


BIRZEIT UNIVERSITY
COMP231 – Advanced Programming
Assignment # 3

Objectives:

1. To create hierarchy of Classes and Objects using Inheritance relationships.
2. To demonstrate the benefit of using the following concepts:
 - Polymorphism, generic bidding, inheritance, abstract classes and interfaces.

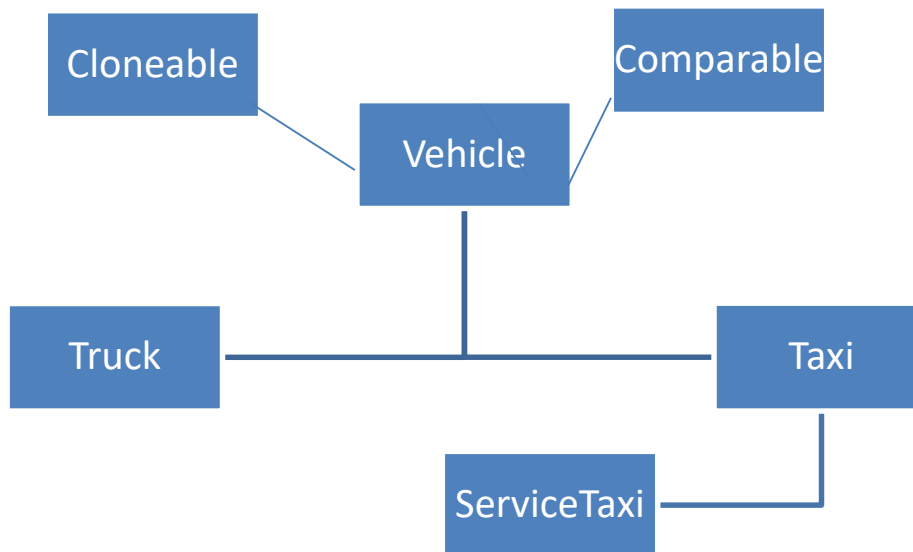
Specification

Submission: **Online through Ritaj.**

What to submit: Your **OWN** well-structured and well-commented JAVA files (.java) into a **studentId_sec#.rar** file, e.g. **118ddddd_sec1.rar**).

Deadline: **30/11/2019** by midnight. (The online submission will be disabled after this time).

Task



Appropriately implement the above hierarchy and stick to the following

- Vehicle class is an abstract class that contains id of Vehicle, color , number of doors, number of cylinders and valid License date.
- You should keep track of number of Vehicles created in your program.
- Add setters and getters as necessary.
- Write getIncome method in vehicle to be implemented in its subclasses as the following
 - income of Truck =(number of trips) X (Transportation allowance)
 - income of taxi= (number of passengers) X (passenger fare)
 - income of service taxi = fixed amount +(number of passenger X Passenger fare)
- All Vehicle objects are comparable based on the income
- All Vehicle objects are cloneable using deep cloning concept.
- toString method should be implemented in appropriate way in all Vehicle subclasses displaying all the information including the income.
- You should create a Test class that has an Arraylist of vehicle objects and then you should print the information in sorted order.(ascending order based on income)

Good Luck!