



avantika
UNIVERSITY

Assignment -1

Object oriented programming



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Problem Statement

This Assignment consists of a complete understanding of an Application and start thinking of its features and performing abstraction into suitable classes with their interconnections and also specifying the features/attributes and methods in those classes and how the classes merge and interact with each other in the course of the entire application.

THE ASSIGNMENT SHOULD BE CONSISTED OF -

1. Describing the Entire application Inputs, Outputs and Processes involved with complete Problem Definition.
2. Abstraction (Identification of correct classes and their associations) to implement the project.
3. Features and Methods available within classes
4. Classes Messaging and Interconnections.
5. Graphical User Interface and Main Flow of the Project
6. Reports to showcase the output.
7. Anything else you feel should be included.

Identification of Problem

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CANTEEN MANAGEMENT SYSTEM

It happens with most of the students when they don't know the menu of mess or canteen. They need to go from the classroom till the mess or canteen, just in order to check what has cooked in the mess or canteen.

There should be such a system where canteen management staff update the menu of mess for each time (includes breakfast, lunch and dinner) as well as in the canteen so that students need not to struggle for going in the mess or canteen. Students must be able to get the things on his device as soon as the menu gets updated.

The flow of program will go as below -

Note -

- This is the one time process, other than this user (food staff) will be able to update or change the menu list at every time he wants.
- Menu list of mess will show up all the things including roti/paratha, sabji, namkeen, achar, sweet and any other thing if made.

03 ABSTRACTION

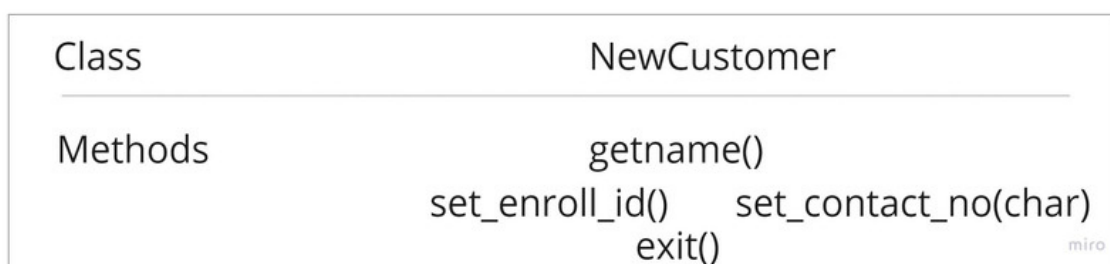
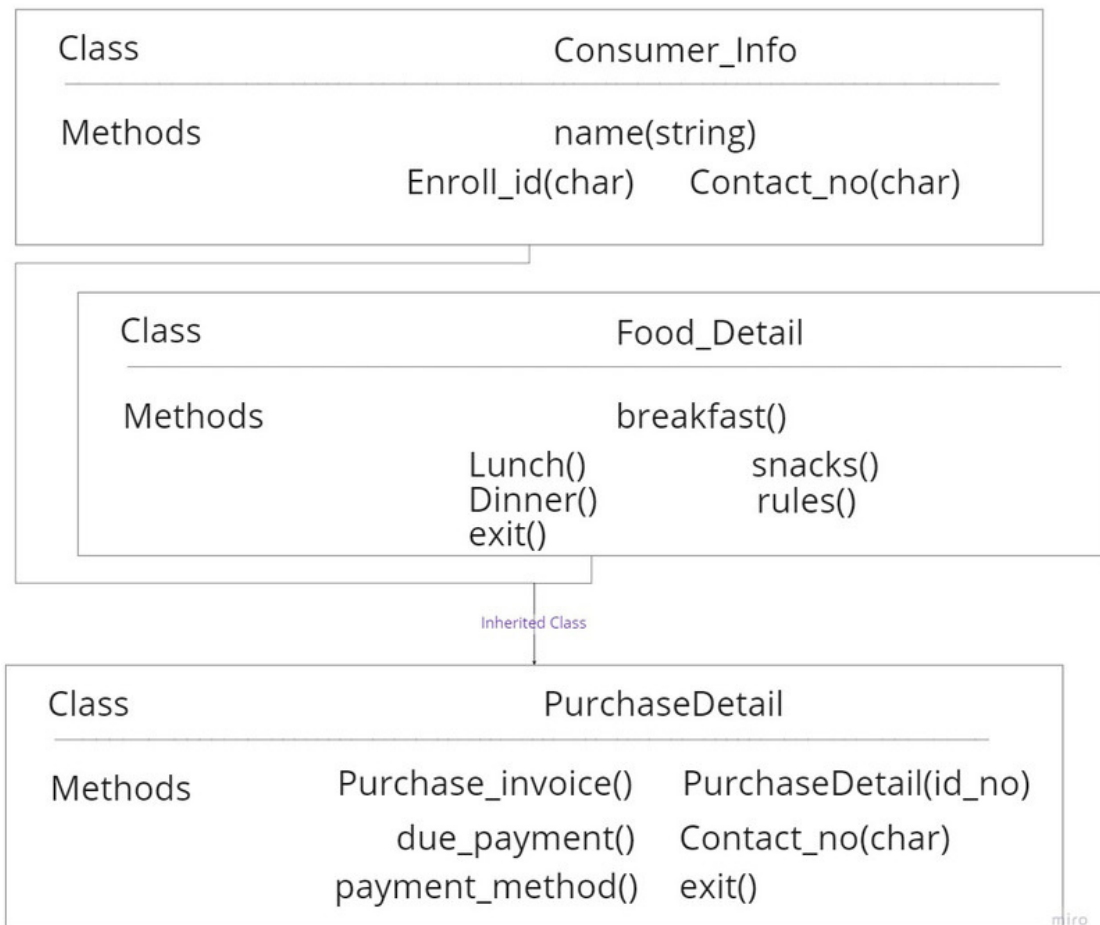
For the completion of this project, we are required to apply inheritance so that it gets easy to use the data throughout the different classes.

