LAB 4

```
abstract class shape{
   int x,y;
  abstract void printArea();
}
class rectangle extends shape
{
   rectangle(int a,int b){
         x=a;
         y=b;
      }
  void printArea(){
      System.out.println("Area of rectangle is "+(x*y));
   }
}
class triangle extends shape
{
    triangle(int a,int b){
         x=a;
         y=b;
      }
  void printArea(){
   System.out.println("Area of triangle is "+(0.5*x*y));
   }
}
class circle extends shape
{
    circle(int a){
         x=a;
      }
   void printArea(){
      System.out.println("Area of circle is "+(3.142*x*x));
   }
}
public class Main
{
            public static void main(String[] args) {
              rectangle rect = new rectangle(5,5);
              triangle tri = new triangle(6,3);
              circle cir = new circle(5);
              rect.printArea();
              tri.printArea();
              cir.printArea();
             }
}
```

```
Area of rectangle is 25
Area of triangle is 9.0
Area of circle is 78.55


...Program finished with exit code 0
Press ENTER to exit console.
```

LAB 5

```
import java.util.Scanner ;
 abstract class account{
   String accname,acctype;
   long accnum;
   double balance;
   final int minbal=1000;
   account(String name, long num, double bal, String type) {
      accname = name;
      accnum = num;
      balance = bal;
      acctype = type;
   }
    abstract void addBal(double amt);
    abstract void dispBal();
    abstract void withdraw(double amt);
}
class curr_acct extends account{
   curr_acct(String name, long num, double bal, String type) {
      super(name,num, bal,type);
    System.out.println("name: "+accname+"\naccnum: "+accnum+"\nbalance: "+balance+"\nacctype:
Current");
   }
   void addBal(double amount){
      balance = balance + amount;
   }
    void dispBal(){
      System.out.println("Your balance is: " + balance);
   }
    void withdraw(double amount){
      if(balance < amount){
         System.out.println("you dont have enough balance");
         System.out.println("balance is "+balance);
         return;
      }
      balance =balance - amount;
      System.out.println("balance = "+balance);
```

```
      if (balance < minbal) {
       System.out.println("penalty of RS."+(balance * 0.01)+" as balance is less than the minumun
needed ");
          balance = balance - balance * 0.01;
          System.out.println("current balance = "+ balance);

      }
  }
   }
class Sav_acct extends account {
Sav_acct(String name, long num, double bal) {
      super(name, num, bal, "Savings");
      System.out.println("name: " + accname + "\taccno: " + accnum + "\tbal: " + bal + "\ttype: " +
acctype);
   }

   void addBal(double amount){
      balance  = balance + amount;
      interest();
   }

   void interest() {
      int t = 2;
      balance = balance*Math.pow(1+(0.2) , t);
   }

   void dispBal(){
      System.out.println("Your balance is: " + balance);
   }

   void withdraw(double amount){
      balance = balance - amount;
      System.out.println("balance = "+balance);

   }
   }

public class Main
{
          public static void main(String[] args) {
             Scanner sc = new Scanner(System.in);
                    curr_acct c = new curr_acct("jay",123456,3000.0,"Current");
                    double amount;
                    int flag= 0;
      while( flag == 0) {
         System.out.println("1:AddBal\n2:displayBal\n3:withdraw\n4:checkbook\n5:quit");
         int ch = sc.nextInt();
         switch (ch) {
```

```
      case 1:
         System.out.println("enter amount to be added:");
         amount = sc.nextDouble();
         c.addBal(amount);
         break;

      case 2:
         c.dispBal();
         break;

      case 3:
         System.out.println("enter amount to be withdrawn:");
         amount = sc.nextDouble();
         c.withdraw(amount);
         break;
      case 4:
         System.out.println("enter details \nenter name of the reciever:");
         String recname = sc.nextLine();
          recname = sc.nextLine();
         System.out.println("enter the amount to be sent:");
         double a = sc.nextDouble();
         if(a> c.balance)
         {
            System.out.println("you dont have enough balance");
         }
         else{
         System.out.println("Enter password");
         String p = sc.nextLine();
         p=sc.nextLine();
         System.out.println(" reciever : "+recname +"\namount sent is "+a);
         c.balance = c.balance - a;
         }
         System.out.println("balance = "+c.balance);

         break;

      default:
         flag = 1;
   }
}
Sav_acct s = new Sav_acct("jennie",500676, 7000);
 flag = 0;
while(flag == 0){
   System.out.println("1:AddBal\n2:displayBal\n3:withdraw\n4:quit");
   int ch = sc.nextInt();
   switch (ch) {
      case 1:
         System.out.println("enter amt to be added:");
```

```
            amount = sc.nextDouble();
            s.addBal(amount);
            break;

        case 2:
            s.dispBal();
            break;

        case 3:
            System.out.println("enter amt to be withdrawn:");
            amount = sc.nextDouble();
            s.withdraw(amount);
            break;

        default:
            flag =1;
    }
}

}
    }
```

```
name: jay
accnum: 123456
balance: 3000.0
acctype: Current
1:AddBal
2:displayBal
3:withdraw
4:checkbook
5:quit
1
enter amount to be added:
2000
1:AddBal
2:displayBal
3:withdraw
4:checkbook
5:quit
3
enter amount to be withdrawn:
1000
balance = 4000.0
1:AddBal
2:displayBal
3:withdraw
```

```
4:checkbook
5:quit
3
enter amount to be withdrawn:
3500
balance = 500.0
penalty of RS.5.0 as balance is less than the minumun needed
current balance = 495.0
1:AddBal
2:displayBal
3:withdraw
4:checkbook
5:quit
4
enter details
enter name of the reciever:
jay
enter the amount to be sent:
200
Enter password
12345
 reciever : jay
amount sent is 200.0
balance = 295.0
```

```
1:AddBal
2:displayBal
3:withdraw
4:checkbook
5:quit
5
name: jennie    accno: 500676   bal: 7000.0     type: Savings
1:AddBal
2:displayBal
3:withdraw
4:quit
1
enter amt to be added:
400
1:AddBal
2:displayBal
3:withdraw
4:quit
2
Your balance is: 10656.0
1:AddBal
2:displayBal
3:withdraw
4:quit
```

```
3
enter amt to be withdrawn:
1000
balance = 9656.0
1:AddBal
2:displayBal
3:withdraw
4:quit
4


...Program finished with exit code 0
Press ENTER to exit console.
```