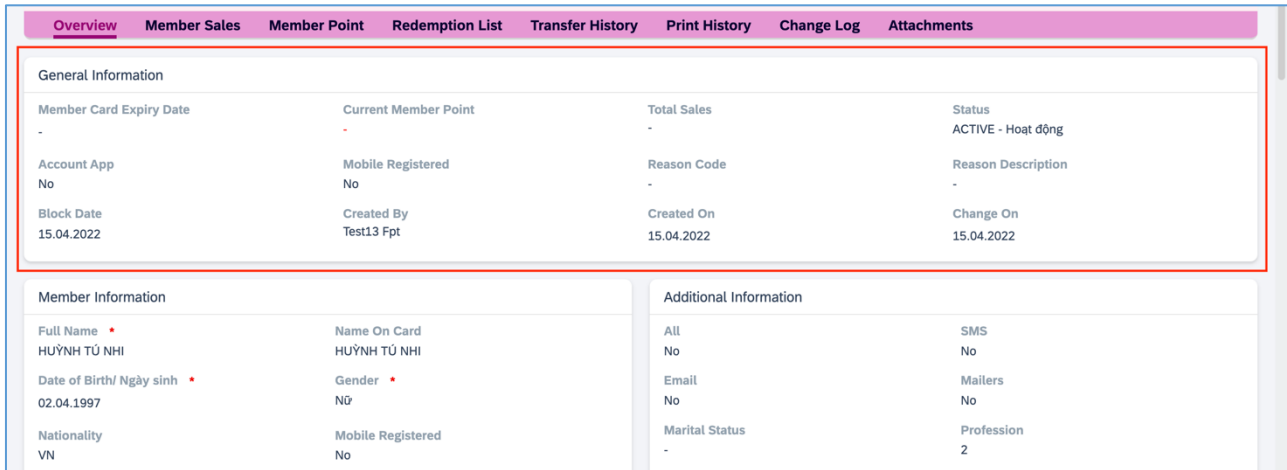
PICTURE 34. General information

This sentence serves as an introduction to the template, outlining the various fields that make up the general information section.

TABLE 14. The fields of general information

No.	Field name	Field content
1	Member Card Expiry Date	The expiry date of member.

TABLE 14 continues

No.	Field name	Field content
2	Created By	User creates member.
3	Status	Member status: - Active - Block - Obsolete
4	Created On	Creating member date.
5	Current Member Point	Member's current point.
6	Change On	Changing information date.

The "member information" section is a comprehensive repository of vital details pertaining to an individual member. This segment is usually located beneath the member header, and it provides a more in-depth look into the member's profile. Essential fields such as the member's full name, contact information (email, phone number), date of birth, and other demographic details are typically included here.

Additionally, this area may feature customizable fields that can be tailored to capture industry-specific or organization-specific data, such as membership tier, preferred communication methods, or any assigned customer representative. Information about the member's account creation date, last login, and any notes or tags may also be found in this section. Often, users have the option to 'edit' or 'update' this information, depending on their administrative privileges. This general information is critical not just for routine administrative tasks, but also for customer service, marketing activities, and data analytics. It serves as a foundation for understanding the member's interaction with the organization, enabling more personalized and effective communication strategies.

