ET0104

ECS Project

Overall Report

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1. **Introduction**
   1. **Overall System Description**The system we chose is a drink dispenser. The drink dispenser aims to guide the user through 9 different drinks, which are as follows:

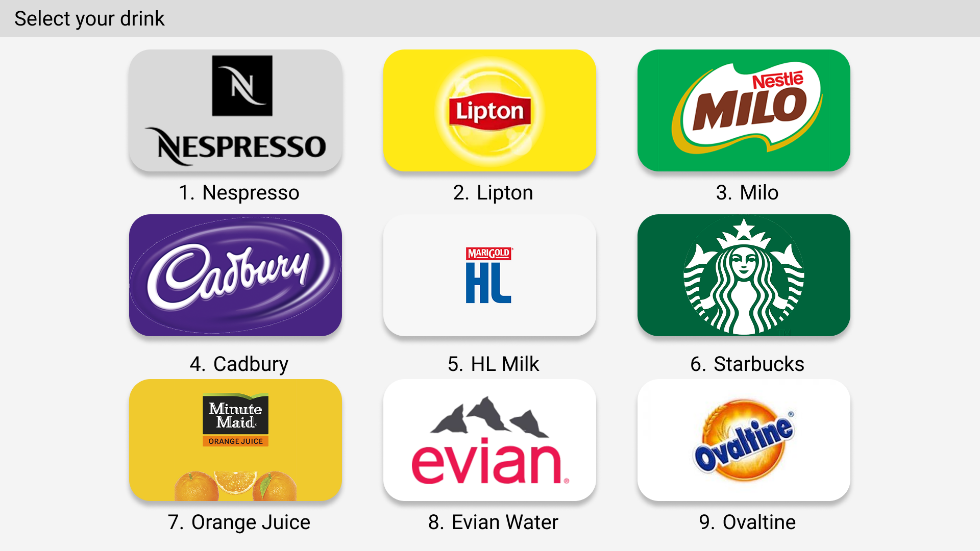
* Nespresso
* Lipton Tea
* Nestle Milo
* Cadbury Hot Chocolate
* Milk
* Starbucks Coffee
* Orange Juice
* Water
* Ovaltine

Other than the drink selection, the drink dispenser allows the user to customise the drink. For example, if the user selects Nespresso, the user can choose the amount of sugar to be added, and an option for adding milk or not.

* 1. **Challenges of the Project**  
     One challenge that we encountered is that we had to create Graphical User Interface (GUI) that simple to use, without prior knowledge of how to create one. Through inspirations and tutorials online, we managed to create one that meets the requirements:  
       
     A screenshot of a computer

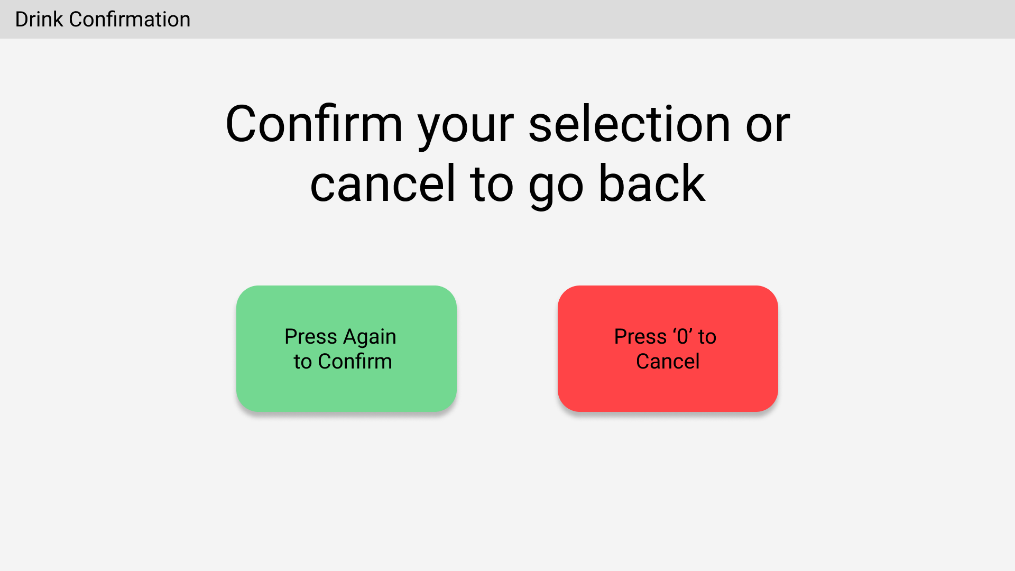
     AI-generated content may be incorrect.

