**Day # 4 Assignments**

1. Create a class **Rectangle** having following members:

private double hight

private double width

Constructor to initialize members hight and width to values 5.0

Setter and getter methods for both instance variables

public double calArea( ) – method to calculate and return area of rectangle

Create a class **TestRectangle** having main method. Create an object of Rectangle class. Call calArea( ) to print area of rectangle.

Ask user to enter values of hight and width and set these new values to object. Print the area of rectangle for new values.

1. Write a program to maintain data about employees of a company.

Create a class **Employee** which has following members:

private int empNo

private String empName

private int empSal

Constructor to initialize instance variables to following values:

empNo = 123

empName = Manjiri

empSal = 25000

Getter and setter methods for all members.

Parameterized Constructor which takes three parameters for emp number, name and salary. Initialize members to passed argument values.

Create a class **EmployeeData** which has main method. Create an object of Employee class. Print initial details of employee object. Ask user to enter all employee data through keyboard and set data in every object. Finally display details of all employees.

1. Create a class **Customer** having following members:

private int custNo

private String custName

private static int custCount;

Static block to initialize custCount to value zero ( 0 )

Parameterized constructor to initialize custNo and custName. Increase the custCount by 1 when a new Customer object is created.

Getter methods for custNo and custName

public int static getCustCount( ) – method to return customer count

Create class **CountCustomer** having main method. Print the initial value of custCount. Create 3 objects of Customer and initialize them with appropriate values scanned from user. Print the value of custCount every time of object creation.

1. Write a program to maintain data about Books in a library of a college.

Create a class **Book** which has following members:

private int bookNo

private String title

private String publication

private String author

private float price

Getter and setter methods for all members.

Create a class **Computer** derived from **Book** having following members

private String type - It could be Networking, DataStructure, DBMS

Setter and getter method for type instance variable

Create a class **Mathematics** derived from **Book** having following members

private String type – It could be Algebra, Geometry

Setter and getter method for type instance variable

Create a class **TestBook** having main method. Create an object of Computer. Scan data from user, set and print details of Computer book.

Create an object of Mathematics class. Scan data from user, set and print details of Mathematics book.

1. Write a program to maintain data about different accounts in a bank.

Create a class **Account** which has following members:

private int accNo

private String accName

private String accBal

Parameterized constructor to initialize all instance variables.

Getter and setter methods for all members.

Create a class **Saving** derived from **Account** having following members

private double rateOfInt - Rate of Interest variable

Parameterized constructor to initialize accNo, accName, accBal and rateOfInt

Setter and getter method for rateOfInt instance variable

Create a class **Current** derived from **Account** having following members

private double rateOfInt - Rate of Interest variable

Parameterized constructor to initialize accNo, accName, accBal and rateOfInt

Setter and getter method for rateOfInt instance variable

Create a class **TestAccount** having main method. Scan data from user for Saving object. Create an object of Saving class and print initialized data.

Scan data from user for Current object. Create an object of Current class and print initialized data.

1. Create a class **Student** having following members.

private ArrayList names – Arraylist of String type

public void setNames( ) – method to scan names of student and set in names

arraylist

public void searchName(String stuName ) – method to search student name

in an arraylist

public void searchName(int index) – method to print student name at an index

position

public void printNames( ) – method to print all student names using Iterator

public void removeName( String stuName ) – method to delete a student name

from arraylist

Create a class **ArrayListDemo** having main method. Create an object of Student class and call all methods.