



COURSE NAME: CSF3023 System Thinking and Logic

| Team members | Matrics number |
|-----------------------------------|----------------|
| AINUL HIDAAYAH BINTI SHAHIBOLLAH | S79722 |
| AHMAD SOLEHUDDIN BIN AHMAD SUFIAN | S79772 |
| MUHAMMAD ARIF BIN MOHD AMRAN | S80162 |
| AHMAD SYAMIL BIN AHMAD ZAM ZAM | S80221 |

Bachelor of Computer Science (Software Engineering) with Honours

Lecturer name:

Professor Dato' Dr. Aziz Deraman

Table of content

| | |
|---|-------|
| 1.0 Introduction | 3 |
| 2.0 Funtional requirements | |
| 2.1 Requirement 1: User Registration | 4-5 |
| 2.2 Requirement 2: Browse menu & search | 6-7 |
| 2.3 Requirement 3: Shopping Cart Management (Add to cart) | 8-9 |
| 2.4 Requirement 4: Payment Process | 10-11 |
| 2.5 Requirement 5: Order Tracking | 12-14 |
| 3.0 References | 15 |

1.0 Introduction

The Online Food Order System is a computer-based application that enables customers to view menus from food vendors, order food, as well as pay for the food online. Essentially, the Online Food Order System is a centralized software that brings together customers, food vendors, and food order services. The primary aim of developing Online Food Ordering System is to ease the existing food ordering process without using telephone calls or actually visiting eating joints. Customers can register, login, order food, monitor their orders and get food delivered to their desired destination. Food joints will benefit from this by efficiently managing orders, minimizing mistakes and increasing their customer base. Such a system is widely applied in the current digital technology era because it saves time, increases the degree of accuracy and increases customer satisfaction. This project makes use of system thinking and logical design in order to concentrate on the breakdown of the Online Food Ordering System.

2.0 Functional requirements

2.1 Requirement 1: User Registration

The User Registration component of the system makes it possible for a new user to register for an account with the Online Food Ordering System. While a user registers for an account, the user is required to provide personal information that may include name, e-mail address, phone number and password. This information is validated to ensure that the e-mail address does not already exist. The significance of this function is that it makes possible the safe access, services, tracking and authentication in the system.

Pseudocode:

Begin

 Display registration form

 Input Name

 Input Email

 Input PhoneNumber

 Input Password

 If (Name = null OR Email = null OR PhoneNumber = null OR Password = null)

 Display "Please fill in all required fields"

 Else

 If (Email already exists in database)

 Display "Email already registered"

