American International University- Bangladesh

CSC 1205: Object Oriented Programming 1 (JAVA)

CO4 Evaluation
Project Concluding Report
Spring 19-20

Group ID: Q02
Project Title: Food Court Management Application

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Food Court Management Application

Introduction:

Why you are doing this project? (No more than 60 words)

We are doing this project as our university final term project of the Object-Oriented Programming (Java) course. This project presents what we have learned from this course and how we can use the principles of Object-Oriented Programming in real-life circumstances.

Problem Analysis:

What kind of problem is being solved with this project? Who will use this application?
(No more than 60 words)

This project is to solve the management issues of a food court. Food Court Management Application can be used to achieve proper management of restaurants as well as the food items for each restaurant. The managing body of food courts will use this application to solve their issues during managing food courts.

UI Design Analysis:

How will the users interact with this application? How can it be improved?
(No more than 60 words)

Food Court Management is a console-based application. Users have to run the application in the console and after that different options will be provided. Users have to choose options and have to give input through the console. User Interface could be improved by using a Graphical User Interface.

Logical Analysis:

How much logic has been applied in this application? Are the applied logics working properly? Are there any logical limitations?
(No more than 100 words)

In this project, many logical tactics have been used to ensure accuracy and quality. There is input validation in this total project which checks the input given by a user is valid or not and handles the exception that could happen for this invalid input. Also there are some logical checkpoints where this project check if the users' given data is realistic or not, like negative or empty data and some others similar. All the applied logics are working properly. There no logical limitations found when the application went through the testing.

OOP Concept Analysis:

What are the OOP1 principles used in this project? How have been they applied? Explain the OOP concepts used in this application (No more than 3 sentences per concept)?
(No more than 160 words)

Inheritance, Polymorphism, Abstraction, and Encapsulation, the core four principles of Object Oriented Programming have been used in this project.

Inheritance: There is an inheritance between MainDish class and FoodItem class also between Appetizer class and FoodItem class where FoodItem class is parent class, MainDish class and Appetizer class both are child class of FoodItem class.

Polymorphism: In this project the terms Polymorphic Behavior of Object and Method Override concept of Polyphism are being used. Polymorphic Behavior of Object happens in Restaurant class where a reference of FoodItem class holds the object of its child class MainDish and Appetizer. Method Override happens where child class MainDish and Appetizer override the showInfo() method form parent class FoodItem.

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Abstraction: Two terms of Abstraction - Abstract Class and Abstract Method are being used in this project. There FooItem class is an abstract class to enforce the developers to inherit in other classes. showInfo() is the abstract method so that developers do not forget to implement it in child classes.

Encapsulation: There encapsulation is being used to organize the project with the help of Package. Also a part of the encapsulation, Access Modifier is being used to set the accessibility of classes, methods, other members to enhance the data security.

Impact of this Project:
What impact this project will have on the society and economy? How will people be benefitted from your project?
(Maximum 80 words)

This project makes it easy to manage a food court. It makes the system of a food court more accurate which increases more productivity. So overall this project helps to develop the social system as well as the economy. People will be benefitted from this project as it reduces paper-works and saves time. Additionally, it does not cost to have a manager to do the paper-works. So it saves both time and money.

Limitations and Possible Future Improvements:
(Maximum 80 words)

There is a major limitation where if the user closes the application user has to insert the previous data again. Also if a user loses his data there is no backed up data and the user will lose the data forever. Moreover, users could have a different device but this application does not have the accessibility to other devices like smartphones. So, there are possible future improvements like implementing an online database and redesigning the application for different platforms.

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