Assignment-4

20BCSE50_KUMAR_JIJNASU_C1-08

1.

```
class Student {
    int roll,mark[]=new int[3];
    String name;
    Character sex;
    void GetInfo(int r, String n, int p, int q, int t, Character s)
    {
        roll = r;
        name = n;
        mark[0] = p;
        mark[1] = q;
        mark[2] = t;
        sex = s;
    }

    float CalMark(int m[])
    {
        int av=0;
        for(int i=0;i<m.length;i++)
            av+=m[i];
        return (float)av/m.length;
    }

    void ShowDetails()
    {
        System.out.println("NAME : "+name);
        System.out.println("ROLL NO. : "+roll);
        System.out.print("MARKS : ");
        for(int i=0;i<mark.length;i++)
            System.out.print(mark[i]+", ");
        System.out.println("\nAVERAGE MARK : "+CalMark(mark));
        System.out.println("SEX : "+sex);
    }
}



class Driver
{
    public static void main(String[] args) {
        Student s1 = new Student();
        s1.GetInfo(23, "Manas Das", 10, 20, 30, 'M');
        s1.ShowDetails();
        Student s2 = new Student();
        s2.GetInfo(24, "RPD", 10, 20, 30, 'M');
        s2.ShowDetails();
```

```
        Student s3 = new Student();
        s3.GetInfo(25, "Hades", 10, 20, 30, 'F');
        s3.ShowDetails();
        Student s4 = new Student();
        s4.GetInfo(26, "Locus", 10, 20, 30, 'F');
        s4.ShowDetails();
        Student s5 = new Student();
        s5.GetInfo(27, "Bizon", 10, 20, 30, 'M');
        s5.ShowDetails();

    }
}
```

2.

```
class myStack {
    int max,top;
    int stk[]=new int[20];
    void stklen(int n)
    {
        this.max=n;
        this.top = -1;
        // this.stk[]=new int[n];
    }

    void push(int v)
    {
        if(this.top<this.max-1)
            this.stk[++this.top]=v;
        else
            System.out.println("Stack overflow...");
    }

    void pop()
    {
        if(this.top<0)
            System.out.println("Stack underflow...");
            else
            System.out.println("Poped element is: "+this.stk[this.top--]);
    }

    void traverse()
    {
        if(this.top<0)
            System.out.println("Stack is empty...");
        else
        {
            System.out.print("Stack is : ");
            for(int i=0;i<=this.top;i++)
```

```
                System.out.print(this.stk[i]+", ");
            System.out.println();
        }
    }
}


class stkDriver
{
    public static void main(String[] args) {
        myStack s=new myStack();
        s.stklen(3);
        s.push(35);
        s.push(3);
        s.push(5);
        s.push(85);
        s.traverse();
        s.pop();
        s.traverse();
        s.pop();
        s.traverse();
        s.pop();
        s.traverse();
        s.pop();
        s.traverse();
    }
}



3.
class Employee
{
    int empNo,basicSal,da,hra;
    double grossSAl;
    String empName;
    void getDetails(String name,int no,int sal,int da,int hra)
    {
        empName = name;
        empNo = no;
        basicSal = sal;
        this.da = da;
        this.hra = hra;
        calGrossSal();
    }

    void calGrossSal()
    {
        grossSAl = 0.2*basicSal + da + 0.1*hra;
    }
```

```
    void showEmpDetails()
    {
        System.out.println(empName+"\t"+empNo+"\t"+basicSal+"\t"+da+"\t"+hra+"\t"+grossSAl);
    }
}



class empDriver
{
    public static void main(String args[])
    {
        Employee emp1=new Employee();
        emp1.getDetails("Ram",1,50000,10000,5000);
        Employee emp2=new Employee();
        emp2.getDetails("Jkhunme",2,30000,30000,4000);
        System.out.println("NAME\tEMPNO\tBASIC\tDA\tHRA\tGROSS");
        emp1.showEmpDetails();
        emp2.showEmpDetails();
    }
}



4.
class Item
{
    int quantity;
    double price;
    String name;
    Item(int q,double p,String n){
        quantity=q;
        price=p;
        name=n;
    }
    String getName(){
       return name;
    }
    double getPrice(){

       return price;
    }
    int getQuantity(){
        return quantity;
    }
    double getValue(){
        double value=price*quantity;
        return value;
    }
    void showDetails(){
```

```
        System.out.println("\t"+name+"\t"+"$"+price+"\t"+quantity+"\t$"+getValue());
    }
}
class Inventory
{
    public static void main(String args[])
    {
        Item i1=new Item(15,2.25,"Stapler");
        Item i2=new Item(5,2.99,"Ereaser");
        Item i3=new Item(9,4.75,"Pensil");
        System.out.println("\t"+"Name"+"\t"+"Price"+"\t"+"Quantity"+"\t"+"Value");
        System.out.println("-------------------------------------------------");
        i1.showDetails();
        i2.showDetails();
        i3.showDetails();
        System.out.println("\nTotal Inventory is
$"+(i1.getValue()+i2.getValue()+i3.getValue()));
    }
}
```

5.

```
class Addcomplex{
    int img,real;
    void getComplex(int r,int i){
        img=i;
        real=r;
    }
    void addComplex(Addcomplex A2){
        real=real+A2.real;
        img=img+A2.img;
    }
    void complex(){
        System.out.println("final complex no.: "+real+" + i"+img);
    }
}
class Driver{
 public static void main(String args[]){
    Addcomplex A1=new Addcomplex();
    Addcomplex A2=new Addcomplex();
    A1.getComplex(2,3);
    A2.getComplex(1,4);
    A1.addComplex(A2);
    A1.complex();
}
}
```