

Lab 3: Software Construction

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Introduction:

I made 5 different classes for this lab each doing their functions and then as a whole a reservation online system is made. You can book your seats, see waiting time, allocated time, available tables , set /get priority through a priority queue, place orders , check members and items on this system. I Have also created a main just in case you need to run the code.

My Approach:

I made different classes for tables, restaurant booking, and order and priority queue. In the tables class I made an abstract table which had 4 subclasses extra-large, large, small and medium tables, to initialize these tables I made another class "Table_Creator" which returns specific table object of subclasses. I made a priority queue for the extra-large table which uses total members to check priority it is done by using lists and order class is used to place an order which uses its constructor to achieve all the functionality and also sets and gets priority and gives it to priority queue and finally restaurant object is used to book the seats based on table availability.

How to run:

First create objects of table creator and priority queue as they will be used in latter classes and then order is initialized using table creator and priority queue then restaurant is initialized using priority queue, creator and order and then booking function is called and all is done.

Github Link: <https://github.com/wahabaftab/Software-Construction>

This is how the hierarchy should be like:

