Assignment- 4

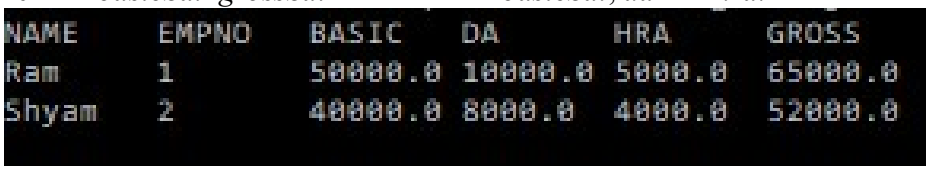
1. Create a class Student having following fields roll, name, p1, p2, p3 and sex. The class contains methods like getInfo(),calMark(),showDetails(). Create a driver class to create instance for five Students and for calling the methods.

2. Define a class *Stack*, which perform the basic operation of stack. Define another driver class to demonstrate the basic operations.

3. Develop a java program that will deal with employee information of an organization.
Define a class *Employee*. Minimum number of data member and member function are as follows:

Data members:*empName*, *empNo*, *basicSal*, *da*, *hra*, *grossSal*
Methods:*calGrossSal()*, *showEmpDetails()*

You are free to add more number of relevant data member and member function.Define parameterized constructor to intilaize*empName*, *empNo* and *basicSal*. Create anytwo objects of Employee class and initialize their data members while object creation. Use the method *calGrossSal()*to calculate the gross salary and method *showEmpDetails()* to display the detail informationof the employees in a tabular manner. Note that *da* is 20% of *basicSal* and *hra* is 10% of *basicSal*. *grossSal* is the sum of *basicSal*, *da* and *hra.*



NAME	EMPNO	BASIC	DA	HRA	GROSS
Ram	1	50000.0	10000.0	5000.0	65000.0
Shyam	2	40000.0	8000.0	4000.0	52000.0

4. Create a class named *Item* that holds data about an item in a retail store.

- The class should have the following three fields:
    1. *name*: the name field is a String object that holds the name of the item.
    2. *price*: the price field is a double variable that holds the item's retail price
    3. *quantity*: the quantity field is an int variable that holds the number of units currently in inventory
- Write a public constructor method that accepts three arguments, name, price, & quantity and stores the values of the arguments passed into it in the object's instance fields.
- Write four public methods to retrieve the values from the three fields and their current inventory value
    1. *String getName( )* returns the item name
    2. *double getPrice( )* returns the price of the item
    3. *intgetQuantity( )* returns the number of quantities
    4. *double getValue( )* that returns the current inventory value (quantity * price)
- Write a separate class called *Inventory* with a main method that creates three Item objects and then produces a neatly formatted table of the store's inventory displaying the three items, their current inventory value, and the total inventory value for the store.
- Duplicate the format of the output exactly shown below. Test your output with different items in inventory.

```
Name            Price           Quantity        Value
=========================================================
Stapler         $2.25           15              $33.75
Paper           $32.99          255             $8412.45
Binder          $4.75           9               $42.75

Total Inventory is $8488.95
```

5. Create a class Addcomplex to add two complex numbers. Use appropriate methods and data members required for taking the input, for calculate and for displaying the results. Create a driver class for creating the instance.