

THE CONCEPT MODEL FOR DELIZIA SELF SERVICE APPLICATION

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Abstract: Delizia Bakery & Cake is a company engaged in the bakery and cake food business. This observation is based on my internship experience at Delizia Bakery & Cake for approximately one year which was carried out on February 1, 2022 to February 13, 2023. In increasing digitization in business processes, providing innovation in digitizing service systems is something that needs to be considered, based on my experience as an intern at the Delizia Bakery & Cake company, I saw where sales of tart orders were usually done manually. By looking at the opportunities of other companies that have implemented digitalization in their business processes, for example McDonald's, which implements their self service technology in ordering food, I found the idea of an alternative means of selling tarts by making a Self Service Technology tart ordering system. The concept of self service technology is that customers can perform services that have been provided independently and automatically without involving store employees and services provided personally, besides that self service technology is also a new experience and adds to customer interest. and from the results of my research related to the concept of self service technology proposed by me to be used by Delizia Bakery & Cake conceptually approved by stakeholders.

Keywords: Digitalization, Self Service Technology, Experience.

INTRODUCTION

In the current era, technological development is growing so rapidly every day, with the rapid development of technology, it is hoped that it can facilitate the activities of its users, whether it is for daily activities, at work, even in the business sector, therefore technology plays an important role in human life. This happens because technology offers convenience in helping to complete every human job. The role of information and communication technology is very important because of the many demands for the need for fast and precise information exchange [1].

Digitalization in the economy or in organizations in general means the digitalization of business models, products and services and all progress or parts of it. For processes, however, this does not necessarily mean fully automated without human intervention Digitalization in displaying food products for sale can also attract the attention of buyers who feel they are getting a new experience in ordering food, one of the efforts to digitize forms of ordering food, for example, such as ordering tarts using the self service technology (SST) program. SST has developed into an important aspect of consumers' daily lives, SST has been widely accepted by people around the world and this trend continues to increase, as SST grows into an important trend in service delivery [2]. An example of the application of SST is McDonald's, which makes new innovations by providing convenience to customers in meeting their needs. With this fast food restaurant McDonald's developed a self service system using technology, namely by providing a machine called Self Ordering Kiosk. Self ordering kiosk technology can develop the possibility for consumers to order their own menus through modern machines easily and immediately pay at the machine using credit, debit or cash cards at the cashier. The existence of this machine technology can also reduce or cut the queue that usually occurs at the cashier because consumers place orders, pay and pick up orders in the same place. Conversely, Self Ordering Kiosk can reduce interaction between consumers and employees[3].

Delizia Bakery & Cake is a company engaged in food processing such as bread and cakes, and it was in this company that I did an internship program as IT Support for approximately one year. During my internship, I came up with an idea to create a program where when buyers want to buy tarts, they can choose the shape, size, sponge/cake, type of finishing, toppings, and decoration that they want, so that buyers get a new user experience that they will not get in other stores. Tarts have various types whether in terms of shape,

size, layers of bread used, type of finishing used, toppings, even to the decoration used. Usually buyers order tarts from tarts that have been displayed by the store. With this proposal, the author hopes to help Delizia Bakery & Cake in digitizing tart orders and also improving user experience, as well as the convenience of buyers who can choose tarts according to what they want in ordering tart orders, so that they can attract more attention from buyers and also increase comfort with this new user experience.

LITERATURE REVIEW

Digitalization

The rapid development of digital technology characterized by the presence of a number of various sophisticated communication tools, where everyone can process, produce, and send and receive all forms of communication messages, anywhere and anytime, as if without recognizing the limits of space and time, in itself has spurred developments in the mass media sector, which is part of the communication component [4]. Today, digitization is the buzzword in value creation transformation. Digitalization in the economy or in organizations in general means the digitalization of business models, products and services as well as the entire progress or parts thereof. For processes, however, this does not necessarily mean fully automated without human intervention [5].

The impact of digitization for can include improving business process efficiency, quality, and consistency through eliminating manual steps and gaining better accuracy. Digitalization can also enable a better real-time view of operations and results, by integrating structured and unstructured data, providing a better view of data organization, and integrating data from other sources. In addition, digitization can result in better job satisfaction for employees through automation of routine work, thus freeing up time to develop new skills. Digitization also increases compliance through standardization of records and improves recovery through easier storage backup and distribution [6].