The member general information section is designed for ease of use, ensuring that anyone from customer service representatives to senior management can quickly access and interpret member data.
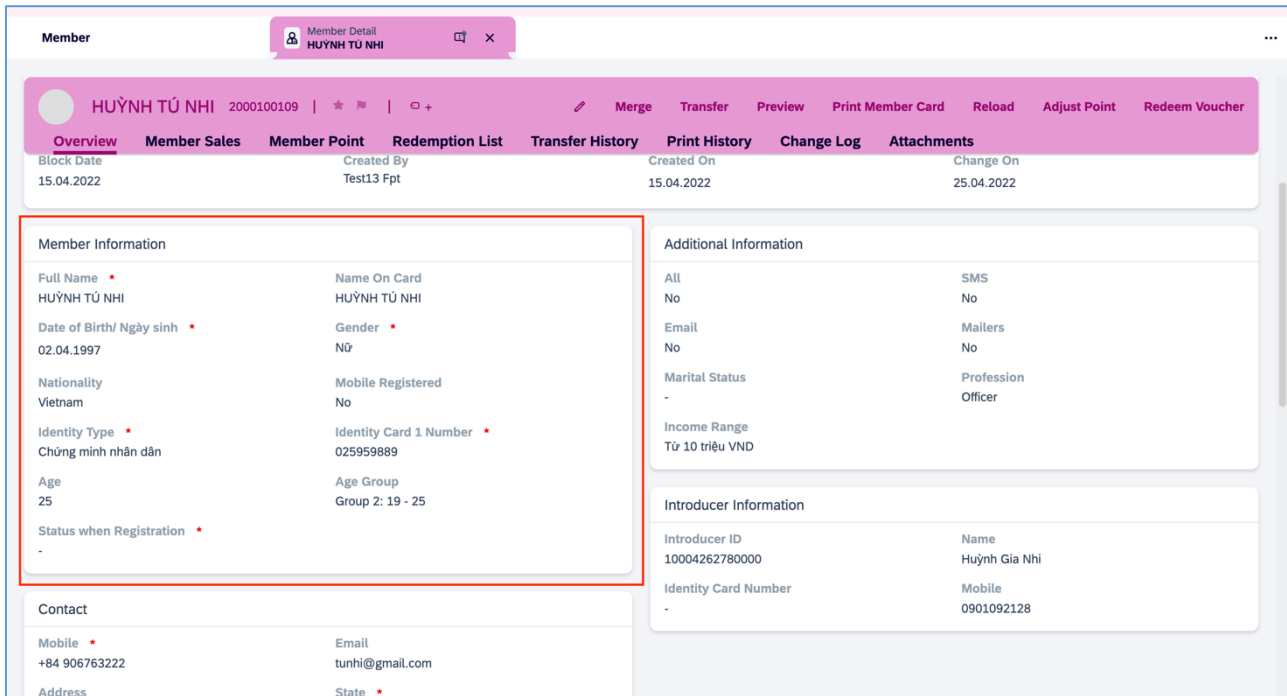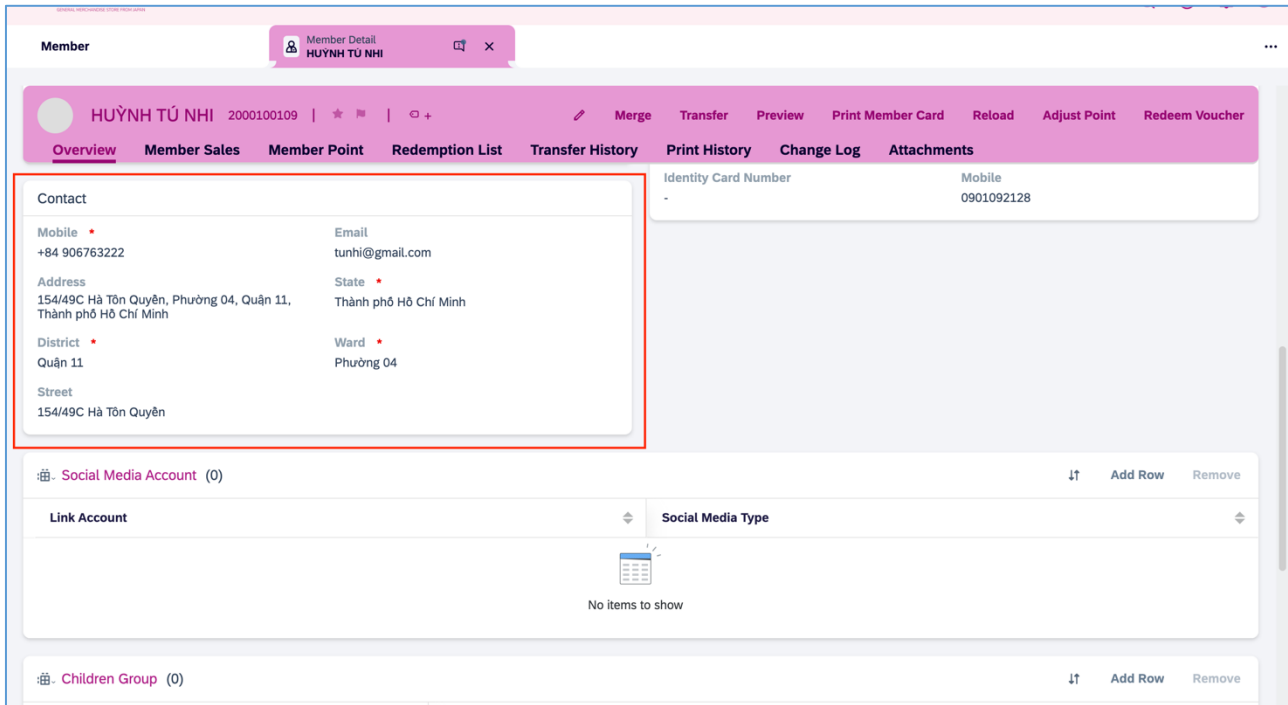

PICTURE 35. Member information

This sentence acts as a preliminary guide to the template, detailing the different elements included in the member information section.

