|  |  |
| --- | --- |
| canteen  Students and staff in MTU waste a considerable amount of time queuing up in the canteen and Bistro to order food. In addition, there is considerable food wastage. | Canteen Time & Food Wastage System at MTU |

Text

Description automatically generated with low confidence

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Table of Contents

[1. Use case scenarios 1](#_Toc120708661)

[1. put food on display 1](#_Toc120708662)

[2. serve customer 1](#_Toc120708663)

[3. Cook food 2](#_Toc120708664)

[4. record food wastage 2](#_Toc120708665)

[5. make payment 3](#_Toc120708666)

[6. Order food 3](#_Toc120708667)

[7. Charge for impulse 4](#_Toc120708668)

[8. Take payment 5](#_Toc120708669)

[2. Non-Functional Requirements 5](#_Toc120708670)

[3. Business Rule Grid 6](#_Toc120708671)

# Use case scenarios

|  | Name | ID |  | Primary Actors | Task Pool |
| --- | --- | --- | --- | --- | --- |
|  | [cook food](#FxwG.SGGAqBwAdZf) | UC10 |  | Head chef |  |
|  | [charge](#dSQG.SGGAqBwAdY_) for impulse | UC08 |  | Cashier |  |
|  | [make payment](#fXbElSGGAqCSARJl) | UC16 |  | Customer |  |
|  | [put food on display](#wAoG.SGGAqBwAdaS) | UC13 |  | Server |  |
|  | [record food wastage](#h_wG.SGGAqBwAdZw) | UC11 |  | Head chef |  |
|  | [order](#l6NElSGGAqCSARJH) food | UC15 |  | Customer |  |
|  | [serve customer](#NbgUlSGGAqCSARLc) | UC18 |  | Server |  |
|  | [receive payment](#8ECklSGGAqCSARKI) | UC17 |  | Cashier |  |

# 1. put food on display

ID: UC13

summary:

allows the customer to order food from the display

basic path:

1. the server set out equipment required to put the food in and serve the food
2. then the server makes batches of the food items cooked by the head chef
3. finally, the server gets the food items from the kitchen and put them on the display counter for the customer to order

|  |  |
| --- | --- |
| Primary Actors | Server |
| Level | N/A |
| Complexity | N/A |
| Use Case Status | N/A |
| Implementation Status | N/A |
| Preconditions | the food is cooked by the head chef for that day food is ready to be displayed on the counter |
| Post-conditions | the food is displayed on the counter and customer is able to see and order the food |
| Author | N/A |
| Assumptions | N/A |

## 2. serve customer

ID: UC18

summary:

serves food to the customer

basic path:

1. the server asks the customer what they want to order
2. the customer orders the food
3. server can view orders
4. server ready the food for the customer to take

|  |  |
| --- | --- |
| Primary Actors | Server |
| Supporting Actors | Customer |
| Level | N/A |
| Complexity | N/A |
| Use Case Status | N/A |
| Implementation Status | N/A |
| Preconditions | customer is ready to make the order server is ready to take orders |
| Post-conditions | the server serves the customers |
| Author | N/A |
| Assumptions | N/A |

# 3. Cook food

ID: UC10

summary:

allows the head chef to decide how much food needs to be cooked for the day

basic path:

1. the head chef looks at the previous day records for cooked food and the food items that was sold
2. the head chef also looks at the food wastage from the previous day
3. the head chef then calculates estimated food required for the day based on records from the previous day

|  |  |
| --- | --- |
| Primary Actors | Head chef |
| Abstract | true |
| Level | N/A |
| Complexity | N/A |
| Use Case Status | N/A |
| Implementation Status | N/A |
| Preconditions | previous record of cooked food and sold food items is available the previous record from food wastage is available |
| Post-conditions | head decides 'x' amount of food needs to be cooked for the day |
| Author | N/A |
| Assumptions | N/A |

# 4. record food wastage

ID: UC11

summary:

1. allows the head chef to know how much food was wasted on the day.
2. allows the head chef to estimate how much food will be cooked the next day.

basic path:

1. head chef look at the records for the food that was cooked on the day
2. then the head chef asks the server about the most and least food items sold on the day
3. by these records the head chef can calculate the total amount of food wastage for the day.

|  |  |
| --- | --- |
| Primary Actors | Head chef |
| Supporting Actors | Server |
| Level | N/A |
| Complexity | N/A |
| Use Case Status | N/A |
| Implementation Status | N/A |
| Preconditions | records for food cooked and food items sold on the day is available |
| Post-conditions | the head chef calculated the total amount of food items wasted on the day |
| Author | N/A |
| Assumptions | N/A |