An example of a company that implements digitalization in the food industry is McDonald's. According to doubling its fast service ethos, McDonald's implemented their operating system to be completely digital, McDonald's has also invested in automated voice technology to accept drive-through orders. Now in Indonesia, self-service has been implemented by using digital menu screens to make transactions[7].

Self Service Technology

Self Service Technology (SST) is an interface technology that allows customers to obtain a service or transact independently like a service performed by a live employee [8]. The concept of service that starts from the original face to face with services that must meet directly evolves into a trend that services can be facilitated using technology [9]. Self Service Technology is part of the business development carried out by a company by providing self-service innovations according to service needs so that it becomes one of the reasons for staying afloat or advancing in its business [10]. One of the companies that have used SST is Indomaret using the i-Kios machine, Indomaret created a machine called i-Kios, the i-Kios machine is a new innovation that can facilitate consumers in making credit purchase transactions, train ticket bookings, flight ticket bookings, transportation booking code payments, online shopping payments, and much more. Consumers can serve themselves without fear of the cashier making mistakes in data entry, besides that with this i-Kios machine consumers can avoid long queues, even though at the end of the transaction consumers are asked to return to the cashier and make the payment process. [11]

The SST system that has been implemented is not only limited to providing consumer satisfaction as a user, but can increase profits for business owners. As for business owners, SST has proven to be very helpful in providing convenient services for consumers and is very important, especially in achieving productivity and satisfaction. Previous research that is also relevant is the Smartphone Device-Based SST on the Food Menu Ordering System. The resulting system is a form of mobile device-based consumer service that allows consumers to serve themselves [12]

UML (Unified Modeling Language)

- Use Case Diagram

Use case diagrams describe the expected functionality of a system. It emphasizes "what" the system does, and not "how". A use case represents an interaction between an actor and the system. A use case represents a specific task, such as logging into the system, creating a shopping list, and so on. An actor is a human or machine entity that interacts with the system to perform certain tasks. Use case diagrams can be very helpful when we are compiling system requirements, communicating designs with clients, and designing test cases for all features in the system. A use case can include the functionality of another use case as part of its inner process. It is generally assumed that the included use case will be called every time the use case that includes it is executed normally. A use case can be included by more than one other use case, so duplication of functionality can be avoided by pulling out common functionality [13].

- **Activity Diagram**

After creating a Use Case model, each scenario in the Use Case will be described more clearly in the activity diagram. Activity diagram is a modeling that describes a work system of an object or a system, an activity diagram is described by a structured flow of the work process of the use case being processed from the starting point to the end point, each activity is described with notations according to its function [14]. Activity diagrams describe the various activity flows in the system being designed, how each flow starts, decisions that may occur, and how they end. Activity diagrams can also describe parallel processes that may occur in multiple executions. Activity diagrams are special state diagrams, where most states are actions and most transitions are triggered by the completion of the previous state (internal processing). Therefore activity diagrams do not describe the internal behavior of a system (and the interactions between subsystems), but rather describe the processes and paths of activity from the top level in general. An activity can be realized by one or more use cases. Activities describe the processes that run, while use cases describe how actors use the system to perform activities [13].

- **Class Diagram**

Class Diagram is a static model that supports a static view of an evolving system. It shows the classes and relationships between classes that remain constant in the system over time [15]. Class diagrams describe the static structure of the classes in your system and describe the attributes, operations and relationships between classes. Class diagrams help visualize the class structure of a system and are the most widely used diagram type. During the design stage, class diagrams play a role in capturing the structure of all classes that make up the architecture of the system being created [16]. Class has 3 main areas, namely:

- Name, is the name of a class.
- Attributes, are the properties of a class. Attributes symbolize the limit of values that may exist in the object of the class.
- Operation, is something that can be done by a class or that can be done by another class against a class.

- **Sequence Diagram**

Sequence diagram is a UML that describes interactions between objects in and around the system, including users, displays, and so on in the form of messages described against time [17]. Sequence diagrams are commonly used to describe scenarios or series of steps taken in response to an event to produce a certain output. Starting from what triggers the activity, what processes and changes occur internally and what output is produced. Each object, including actors, has a vertical lifeline. Messages are depicted as arrowed lines from one object to another. In the next design phase, messages will be mapped to operations/methods of classes. Activation bar shows the length of execution of a process, usually starting with the receipt of a message [13].