 Else

 Store Name, Email, PhoneNumber, Password in database

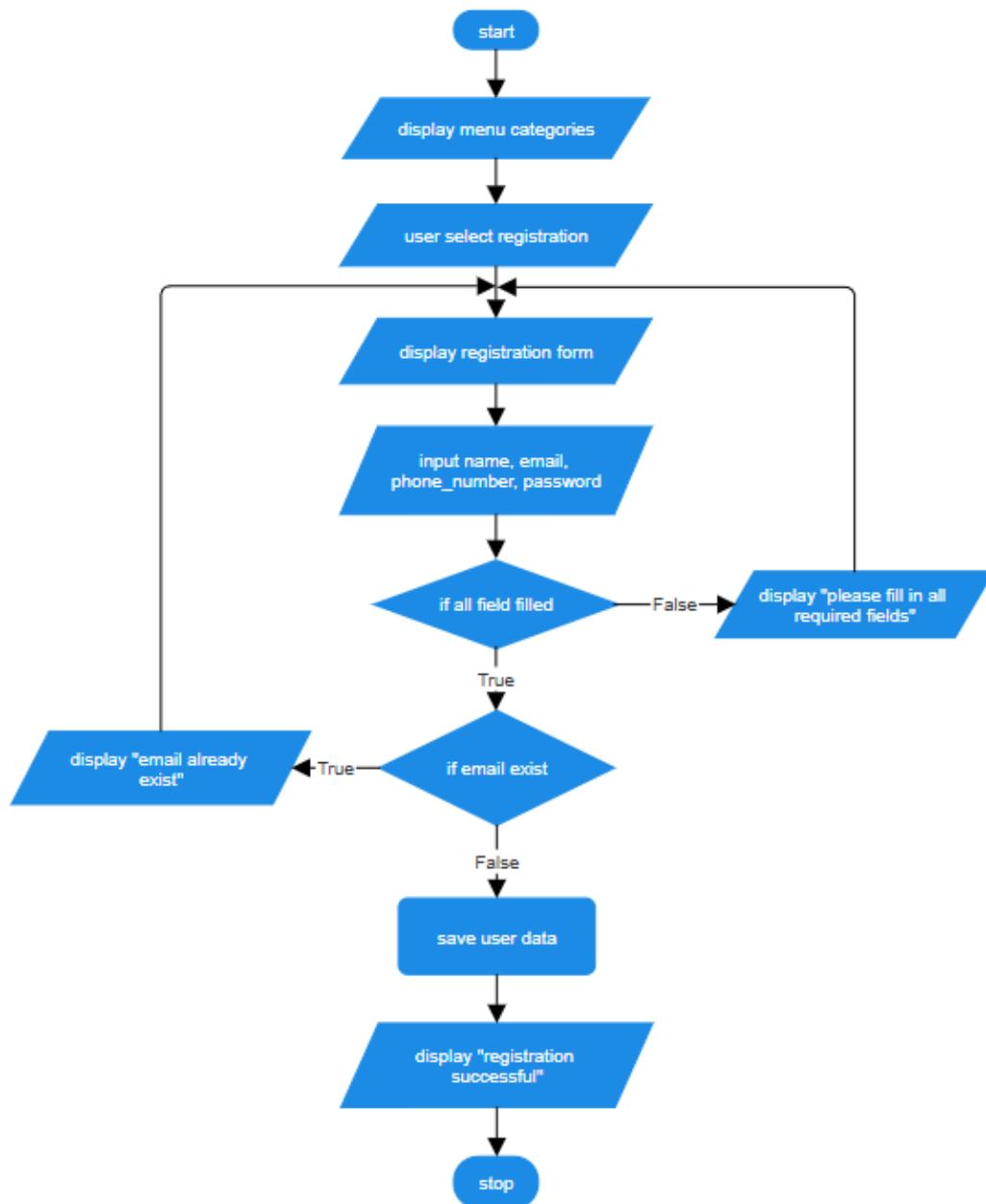
 Display "Registration Successful"

 Endif

 Endif

End

Flowchart:



2.2 Requirement 2: Browse menu & search

Users can view available food items categorized by cuisine or price and select items to add to their virtual shopping cart.

Pseudocode:

BEGIN

 DISPLAY Menu Categories

 USER selects Category

 FOR EACH item IN Category

 DISPLAY Item Name, Description, and Price

 ENDFOR

 IF User clicks “Add to Cart” THEN

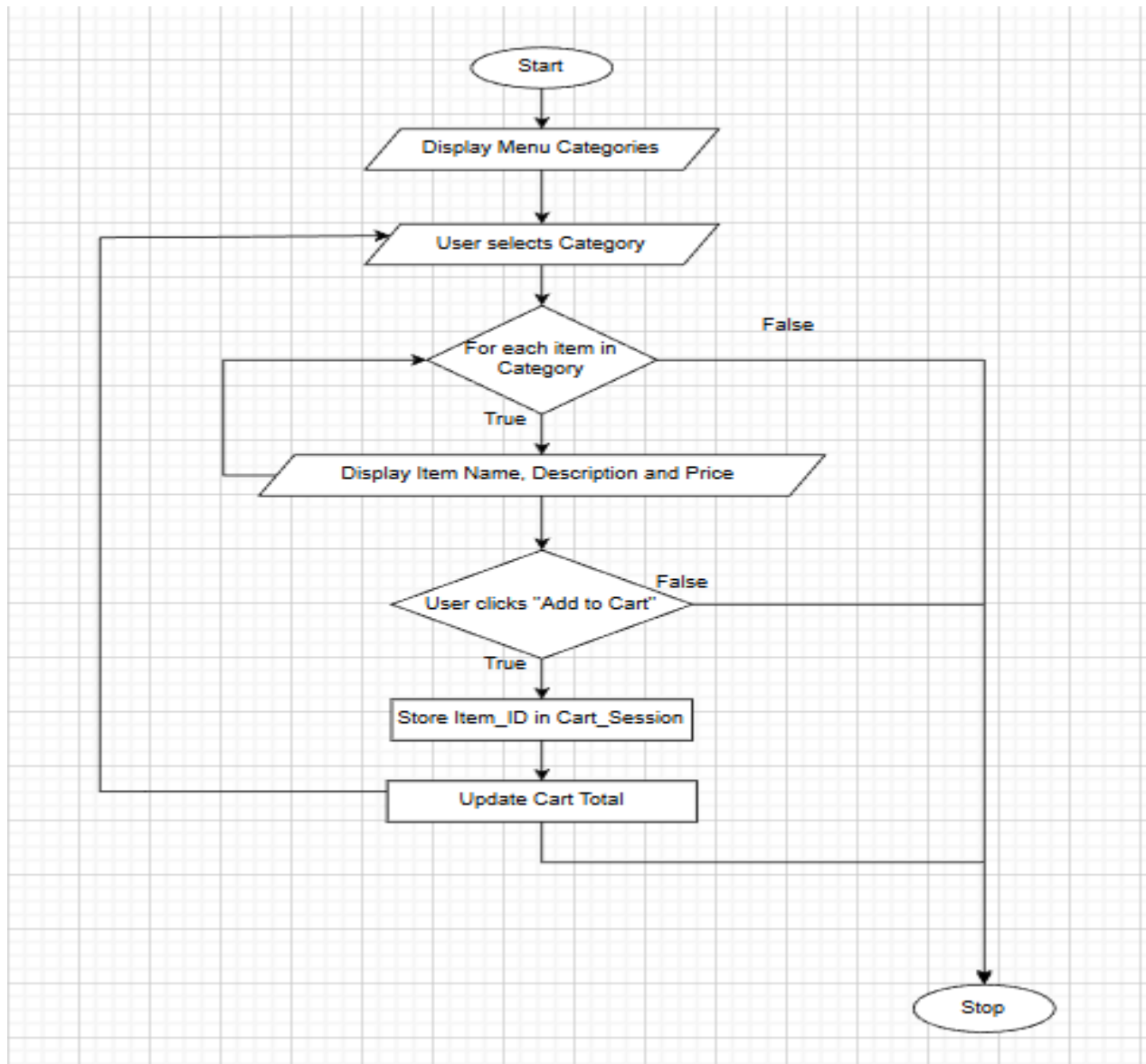
 STORE Item_ID in Cart_Session

 UPDATE Cart Total

 END IF

END

Flowchart:



2.3 Requirement 3: Shopping Cart Management (Add to cart)

This function allows users to review their selected food items, adjust quantities (increase or decrease), or remove items before proceeding to checkout. The system must automatically recalculate the total price whenever a change is made.

Pseudocode:

BEGIN

 DISPLAY all items in Cart_Session

 CALCULATE Total_Price = Sum of (Item_Price * Quantity)

 DISPLAY Total_Price

IF User chooses "Update Quantity" THEN

 INPUT New_Quantity

 IF New_Quantity > 0 THEN

 SET Item_Quantity = New_Quantity

 ELSE

 REMOVE Item from Cart

 END IF

 RECALCULATE Total_Price

ELSE IF User chooses "Remove Item" THEN

 DELETE Item from Cart_Session

 RECALCULATE Total_Price

ELSE IF User chooses "Checkout" THEN

 PROCEED to Payment Requirement

END IF

END

Flowchart:



2.4 Requirement 4: Payment Process

This function allows user to pay for the ordered product and directs the money transfer to the vendor.

Pseudocode:

START

 DISPLAY item in cart

 IF item in Cart_Session == null THEN

 DISPLAY "Error: You have no item in your cart"

 ELSE

 PaymentResponse = Gateway.Authorize(PaymentDetails, Total_Price)

 END IF

 IF PaymentResponse == "SUCCESS" THEN

 Transfer USER's money to VENDOR

 DISPLAY "Payment Successful!"