The flow of the class is as follows -

- There will be three parent classes -
 - Consumer_Info
 - New_customer
 - FoodDetail
- Now the data which will be received from the two classes (mainly New_customer & FoodDetail) would be used by the inherited class i.e., Purchase_Detail.
- And then user gets everything he/she needed.

03 ABSTRACTION

Class diagram



Features of this project

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CANTEEN MANAGEMENT SYSTEM

- Canteen management system will able to provide fast services to their customers by using their records which has been saved previously
- The receptionist can add the employee and update the employee details.
- Similarly, the employee manages the sales and order.
- Developed using C++ language.
- Easy to operate and understandable.

Project Objective

- This system will help the costumer to get updated on time about the dishes available in canteen. However new records can be added any time whenever any customers visited to their canteen shop. To identify the customers each customers will be provided with their customer id and during data entering process all their basic information's will be added into the file.
- At the mean time customers are also provided with option of purchasing the particular item. If the customer enter the yes option, then they can enter the number of quantity for each product and at the end they will able to get the bills for the items which they have purchased and finally backup their purchased items from the pickup center. Thus admin will only having the responsibility to check the final bills and provide better services to their new and existing customers.
- And the customer are also have the option to pay bill later but it has a limit after that limit customer will not able to purchase until unless the due amount get clear.

05 Classes Messaging & Interconnection

THE ASSIGNMENT SHOULD BE CONSISTED OF -



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Graphical User Interface & Main Flow Of The Project



**Welcome To
Avantika Canteen**



Welcome Page

Choose option 1 or 2

Existing Member

New Member

Member Option Selection

If (Option==1)

Purchase Invoice

Due Payment

Show Menu

Exit

When *Existing Member* is selected

Else

Name

Enrollment ID

Contact Number

When *New Member* is selected

If (Option==1)