RESEARCH METHOD

After I got the idea of digitalization in the sale of tarts and consulted with IT staff, the next stage I made a proposal to the director of Delizia Bakery & Cake on the digitalization. The proposal received a positive response from the director and continued to the interview session, this interview was conducted to obtain information and input which would later become my foundation for working on further activities. The result of the interview was the android system and user requirements..

RESULT AND DISCUSSION

In planning the design and proposal of the system, there are two types of users, namely customers and admins. In terms of customers, customers can access the custom tart SST to order tarts from choosing sponge, shape, size, finishing, toppings, decoration, and also buyers can also request according to their wishes. Customers can also access the select tart page for another option to order tarts, the difference is that on this page customers are given a choice of various examples of tart models that have been provided by the system and customers can choose the cake model and choose the size they want from the cake model, customers can also add decorations and also request according to their wishes. When initially accessing the application, customers do not need to log in because this application is only used to order tarts which later customers must print an order note and make payments to the cashier. And when the store holds a discount/promo in purchasing tarts, the price of the tarts will be deducted when making payments at the cashier according to the promo held by the store.

In terms of admin, when the admin wants to access the Admin Home Page, the admin must log in first to make sure because the page can only be accessed by the admin. When you have entered the Admin Home Page, the admin can add products if there are new products that you want to add to the system, delete

products if the product is deemed unfit for the market, and the admin can also change products that function to change price descriptions and product photos if there are product updates.

The design of the activity diagram is based on the SST process flow that has been discussed with the company. There are several activity diagrams that are made, namely:

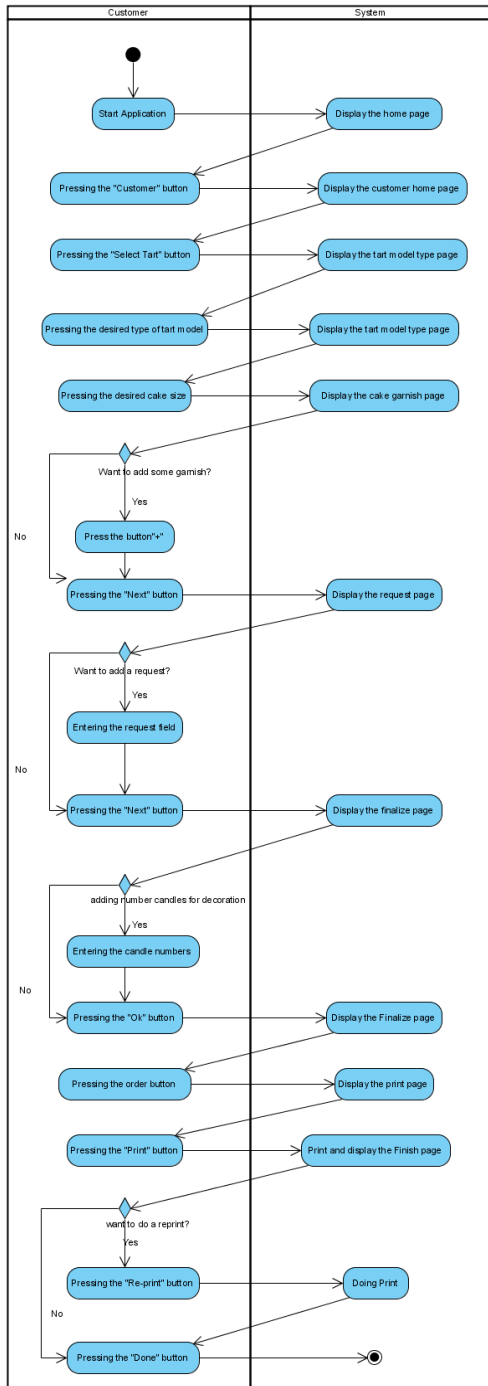


Figure 2. Activity Diagram Ordering Custom Tart

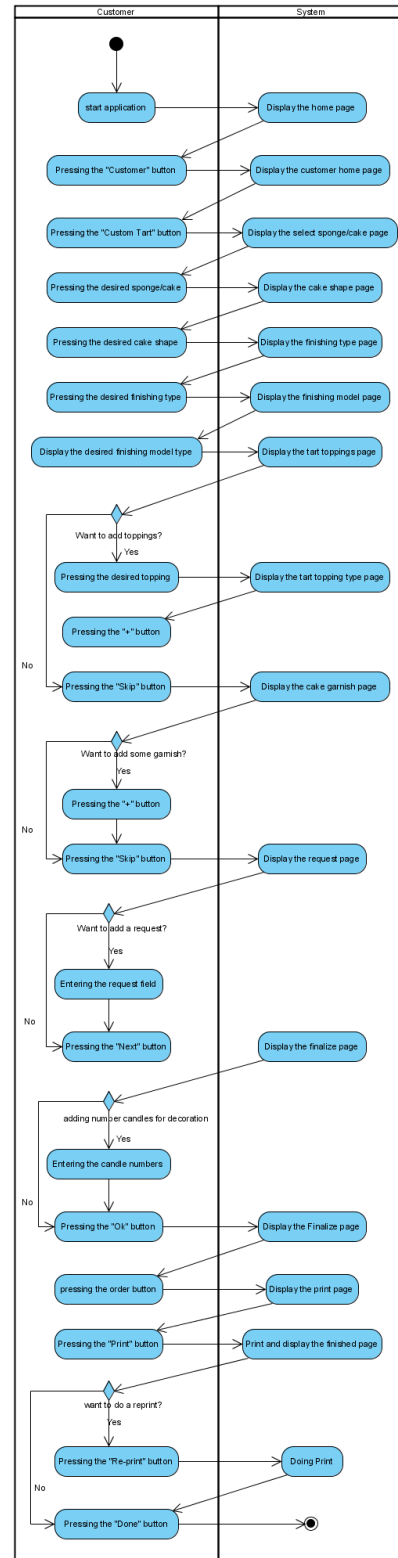


Figure 1. Activity Diagram Ordering Select Tart

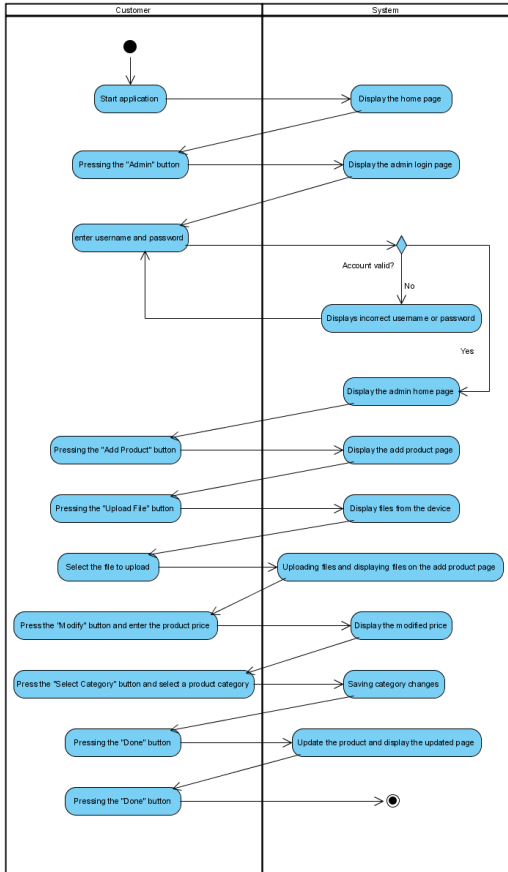


Figure 3. Activity Diagram Add Product

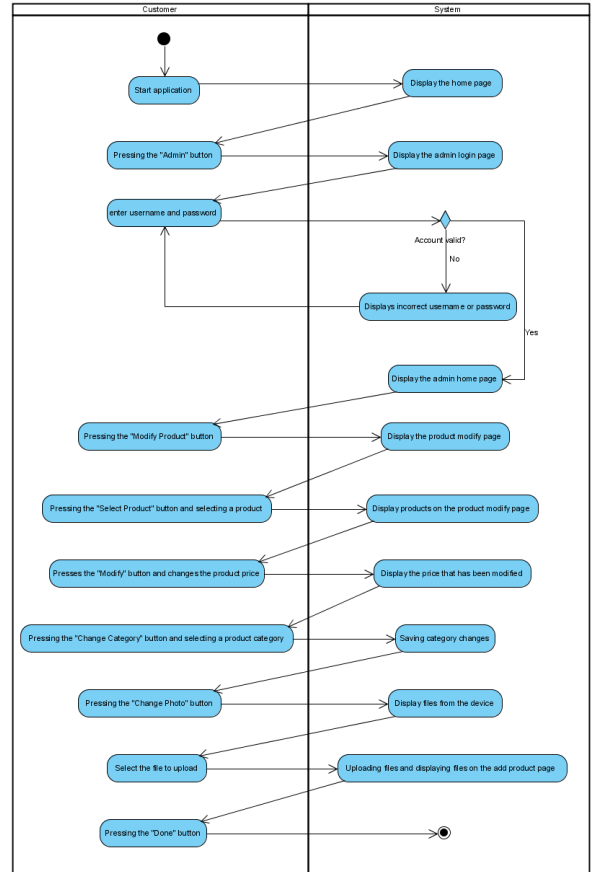


Figure 5. Activity Diagram Modify Product

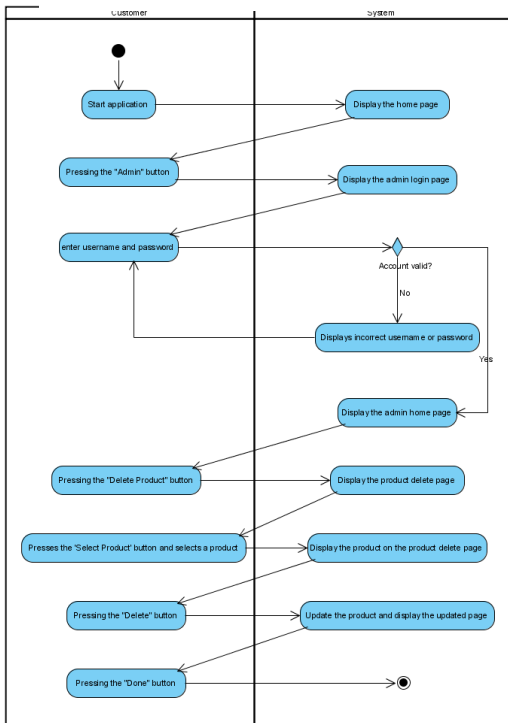


Figure 4. Activity Diagram Delete Product

The use case diagram design is based on user activities described in the activity diagram. From