TABLE 15. The fields of member information

No.	Field name	Field content
1	Full Name	Member full name.
2	Name On Card	Member name on card.
3	Date of Birth	Member's date of birth.
4	Gender	Member's gender.
5	Nationality	Member's nationality.
6	Mobile Registered	Member register by Mobile, there are 2 values: - Yes - No
7	Identity Type	Member's identity type: - Identified card 1 - Identified card 2 - Passport
8	Identity Card 1	Identity card 1 number
9	Identity Card 2	Identity card 2 number
10	Passport Number	Passport number
10	Business License No	Account's business license number.
11	Tax Number	Account's tax number.

The contact information section is a critical component that allows users to manage and view various details related to customer contacts. This part of the platform encompasses fields for capturing essential data such as names, email addresses, phone numbers, and even social media handles, among others. This granular level of data helps in streamlining communication strategies and customer relationship management. The interface is designed for ease of use, enabling users to not only view but also edit, delete, or even export this information according to specific business requirements.
(SAP Solution Guide for SAP Sales Cloud 2023.)

PICTURE 36. Contact

This statement serves as an initial overview of the template, highlighting the various components that comprise the Contact section.
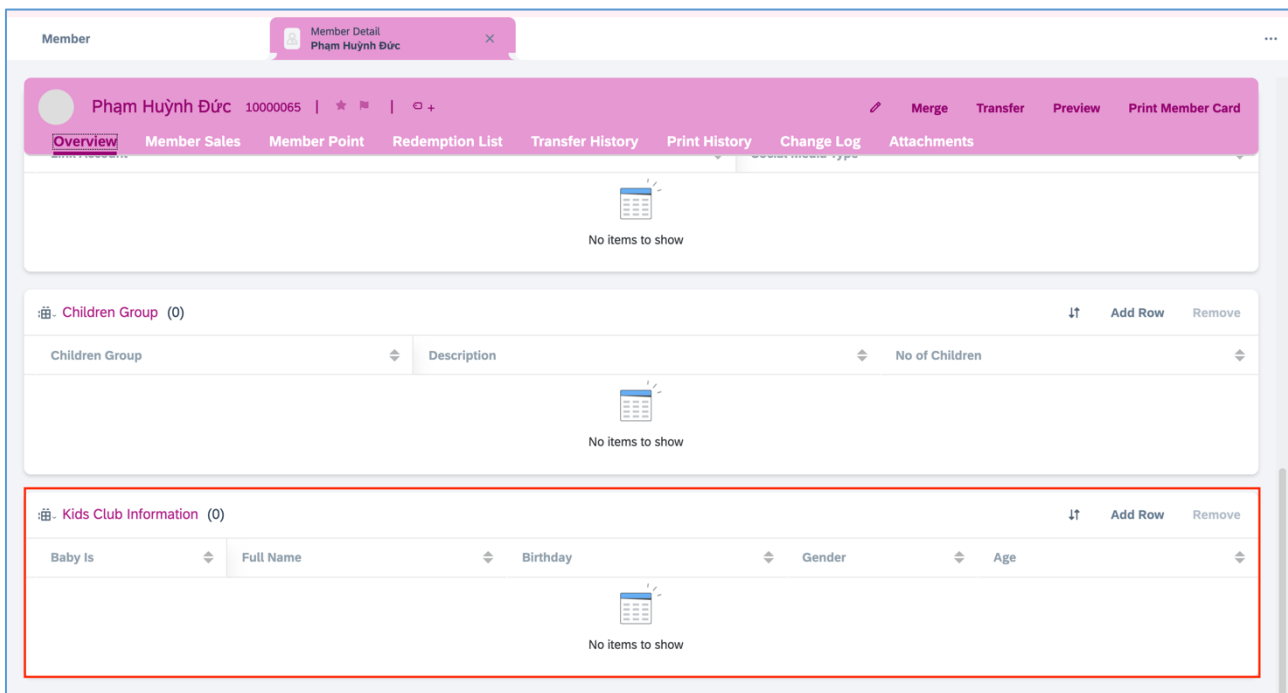
TABLE16: The fields of contact information

No.	Field name	Field content
1	Mobile	Member's mobile number.
2	Email	Member's email
3	Address	Member's address.
4	State	State
5	District	District
6	Ward	Ward
7	Latitude	Latitude
8	Street	Street

In SAP CX, the Kids Club section is meticulously designed to manage and streamline all relevant information pertaining to child members of your customer base. This segment offers specialized fields to input critical data, such as the child's name, age, birth date, and unique identifiers like a membership number. It also allows for the association of the child's account with that of a parent or guardian.

(SAP 2023 Solution Guide for SAP Sales Cloud.)

Additional fields may include preferences, like favorite activities or characters, to help tailor marketing strategies and service offerings. You can also track participation in Kids Club events or programs, allowing for a better understanding of engagement levels. The well-organized interface makes it simple to navigate, edit, or update any given entry, thereby enabling a more personalized and effective customer relationship management experience.

PICTURE 37. Kids club information

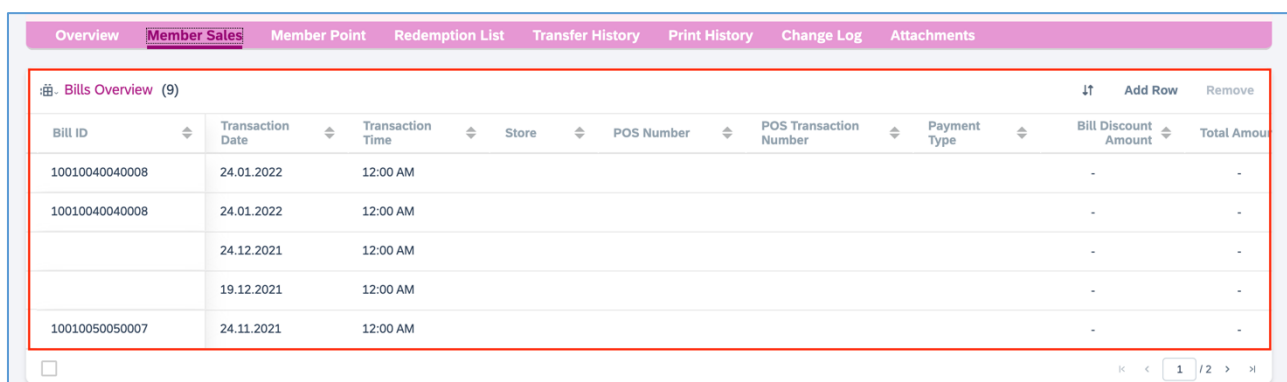This statement serves as an initial overview of the template, highlighting the various components that comprise the kids club section.

TABLE 17. The fields of kids club information

No.	Field name	Field content
1	Baby Is	Show the sequences of the baby.
2	Full Name	Baby's full name.
3	Birthday	Baby's date of birth.
4	Gender	Baby's gender
5	Age	Baby's age.

In SAP CX, the member sales section is a comprehensive hub designed to consolidate all sales-related activities and transactions linked to a specific member. This area enables users to view, manage, and analyze a wide range of data, including purchase history, total lifetime value, frequency of purchases, and types of products or services bought. Specialized fields may also capture promotional responses, making it easier to measure the effectiveness of marketing campaigns targeted at individual members. The system's robust analytics can offer actionable insights by highlighting trends or patterns in a member's buying behavior. These insights can, in turn, be leveraged for personalized marketing or upselling opportunities.

Functionality for real-time data updates ensures that every interaction or transaction is immediately reflected, providing a continuously updated 360-degree view of each member's sales activity. In SAP CX, navigating to the member sales information is a straightforward process. Users first go to the member section and then are presented with a member viewlist display where all member accounts are listed. By clicking on any member's account, the system reveals a comprehensive set of information about that member. To focus specifically on sales data, users simply click on the member sales tab. Once this tab is accessed, the system automatically populates and displays all the member's billing information. This feature allows for an at-a-glance understanding of the member's purchase history, facilitating better customer relationship management and targeted marketing efforts.

PICTURE 38. Member sales

PICTURE 39. Member sales

This statement serves as an initial overview of the template, highlighting the various components that comprise the member sales section.

TABLE 18. The fields of member sales information

No.	Field name	Field content
1	Bill ID	System automatically shows Bill ID.
2	Transaction Date	System automatically shows transaction date of bill.
3	Transaction Time	System automatically shows transaction time of bill
4	Store	System automatically shows store of bill.
5	POS Number	System automatically shows POS number of bill.
6	POS Transaction Number	System automatically shows POS transacrion number of bill.
7	Payment Type	System automatically shows payment type of bill.
8	Bill Discount Amount	System automatically shows discount of bill.
9	Total Amount	System automatically shows total amount of bill.
10	Earned Point	System automatically shows earned point of bill.
11	Payment Bonus Point	System automatically shows payment bonus point of bill.
12	Bonus Point from Plan	System automatically shows bonus point from plan of bill.
13	Point of Bill	System automatically shows point of bill.

