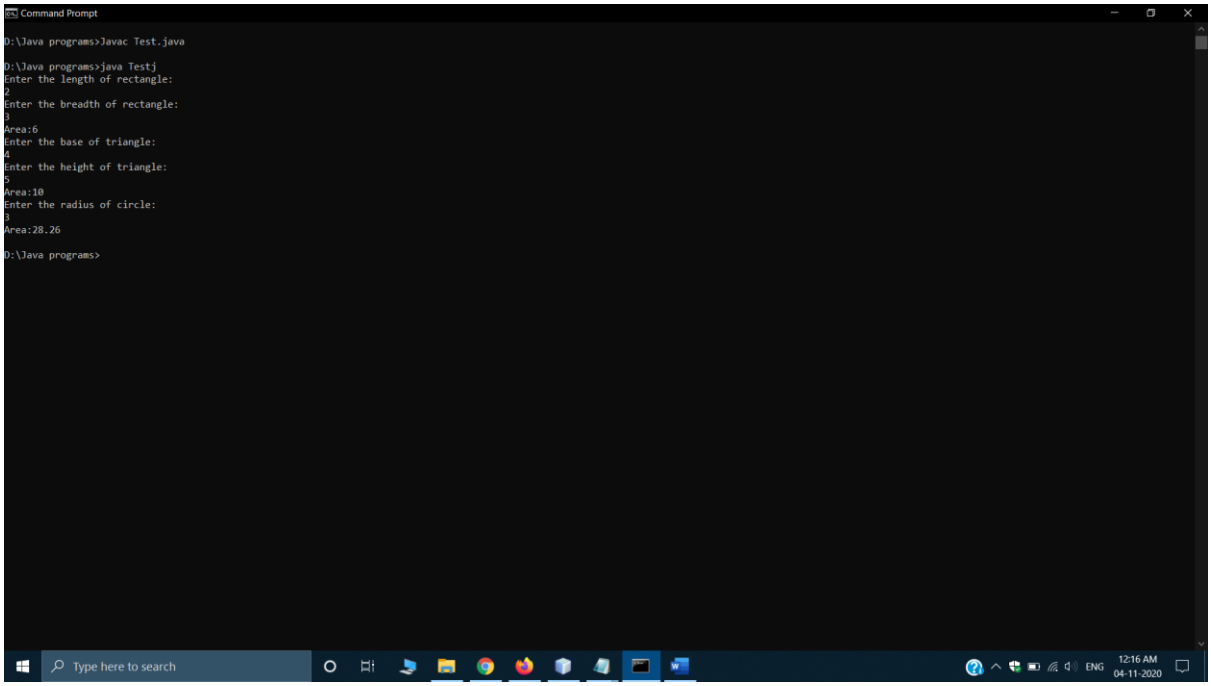
ANS 4:-

```
import java.util.Scanner;
abstract class shape{
        int a;
        int b;
        abstract void printArea();
}
class rectangle extends shape{
    Scanner sc=new Scanner(System.in);
    void printArea(){
        System.out.println("Enter the length of rectangle:");
        a=sc.nextInt();
        System.out.println("Enter the breadth of rectangle:");
        b=sc.nextInt();
        System.out.println("Area:"+a*b);
    }
}
class triangle extends shape{
    Scanner sc=new Scanner(System.in);
    void printArea(){
        System.out.println("Enter the base of triangle:");
        a=sc.nextInt();
        System.out.println("Enter the height of triangle:");
        b=sc.nextInt();
        System.out.println("Area:"+(a*b)/2);
    }

}
class circle extends shape{
    double res;
```

```
    Scanner sc=new Scanner(System.in);
    void printArea(){
        System.out.println("Enter the radius of circle:");
        a=sc.nextInt();
        res=(double)3.14*(a*a);
        System.out.println("Area:"+res);
    }

}
class Testj{
    public static void main(String args[]){
        rectangle r=new rectangle();
        triangle t=new triangle();
        circle c=new circle();
        r.printArea();
        t.printArea();
        c.printArea();
    }
}
```



ANS 5:-

```
import java.util.Scanner;
abstract class Account
{
   String cust_name;
   String acc_no;
   String acc_type;
   double balance;
   double min_bal = 1000.0;

   Account (String cust_name, String acc_no,String acc_type,double balance) {
      this.cust_name=cust_name;
      this.acc_no=acc_no;
```

```
        this.acc_type=acc_type;
        this.balance=balance;