a total of 5 activity diagrams that we designed, there are 6 use cases, among others:

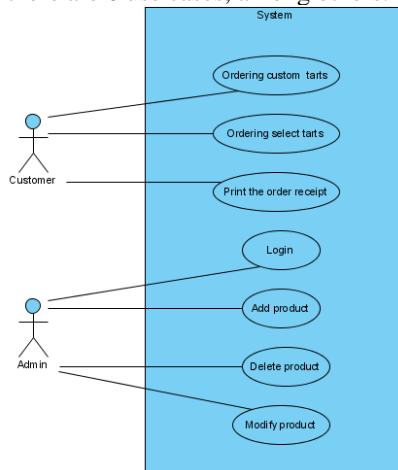


Figure 6. Use Case Diagram

The design of the class diagram is based on the use case diagram, which of the 7 use cases will become several classes with data attributes in each class.

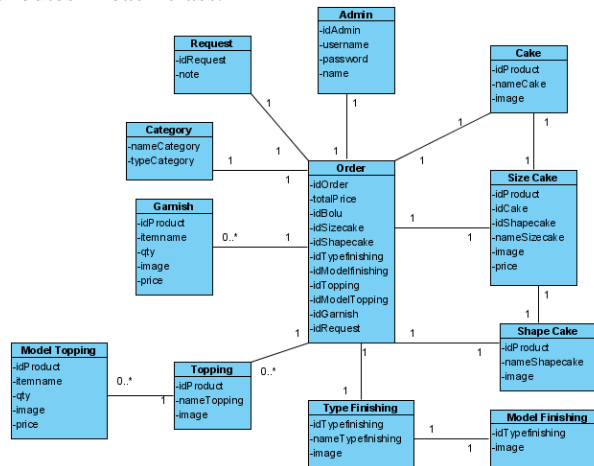


Figure 7. Class Diagram

Sequence diagram is a diagram designed to describe the flow of activities and the flow of data transactions carried out by users and systems.