In SAP CX, the member points section serves as a vital tool for understanding and managing a member's interactions with your business in terms of loyalty points. Accessible via the member dashboard,

this section is designed to offer a comprehensive view of how a member is accumulating, using, or losing points over time. Once you navigate to the member menu and select a particular member account, clicking on the member points tab reveals an organized display of information including the current point balance, pending points, history of point transactions, and any adjustments made. The system automatically updates this section in real-time to reflect the most current data. This data is crucial for both business analysts looking to understand customer behavior, and customer service representatives needing quick access to a member's point status. The member points section is an integral part of customer relationship management, aiding in the implementation of loyalty programs and targeted promotions.

The point detail feature under the member points section offers an exhaustive and granular view of every loyalty point transaction associated with a particular member. It functions as a comprehensive ledger, displaying the date, type, amount, and status of each point transaction. To access this, you need to go to the member section, select the member whose details you wish to view, and then click on the point detail tab. This tab is typically situated next to or under the general member points tab. This detailed feature is essential for resolving any disputes, understanding the member's engagement with your loyalty programs, and for analytic purposes. The data in this section is real-time, ensuring that you have the most up-to-date information for effective point management and customer service.

PICTURE 40. Point detail

This statement serves as an initial overview of the template, highlighting the various components that comprise the point detail section.
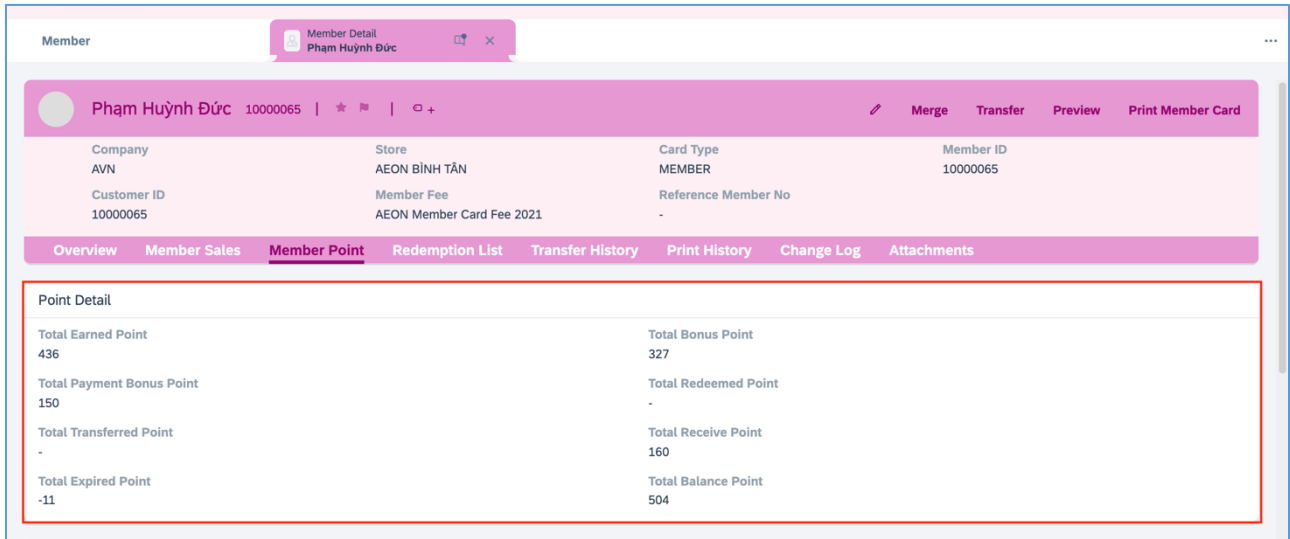
TABLE 19. The fields of point detail information

No.	Field name	Field content
1	Total Earned Point	System automatically calculates and shows total point which earns from member's bill.
2	Total Bonus Point	System automatically calculates and shows total bonus point of member.
3	Total Payment Bonus Point	System automatically calculates and shows total payment bonus point of member.
4	Total Redeemed Point	System automatically calculates and shows total redeemed point.
5	Total Transferred Point	System automatically calculates and shows total transferred point of member.
6	Total Receive Point	System automatically calculates and shows total receive point of member.
7	Total Expired Point	System automatically calculates and shows total expired point of member.

