

Lab 6

1. Design a class named **Car**. The class contains:

- a. Private data fields brand and model.
- b. A **constructor** for the arguments brand and model
- c. A **method** to **display information** about the car brand and model.
- d. **Implement** a method named **modifyCar** that takes a **String newModel** as a parameter.
 - i. It updates the model of the car without changing the brand.
- e. **Implement** a method **createCar(String brand, String model)** that creates a new Car object and returns it.
- f. Write a test program:
 - i. Create a Car object with the brand and model.
 - ii. Display information about the original car.
 - iii. Modify the car's model using the **modifyCar** method.
 - iv. Display information about the modified car.
 - v. Create a new Car object with the new brand and the new model using the createCar method.
 - vi. Display information about the new car.

2. Design a class named **Person**. The class contains:

1. Private data fields first name, middle name, last name.
2. Implement a constructor with the following arguments: first name, middle name, last name.
3. You should also do the following:
 - a. Set the last name only.
 - b. Set the first name only.
 - c. Set the middle name.
 - d. Check whether a given last name is the same as the last name of this person.
 - e. Check whether a given first name is the same as the first name of this person.
 - f. Check whether a given middle name is the same as the middle name of this person.
4. Add the **method equals** that returns true if two objects contain the **same first, middle, and last name**.
5. Add the method **makeCopy** that copies the instance variables of a **Person object** into **another Person object**.
6. Add the method **getCopy** that creates and returns the address of the object, which is a **copy of another Person object**.
7. Write a program that tests various operations of the class **Person**.