



# American International University- Bangladesh

## CSC 1205: Object Oriented Programming 1 (JAVA)

### CO4 Evaluation Project Concluding Report Spring 19-20

**Group ID: M13**

**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 completed a project and that was Food Court Management Application by which managing a food court will be little bit easier. For each food court managing employee, restaurant, food items is a challenge which they have to face almost everyday. This is why we made this project to solve this kind of problem and make the management system simple as much as possible.

## Problem Analysis:

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

Our project is mainly use to solve different types of data management problem of food court. For example by using this project any managing committee of any food court can be able to manage employee, restaurants and food items from where they can access different data of these sections.

The people or the committee who are used to manage a food court, they will use this application.

## UI Design Analysis:

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

Typically, UI design refers to graphical user interfaces but here a console interface will be given to user to interact with this application that means it's a text based application which is little bit problematic for the user. Because of it's harder and confusing for the user to work fast with different options without using color sense or different block to click or entry. By using graphical interface it can be improved.

## Logical Analysis:

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

Here we applied almost 14 logic for different operations. By using these logic we tried to cover the whole system. They are:

**Insert Employee:** By using this user can insert an employee.

**Remove employee:** By using this user can remove an employee.

**Get Employee:** By using this user can search an employee to know about the details of the employee.

**Show All Employee:** By using this user can see all the employee of food court.

**Insert Restaurant:** By using this user can insert restaurant to the management.

**Remove Restaurant:** By using this user can remove a restaurant.

**Get Restaurant:** By using this user can search a restaurant to know about the details of the restaurant.

**Show All Restaurant:** By using this user can see all the restaurant under food court.

**Insert Food Item:** By using this user can insert an Food Item.

**Remove Food Item:** By using this user can remove a food item.

**Get Food Item:** By using this user can search a food item to know about the details of the food.

**Show All FoodItem:** By using this user can see all the food item under food court.

**Add Quantity:** By using this user can add quantity of the available food to the restaurant.

**Sell Quantity:** By using this user can sell quantity of the available food to the restaurant.



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Applied logics will work properly though there is some limitations. For example from the side of user they can't be able to manage customer and some operations what they need to face everyday.

## **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)*

In this project we used 4 principles of object oriented programming-java. They are applied in different part of the program. For example here we used encapsulation for binding attribute with method, interface to increase the reusability of code, polymorphism for overloading and overriding, abstraction to in force inheritance and method overriding. Explain-

**1.Encapsulation:** Encapsulation is the mechanism of binding one attribute with a method. It is done so that we don't have to access the attributes of a class directly. It is achieve through access modifiers. In this code we used so many set and get method for different attribute.

**2.Inheritance:** Inheritance is the mechanism of creating a new class from an existing class. Which increase the reusability of a code .Where we had to ensure that there is a is-a relationship between the classes .In this code we used inheritance for foof item as it is possible to have so many items in a food court.

**3.Polymorphism:** Polymorphism means different forms of the same thing. In programming polymorphic behavior might be with methods, costructors and objects. For example method overloading, method overriding, constructor overloading and polymorphic behavior of objects. In our project we used almost every kind of polymorphism in different classes.

**4.Abstraction:** In programming concept of hiding details is known as abstraction.We can hide the details of a method or a class. Abstraction inforces inheritance and method overriding.

## **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)*

Now-a-days we can see a huge number of food court are available around the world and the people are used to go there to eat food that means it's a complicated place to maintain as they are used to crowded.So,it is must for the managing side to perform properly by which people will be impressed.This is why if they want to manage this system smoothly they can use this application.Its possible to treat the customer by managing the whole system with this application.By this the user can insert,remove,search every element available in this application.So, we can say that the user,the customer and the people who are related to this system they can work and collect thbeir data smoothly.

## **Limitations and Possible Future Improvements:**

*(Maximum 80 words)*

We tried our best to make the application user friendly and hassle free as much as possible but then again there are some limitations. For example we couldn't be able to add graphical user interface, this project couldn't be able to cover the whole system this is why there was no portion for customer which is must. There was only portion for the food court managing side, only one kind of people from the side of responsibility are allowed to use this, we tried to handle the exceptions properly but still now occurring run time exception is possible from the side of user. Though still now future improvements is possible for us by developing. For example in next we can try to add graphical user interface with different color sence or block,we can cover the whole system so that we can add worker, customer and give access to them with their limitations. It's possible to make the application more and more user friendly by solving



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each and every kind of exception with specific message to the user as they can realize what's wrong with the input. Finally, we can say that still now there are some limitations but it's possible to handle by future improvements.