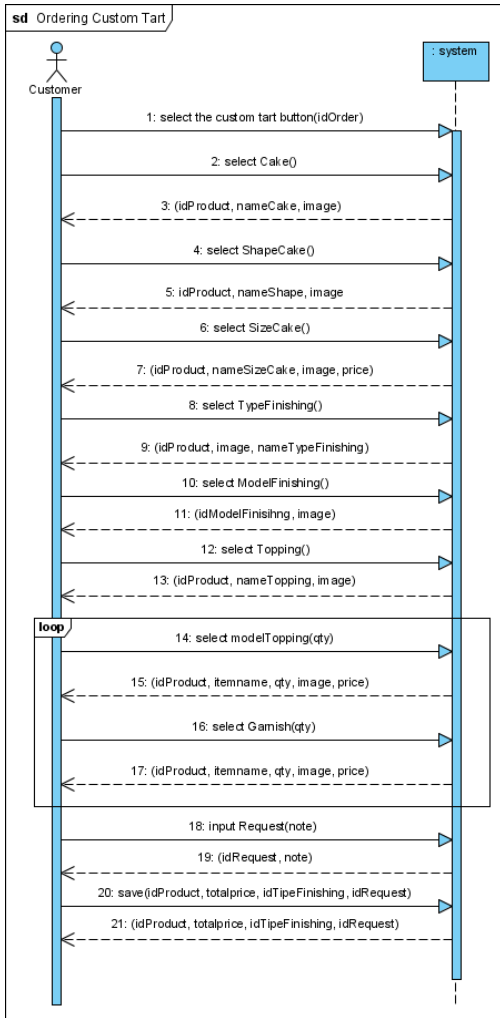


Figure 8. Sequence Diagram Ordering Custom Tart

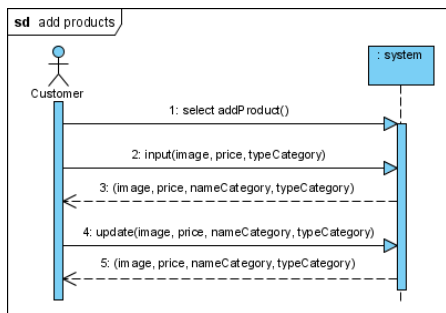


Figure 11. Sequence Diagram Add Product

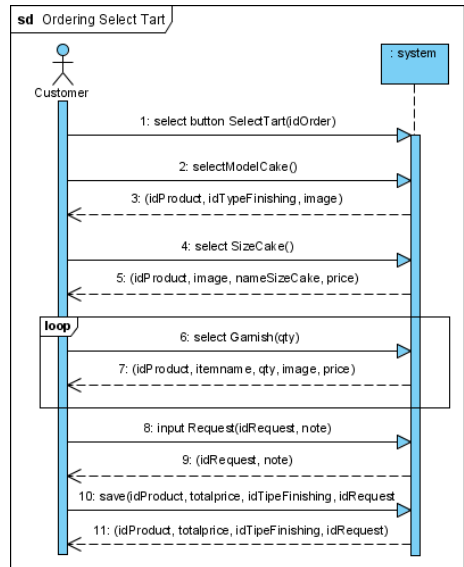


Figure 9. Sequence Diagram Ordering Select Tart

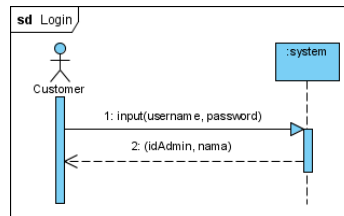


Figure 10. Sequence Diagram Login

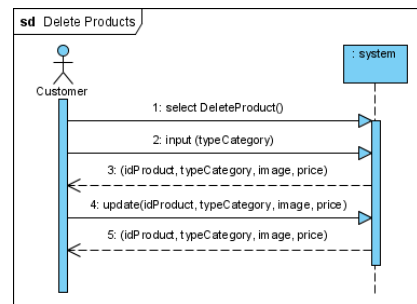


Figure 12. Sequence Diagram Delete Product

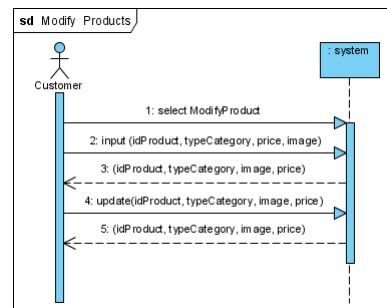


Figure 13. Sequence Diagram Modify Product

CONCLUSION and SUGGESTION

This paper discusses the company's digitalization development efforts in ordering and displaying food products sold using Self Service Technology (SST) called Delizia Self Service. Utilization of the use of Self Service Technology in ordering and displaying food products sold can serve to provide alternative means of selling Delizia Bakery & Cake tarts, increase the sales value of tarts at Delizia Bakery & Cake, and can increase buyer interest, user experience, satisfaction, and comfort when ordering tarts. And when I interviewed the stakeholder, he also agreed that it could help in increasing buyer interest and increasing the value of tart sales.

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