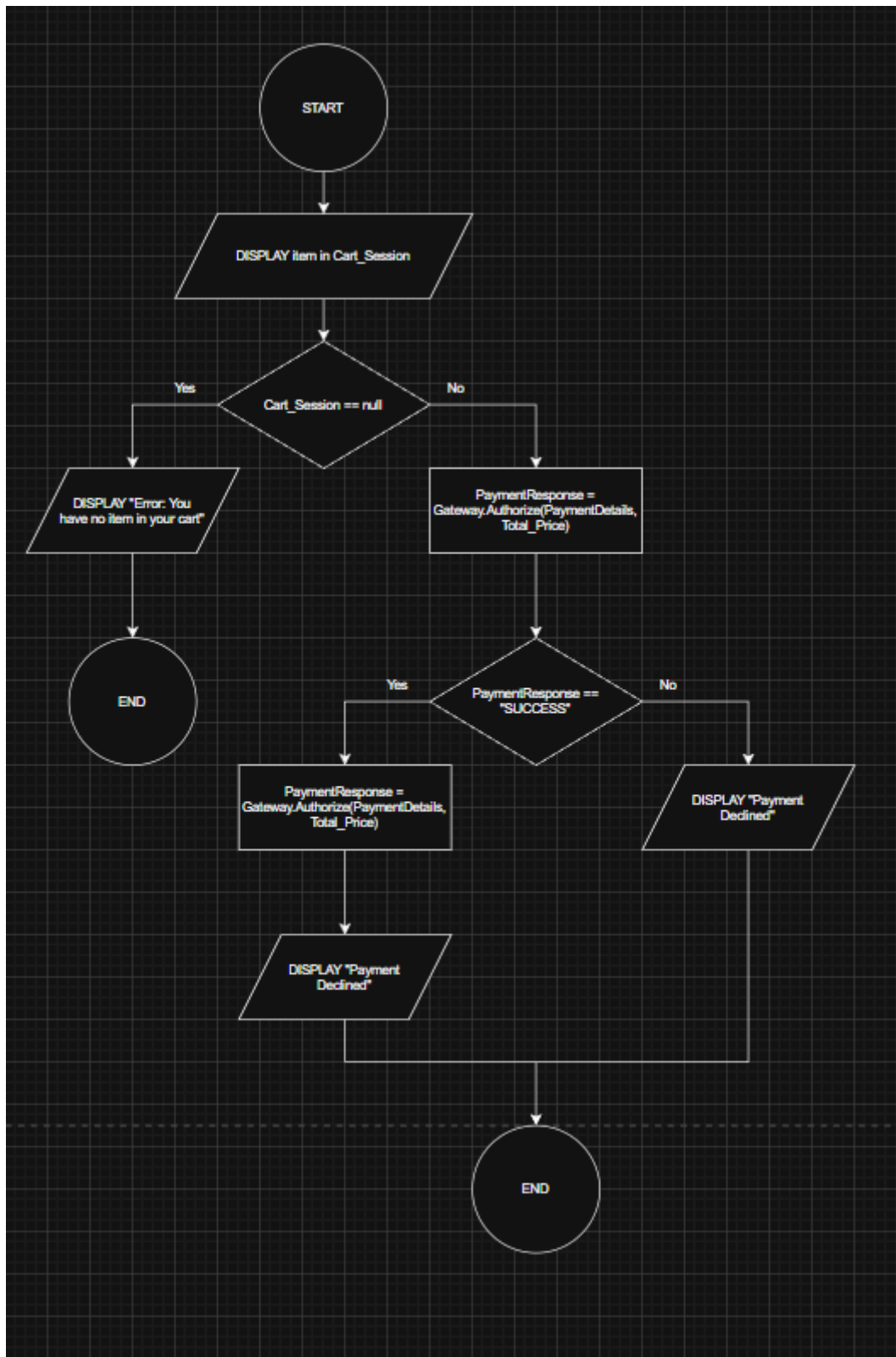
 ELSE

 DISPLAY "Payment Declined"

 END IF

END

Flowchart:



2.5 Requirement 5: Order Tracking

This requirement handles the financial transaction once the user checks out from the cart. It allows the user to select a payment method, validates the transaction, and generates a digital receipt.

Pseudocode:

Start

Open apps/website

Navigate to Order Tracking page

IF user is logged in THEN

 Select order from Order History

ELSE

 PROMPT user for Order ID and phone/email

END IF

IF order is found THEN

 FETCH current order status and ETA

 DISPLAY status and ETA to user

WHILE order status is NOT "Delivered" AND NOT "Canceled" DO

 WAIT for update interval

 REFRESH order status

 IF status is updated THEN

 NOTIFY user

 DISPLAY new status

 ELSE

 CONTINUE

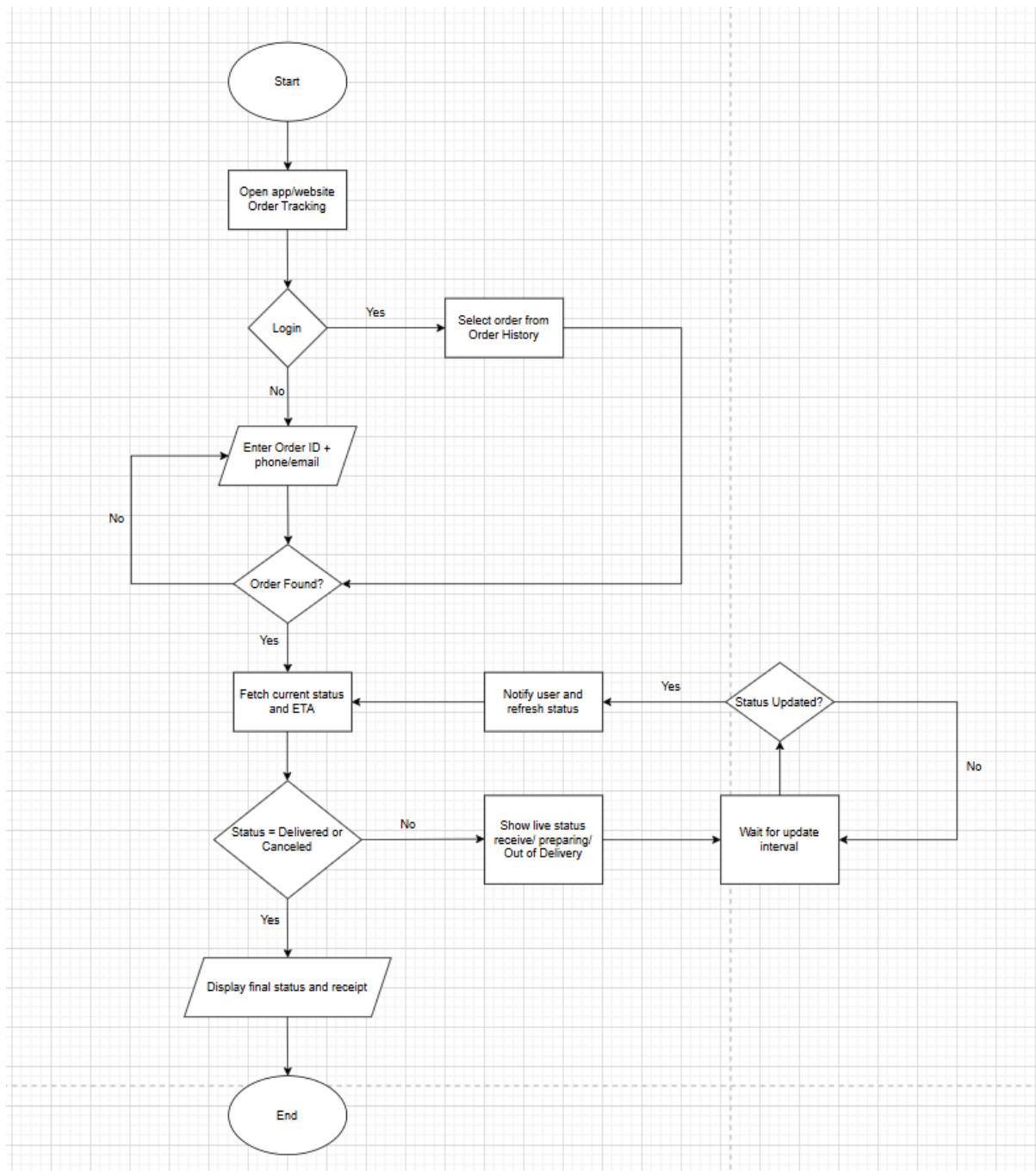
 END IF

```
    IF status is "Prepared" OR "Out for Delivery" THEN
        DISPLAY live status tracking
    END IF
END WHILE

DISPLAY final status ("Delivered" or "Canceled")
DISPLAY receipt if available
ELSE
    DISPLAY "Order not found" message
END IF

END
```

Flowchart:



3.0 References

-Lucidchart. (2019). *Flowchart Symbols and Notation*. Lucidchart.com.

<https://www.lucidchart.com/pages/flowchart-symbols-meaning-explained>

-Ulemu Mponela, Dr. Kadar Shereef, & Dr. Tawarish. (2024, February 17). *Online Food Ordering System*. ResearchGate; HM Publishers.

https://www.researchgate.net/publication/378293405_Online_Food_Ordering_System

-GeeksforGeeks. (2023, November 23). *How to write a Pseudo Code?* - GeeksforGeeks. GeeksforGeeks.

<https://www.geeksforgeeks.org/how-to-write-a-pseudo-code/>

-<https://www.ibm.com/docs/en/rational-soft-arch/9.7.0?topic=diagrams-flowchart-symbols>

- Google Search. (2019). Google.com.

<https://www.google.com/search?q=https://www.ibm.com/docs/en/rational-soft-arch/9.7.0%3Ftopic%3Ddiagrams-flowchart-symbols>

-*Rational Software Architect*. (2017). Ibm.com.

<https://www.ibm.com/docs/en/rational-soft-arch/9.7.0?topic=diagrams-flowchart-symbols>