**OBJECT ORIENTED PROGRAMMING**

**LAB# 09 TASKS**

## **Association, Aggregation and Composition in Java**

1. Write a program and create the objects of classes in class car to explain the concept of composition. Create several classes as engine, doors, capacity and wheel having their individual methods attributes. The object of these classes are created in a car class and they are set as public. The object of this car class is created in Main method and this with the help of this object we can call other classes as well and can use their functionalities and design UML class diagram.
2. Write complete program for Flight's class, Time's class and Passenger's class with the concept of association and aggregation and design UML class diagram. Functions information also been given in the table below:

|  |  |
| --- | --- |
| **Method** | **Description** |
| addPassenger(Passenger) | This method will add Passenger's object to vector passengerList. |
| printInfo() | This method will display all flight information namely ID (Flight number), destination, departure time, arrival time and number of passengers.  For Example:  Flight no : PK-303  Destination : Lahore  Departure : 8:10  Arrival : 9:00  Number of passenger :2 |
| getHour() | This method will return the value of attribute **hour** |
| getMinute() | This method will return the value of attribute **minute** |

1. A company manages many stores. Each Store contains many Products. Implement Product, Store and Company classes using association and aggrigation concepts and design UML class diagram.