Continues

TABLE 19 continues

8	Total Balance Point	System automatically calculates and shows total balance point of member.

These tabs offer in-depth insights into the member's profile, transaction history, loyalty points accumulated or redeemed, and other crucial data. The real-time data availability ensures accurate and up-to-date information for analytics, troubleshooting, or customer service purposes. The feature is designed to provide a holistic understanding of the member's interactions with the organization, making it a valuable tool for stakeholders ranging from customer service representatives to marketing professionals.

PICTURE 41. Inquire member details

This statement serves as an initial overview of the template, highlighting the various components that comprise the inquire member details section.

TABLE 20. The fields of inquiring member details information

No.	Field name	Field content
1	Valid From	System automatically shows valid date of point.
2	Valid To	System automatically shows expiry date of point.

Continues

TABLE 20 continues

3	Earned Points	System automatically shows earned point from member's bill.
4	Bonus Point	System automatically shows member's bonus point.
5	Payment Bonus Point	System automatically shows member's payment bonus point.
6	Redeemed Point	System automatically shows member's redeemed point.
7	Transfer Point	System automatically shows transfer point of member.
8	Receive Point	System automatically shows receive point of member.

9	Return Point	System automatically shows return point of member (point calculated from return bill).
9	Balance Point	System automatically shows balance point of member.
10	Status	System automatically shows status of point.

Within this tab, users can view a detailed breakdown of the member's point transactions, including points earned, redeemed, or adjusted. The system displays information such as the transaction date, point value, expiration date, and the specific activities or transactions that led to the point accumulation or redemption. This feature is particularly useful for auditing purposes, customer inquiries, or strategizing targeted marketing campaigns. It provides real-time, comprehensive data that allows for precise management of a member's loyalty program status.
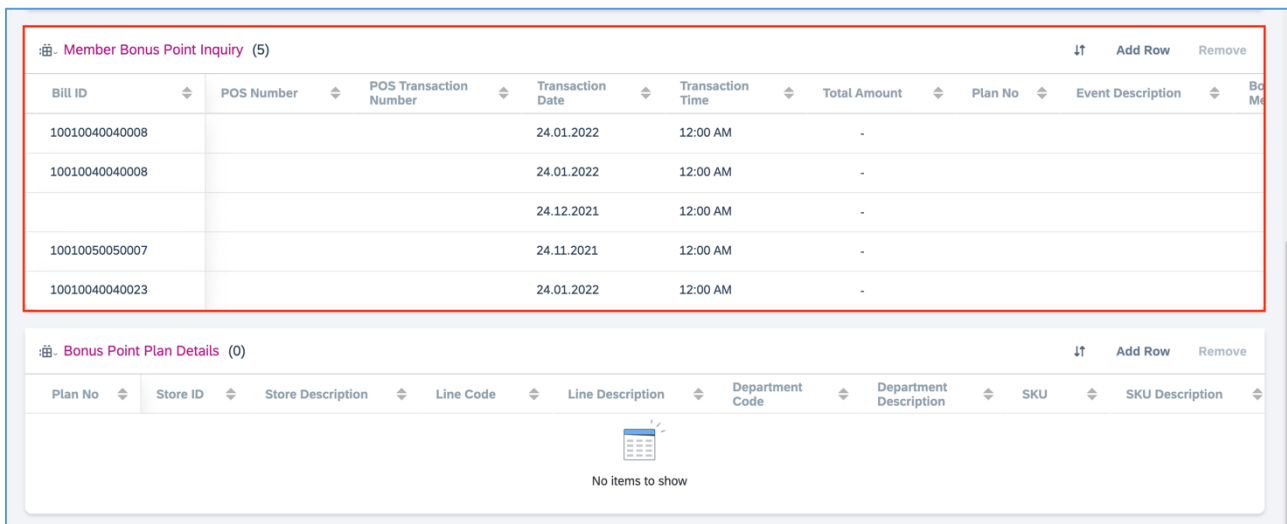
PICTURE 42. Member bonus point inquiry

This statement serves as an initial overview of the template, highlighting the various components that comprise the member bonus point inquiry section.

TABLE 21. The fields of member bonus point inquiry

| No.	Field name	Field content
1	Bill ID	System automatically calculates and shows bill ID which applied for member's bonus point.

Continues

TABLE 21 continues

2	POS Number	System automatically shows POS number of bill which is applied member's bonus point.
3	POS Transaction Number	System automatically shows POS transaction number of bill which is applied member's bonus point.
4	Transaction Date	System automatically shows date of bill which is applied member's bonus point.
5	Transaction Time	System automatically shows time of bill which is applied member's bonus point.
6	Total Amount	System automatically shows total amount of bill which is applied member's bonus point.
7	Plan No	System automatically shows plan number which is applied member's bonus point.
8	Event Description	System automatically shows event description apply for member's bonus point.
9	Bonus Point Method	System automatically shows bonus point method apply for member.
10	Bonus Point Type	System automatically shows bonus point type which is applied for member.
11	Point Plan Value	System automatically shows point plan value which is applied for member.
12	Bonus Point	System automatically shows bonus point which is applieed for member.

The "Bonus point plan details" feature in SAP CX serves as a comprehensive interface for managing and understanding the intricacies of a member's bonus point accumulation strategy. Accessible from the member dashboard, this feature allows users to delve into the specifics of each bonus point plan a member is enrolled in. It provides critical data such as the start and end dates of each plan, the rules for point accumulation and redemption, as well as any caps or limitations. The system even offers a detailed breakdown of transactions that have contributed to the member's current point balance under each plan.

This granular insight makes it easier to implement targeted marketing efforts, handle customer inquiries more effectively, and adjust loyalty programs to better meet organizational objectives. Overall, the Bonus Point Plan Details feature is indispensable for anyone tasked with the optimal utilization and management of customer loyalty programs within the SAP CX ecosystem.
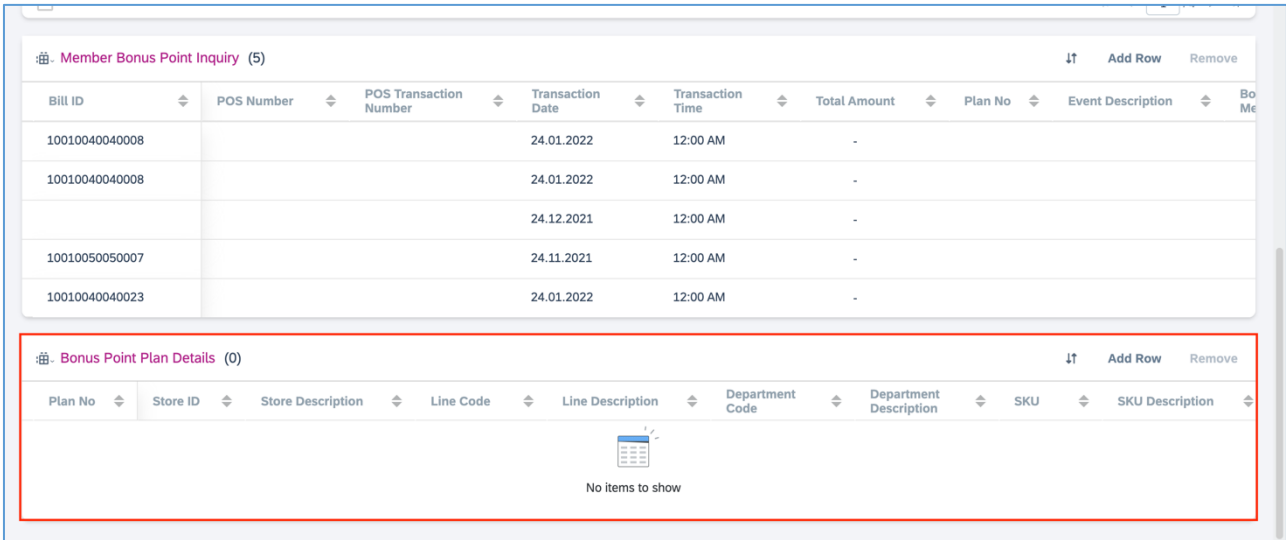
PICTURE 43. Bonus point plan details

This statement serves as an initial overview of the template, highlighting the various components that comprise the bonus point plan detail section.

TABLE 22. The fields of bonus point plan detail

No.	Field name	Field content
1	Plan No	System automatically shows plan no bonus point which is apply for member.
2	Store Code	System automatically shows condition according store of bonus point event which is applied for member.
3	Store Description	System automatically shows store name of bonus point event which is applied for member.
4	Line Code	System automatically shows line code of bonus point event which is applied for member.
5	Line Description	System automatically shows line name of bonus point event which is applied for member.

Continues

TABLE 22 continues

6	Department Code	System automatically shows department code of bonus point event which is applied for member.
7	Department Description	System automatically shows department description of bonus point event which is applied for member.
8	SKU	System automatically shows SKU code of bonus point event which is applied for member.
9	SKU Description	System automatically shows SKU description of bonus point event which is applied for member.