Your Puchace Invoice

Item-1	Price
Item-2	Price
Item-3	Price
Item-4	Price

Total

When Purchase Invoice is selected

Due Payment			
<div>RS. 5000 Due Today</div>			
S.No.	Item	Quantity	Amount

When Due Payment is selected

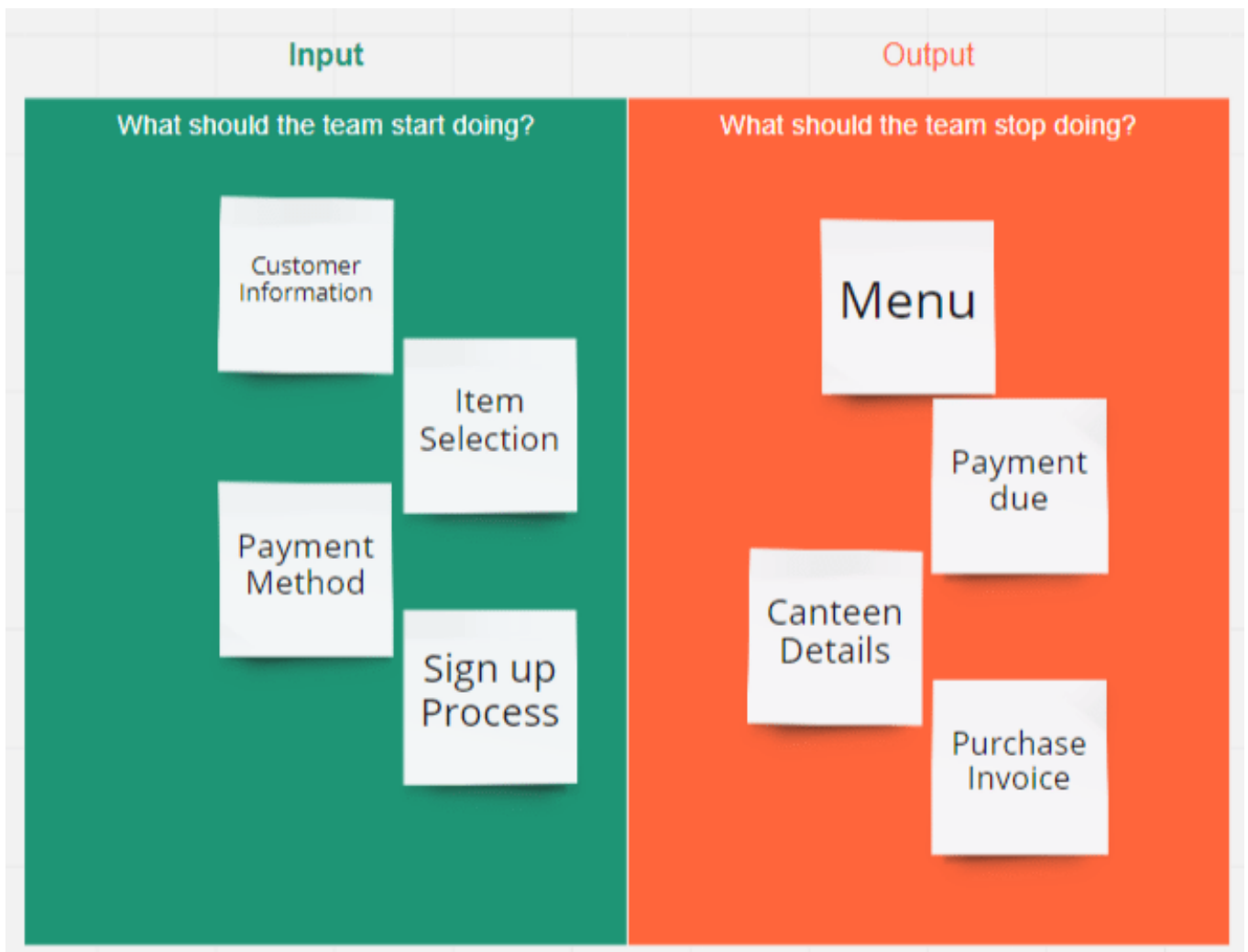
Item Menu
1. Breakfast
2. Lunch
3. Snacks
4. Dinner

When *Show Menu* is selected

Breakfast
1. Item1
2. Item2
3. Item3
Price per plate -> --/-

When Breakfast is selected from menu item

Input & output Process 07



Input Details

Certain inputs that are need to be taken from the customer in order to make the mess staff work smooth and hectic free and also to give students a better service.

The inputs that are required from the users is as follows -

1. Name
2. Id no.
3. Contact details.
4. Food time selection (For what time do you want the food detail)
5. Item selection (Which dish the user want to select)
6. Payment method which user prefer.
7. All the data required for the sign up process.

Output Details

Certain outputs are need to be given to the user either in the form of feedback or different information that user want.

The outputs that are required for the users is as follows -

1. Menu list - What all dishes and snacks are available at different time which is required to the users.
2. Purchase invoice of the user where all the detail of his bill would be given.
3. Due Payment (if any otherwise 0)
4. Canteen details (include rules & regulation of canteen, canteen timing, available items in the canteen)

Conclusion

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After completion of this project we got a deeper understanding Of how to proceed after identifying a problem, and by solving it digitally, Which includes the abstraction of classes, classes interconnections, graphical user interface and lastly the input and output process. In addition to We got to know that how describing a problem in detailed way, can make our task easy. After analyzing the complete problem statement we got a clear idea of what all things are required in order to successful completion of this project. After setting a clear objective of the problem. and this is how we concluded.