1. **User Manual**
   1. **Drink Selection**

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The program will display drink selection page upon launching. The user can choose 9 different drinks, ranging from coffees, hot chocolate, tea, to orange juice. To select a drink, press the number on the keypad to the corresponding number below each drink. For example, if the user would like to drink orange juice, the user would have to press ‘7’ on the keypad.

The program will then ask the user to confirm the selected drink as described in the image below, either press the same number again to confirm the selected drink, or press ‘0’ to cancel the selection, and return to the drink selection page. Once selected, the selection cannot be cancelled any more.



After this page, the program will either prepare the drink, or it will request the user to customise the drink depending on the type of drink selected. Below shows a table of the drink and the customisable options

|  |  |  |  |
| --- | --- | --- | --- |
| Drinks / Options | Temperature  Option | Sugar  Option | Milk  Option |
| Nespresso | O | P | P |
| Lipton | O | P | P |
| Milo | O | O | O |
| Cadbury | P | O | O |
| HL Milk | P | O | O |
| Starbucks | O | P | P |
| Orange Juice | O | O | O |
| Evian Water | P | O | O |
| Ovaltine | O | O | O |

* 1. **Temperature Option**

A screenshot of a computer

AI-generated content may be incorrect.

The temperature option only applies to the following drinks:

* Evian Water
* HL Milk
* Cadbury

The program will ask the user to select the temperature of the drink. There will be 3 options to choose from as shown above image:

* Hot
* Cold
* Normal (Ambient Temperature)

To choose the temperature for the drink, press the number on the keypad to the corresponding number below each temperature option. For example, if the user wants to have a hot drink, they will have to press ‘1’ on the keypad.

* 1. **Sugar Option**

A few icons of different types of sugar

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Similarly to the temperature option, the sugar option only applies to selected drinks which are:

* Nespresso
* Lipton
* Starbucks

Once either one of the drinks from above are selected and confirmed, the program will first ask to choose the amount of sugar to be added to the drink. There are 3 options that the user can select from:

* No Sugar
* Less Sugar
* Normal

Same as temperature option, to choose, simply press the number on the keypad that corresponds to the number below each option. Once the option has been selected, the program will then request the user to choose whether to add milk to the drink. Details will be explained in the next section.

* 1. **Milk Option**

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As mentioned in the previous section, the milk option is requested after the sugar level is selected. Thus, it is only applied to the same drinks as the sugar option. Once the sugar level is selected, the program will then request the user to select one of the following:

* Add Milk
* No Milk

To select the option, the user has to use the keypad to key in the number that corresponds to the number below the option. Therefore, if the user wants milk to be added, they will have to press ‘1’.

* 1. **Preparation and Completion**

A black and white image of a machine

AI-generated content may be incorrect.

Once the drink has been confirmed or customised finish, the program will prepare the drink. The above image will be shown to indicate that it is preparing. Please wait until the screen shows that it is completed, as shown below:

A cartoon of a drink with a straw

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Once it is completed, the program will wait for a while, and it will return to the drink selection page.

1. **Use case 1 - Select drinks that has sugar and milk options**
   1. **Use Case Diagram**

**A diagram of a person's process

AI-generated content may be incorrect.**

* 1. **Interaction Diagram**

**A diagram of a company

AI-generated content may be incorrect.**

1. **Use Case 2 - Select drinks that has temperature option**
   1. **Use Case Diagram**

**A diagram of a person with text

AI-generated content may be incorrect.**

* 1. **Interaction Diagram**

**A diagram of a diagram

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1. **Work Assigned**

Below is a table of the worked assigned to each team member

|  |  |
| --- | --- |
| Lau Yue Hang | Poh Boon Siong |
| * Designed and coded the program * Designed the UML for Use Case 1 | * Designed the GUI for the program * Designed the UML for Use Case 2 * Created the User Manual |