# 5. make payment

ID: UC16

summary:

allows the customer to make the payment

basic Path:

* customer queue up to pay
* customer brings the food to the till to pay
* cashier inputs food items into the system
* System calculates payment amount.
* System generates a bill.
* Customer presents accepted form of payment (student/staff ID or credit card).
* cashier executes the Process of Payment.

|  |  |
| --- | --- |
| Primary Actors | Customer |
| Supporting Actors | Cashier |
| Level | N/A |
| Complexity | N/A |
| Use Case Status | N/A |
| Implementation Status | N/A |
| Preconditions | the customer has the MTU card/bank card available to make the payment the machine is working properly the customer inserts the card into the machine |
| Post-conditions | the payment was accepted by the system |
| Author | N/A |
| Assumptions | N/A |

# 6. Order food

ID: UC15

summary: allows the customer(student/staff) to selects items from the menu to order

Basic path:

1. customers select food item(S) to order from the menu
2. customer queue up to order food
3. customer goes to the food counter to place the order
4. the server prepares their food
5. the server gives the order to the customer

|  |  |
| --- | --- |
| Primary Actors | Customer |
| Supporting Actors | Server |
| Level | N/A |
| Complexity | N/A |
| Use Case Status | medium level of details |
| Implementation Status | N/A |
| Preconditions | customer is ready to order the food. customer queue up |
| Post-conditions | The customer ordered the order. The server served the customer. |
| Author | N/A |
| Assumptions | N/A |

# 7. Charge for impulse

ID: UC08

summary:

allows the system to print the bill for the food items inserted into the system

basic Path:

1. customer brings the food to the counter
2. cashier inputs the food items into the system
3. the system calculates the total amount to be charged
4. the system prints the bill

|  |  |
| --- | --- |
| Primary Actors | Cashier |
| Supporting Actors | Customer |
| Level | N/A |
| Complexity | N/A |
| Use Case Status | N/A |
| Implementation Status | N/A |
| Preconditions | the cashier inputs food items into the system the system calculates the total amount to be charged |
| Post-conditions | the system print the calculated amount |
| Author | N/A |
| Assumptions | N/A |

# 8. Take payment

ID: UC17

summary:

cashier receives payment from the customer for food they want to buy

basic path:

1. system prints the bill
2. the cashier asks for the payment
3. customer inserts/tabs the accepted card(student/staff ID or bank car) into the machine
4. the payment is successfully made by the customer

|  |  |
| --- | --- |
| Primary Actors | Cashier |
| Supporting Actors | Customer |
| Level | N/A |
| Complexity | N/A |
| Use Case Status | N/A |
| Implementation Status | N/A |
| Preconditions | the system calculated the total amount to be charged the system is ready to receive the payment |
| Post-conditions | customer paid successfully |
| Author | N/A |
| Assumptions | N/A |

# 2. Non-functional requirements

| ID | Kind | Name | Description |
| --- | --- | --- | --- |
| REQ003 |  | Customers payment details should be encrypted |  |
| REQ004 |  | Allergens should appear on dish description |  |
| REQ002 |  | Orders should appear in order of pickup time |  |
| REQ001 |  | Speed of pickup time |  |

# 3. Business Rule Grid

| ID | Name | Rule | Type |
| --- | --- | --- | --- |
| BR001 | Permission | We must get approval from the chief for certain orders in order to maintain customer satisfaction. E.g, For any transaction over $30, the chief must be informed and accept the transaction. |  |
| BR002 | Purchase order | Before any product is handed out, a purchase order Number must be shown and validated by a member of staff. E.G, When calling for a certain order number make sure the numbers are the same and the product is valid. |  |
| BR003 | Returns | As a business, we are able to accept customers’ returns for valid reasons. E.G Bringing back food saying it’s cold, wrong order, etc. |  |
|  | Rule3 |  |  |
|  | Rule4 |  |  |

# 3.1. Business Rules grid

| ID | Name | Rule |
| --- | --- | --- |
| 001 | B1 | Format of student/staff card |
| 002 | B2 | Menu options must be edited and displayed for customers |
| 003 | B3 | Customers are given 10 minutes after initiating an order to complete the orderor the order will be cancelled |
| 004 | B4 | All food must be logged for the end of day wastage report |
| 005 | B5 | The food wastage report must be sent to the head chefs database |
| 006 | B6 | Customers must present their Staff/Student ID to obtain thier order |
| 007 | B7 | Customers are to collect thier orders within 10 minutes of it being plated |