Software Construction

Lab-3

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Class – SE-5B

# Introduction:

In this lab I will create a restaurant reservation system in which users can reserve tables in my restaurant and then they can come and place order and eat at the restaurant.

# Approach:

Table will be reserved for any user if the maximum number of tables are already not filled. Customers who are booking extra-large table can book it for as long as they want but rest of the customers can book tables only for a maximum time of 2 hours.

Each food item takes 30 minutes to be prepared so after taking order customer will be notified how much time it will take to prepare his/her order. If the time allotted is less than the time required to prepare food, customer will be notified that he cannot get food in such time.

After Food is prepared, it will be served to the customer if there is no conflict in the conditions.

# Design:

There are 4 functions i.e. reservation, prepareOrder, serve and schedule. Reservation covers all the cases for reserving table. PrepareOrder method covers the calculation of time till serving and serve method covers the serving of food items. Schedule function prints the monthly schedule.

These 4 methods are called in same hierarchy in my custom Main method of my Restaurant class to demonstrate the whole procedure of reservation, order, serving and then printing monthly report.

# How to run:

Lab3.java contains my main class. In Lab3 class an instance of my Restaurant class(Restaurant.java) is created. Restaurant class has all the important methods for which I have created my unit tests (RestaurantTest.java).

Place 1st two java files in the source folder and the RestaurantTest.java in the test packages folder.

# Analysis:

I created multiple tests for the analysis of this system. I gave them different values and every time it produced the expected result.

On whole some other sharp details could have been added to this, but my system covers almost all the basic requirements mentioned in the manual.

# Link to GitHub repository: - <https://github.com/ibrahimusmani/Lab3>