The redemption list in SAP CX serves as a centralized hub for tracking and managing all member point redemptions. Accessible through the member dashboard, this feature provides users with a comprehensive view of a member's point usage history, including details such as redemption dates, point values redeemed, and the specific items or services for which the points were used. The list can often be sorted and filtered according to various criteria, such as redemption type or date range, providing a flexible tool for examining redemption patterns. This information is critical for customer service representatives who may need to address queries or issues related to point redemptions.

Furthermore, the insights gleaned from the redemption list can be invaluable for the marketing team, helping them understand member behavior and preferences, which in turn can guide the creation of more targeted and effective loyalty promotions. Overall, the redemption list feature is a powerful tool for managing and optimizing the customer loyalty experience within the SAP CX platform.

PICTURE 44. Redemption list

This statement serves as an initial overview of the template, highlighting the various components that comprise the redemption list section.

TABLE 23. The fields of redemption list

No.	Field name	Field content
1	Redeem No	System automatically shows redeem number of member.
2	Redeem Date	System automatically shows redeem date of member.
3	Redeem Time	System automatically shows redeem time of member.
4	Store	System automatically shows redeem store of member.
5	Store Name	System automatically shows redeem store name of member.
6	Total Redeem Point	System automatically shows total redeeem point of member.
7	Created Method	System automatically shows created method of member.
8	Mobile Redeem No	System automatically shows mobile redeem number of member.
9	Created By	System automatically shows the user who redeem point for member.

The "Transfer History" section within SAP CX offers users a meticulous record of all point transfer activities related to a member's account. By navigating to this area, one can gain deep insights into the chronological history of how points have been transferred to and from a member's account. Each transfer entry typically encompasses pertinent details such as the date of transfer, the number of points involved, the reason or cause for the transfer, and the source or destination account in case of inter-member transfers.

This feature is especially invaluable for businesses aiming to maintain transparency in their loyalty programs, as it allows customer service representatives to swiftly address and resolve any discrepancies or queries related to point transfers. Additionally, by analyzing transfer patterns and behaviors, companies can refine their strategies to ensure optimum member engagement. In essence, the transfer history tool in SAP CX is not only an instrument for operational accuracy but also a strategic asset for improving member loyalty initiatives.

PICTURE 45. Transfer history

This statement serves as an initial overview of the template, highlighting the various components that comprise the transfer history section.

TABLE 24. The fields of transferring history

No.	Field name	Field content
1	Transfer Date	System automatically shows transfer date of member.
2	Store	System automatically shows redeem store of member.
3	From Member ID	System automatically shows mobile redeem number of member.
4	To Member ID	System automatically shows member who is received point.
5	Transfer Time	System automatically shows mobile redeem number of member.
6	Total transferred point	System automatically shows total transferred point.
7	Reason Code	System automatically shows reason code of member.
8	Reason Description	System automatically shows reason description of member.

This feature is particularly useful for tracking the issuance of physical documents, receipts, or vouchers related to the member. Within this section, users can find a detailed list of each print job, complete with crucial details such as the date and time of printing, the type of document printed, and the printer used. The print history section allows customer service representatives to verify that essential documents have been printed and issued as needed, thereby ensuring accountability and traceability. It can be instrumental in resolving disputes, clarifying member queries, and ensuring the accurate delivery of physical documents.

This level of meticulous record-keeping is vital for both operational transparency and compliance with organizational policies and regulatory guidelines. In summary, the print history feature within SAP CX serves as a valuable tool for audit trails and enhances the integrity of a member's account management.

PICTURE 46. Print history

This statement serves as an initial overview of the template, highlighting the various components that comprise the transfer history section.

TABLE 25. The fields of printing history

No.	Field name	Field content
1	Printed Date	The date print card.
2	Printed By	The user who prints card.
3	Reason Code	The print card reason.
4	Reason Description	The print card reason description.
5	Reprint	Reprint card.

4 CONCLUSION

The SAP CX system is a widely explored subject for research and development. The website operates efficiently, offering potential benefits to businesses in managing their customer services. The central objective of the thesis was to implement the SAP CX system for Company x. Specific aspects like form authentication, data submission forms, content rendering on web pages, and layout systems are straightforward but are built on a foundational knowledge that aids users in comprehending and utilizing them to enhance the system's functionality. The most crucial aspect was designing an architecture that considers customer context, requirements, controllers, and services, along with the techniques necessary for constructing a successful system. However, due to constraints in time and technical expertise, the application only offers certain functionalities to meet the essential study requirements and graduation criteria. To enhance user experience, there is a need for improvements in the UX/UI design of the application, making it more user-friendly. Additionally, the application should be optimized for better performance on various devices, including smartphones and tablets.

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