    }
    abstract void deposit(double amount);
    abstract void display();
    abstract void withdrawal(double amount);
}

class Curr_acct extends Account
{
    double penalty=100.0;
    Curr_acct(String cust_name, String acc_no,String acc_type,double balance)
    {
    super(cust_name,acc_no,acc_type,balance);
    System.out.println("Name of the customer: "+cust_name);
    System.out.println("Account Number accno: "+acc_no);
    System.out.println("Account type: "+acc_type);
    System.out.println("Balance: "+balance);
    }

    void deposit(double amount)
    {
        this.balance+= amount;
    }

    void withdrawal(double amount)
    {
        this.balance-=amount;
        if(this.balance<min_bal)
            imposepenalty();
        System.out.println("The current balance is "+balance);
```

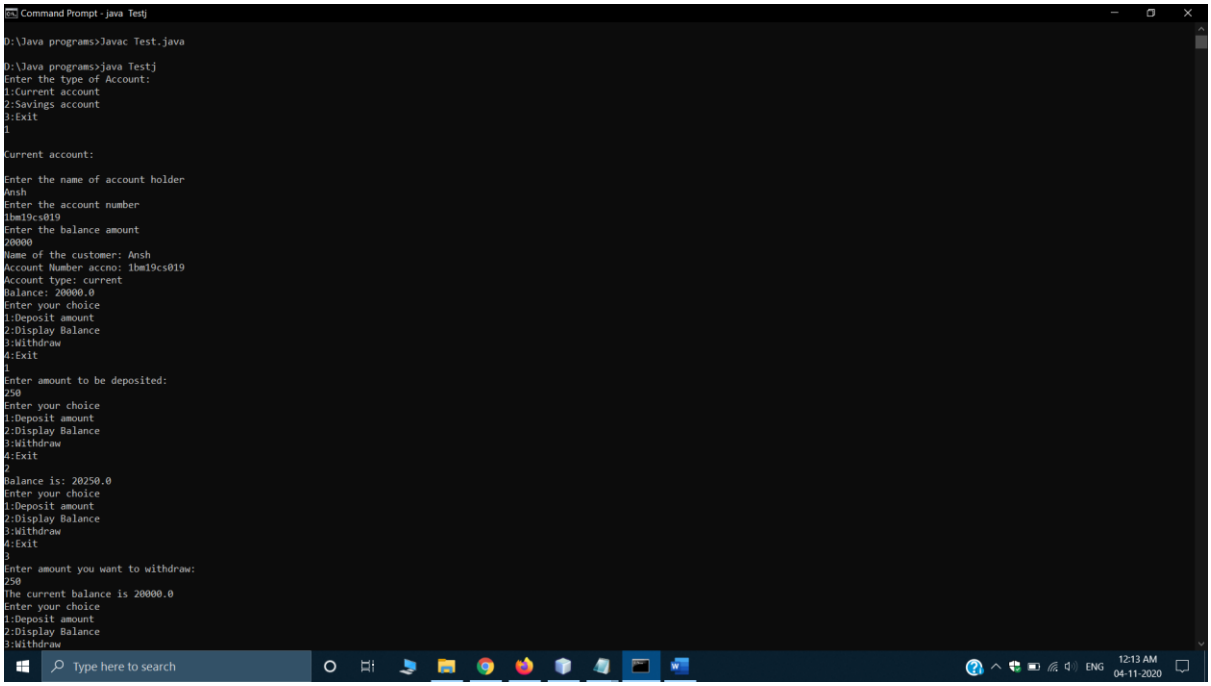
```
    }
    void imposepenalty()
    {

        this.balance=this.balance-penalty;
        System.out.println("The current balance is insufficient,penalty imposted = 100Rs");

    }

    void display()
    {
       System.out.println("Balance is: " + this.balance);
    }
}


class Sav_acct extends Account
{
    Sav_acct(String cust_name,String acc_no,String acc_type,double balance)
    {
       super(cust_name,acc_no,acc_type,balance);
       System.out.println("Name of the customer: "+cust_name);
       System.out.println("Account Number accno: "+acc_no);
       System.out.println("Account type: "+acc_type);
       System.out.println("Balance: "+balance);
    }

    void deposit(double amount)
    {
       this.balance = this.balance+amount;
       System.out.println("UPDATED BALANCE:"+this.balance);
```

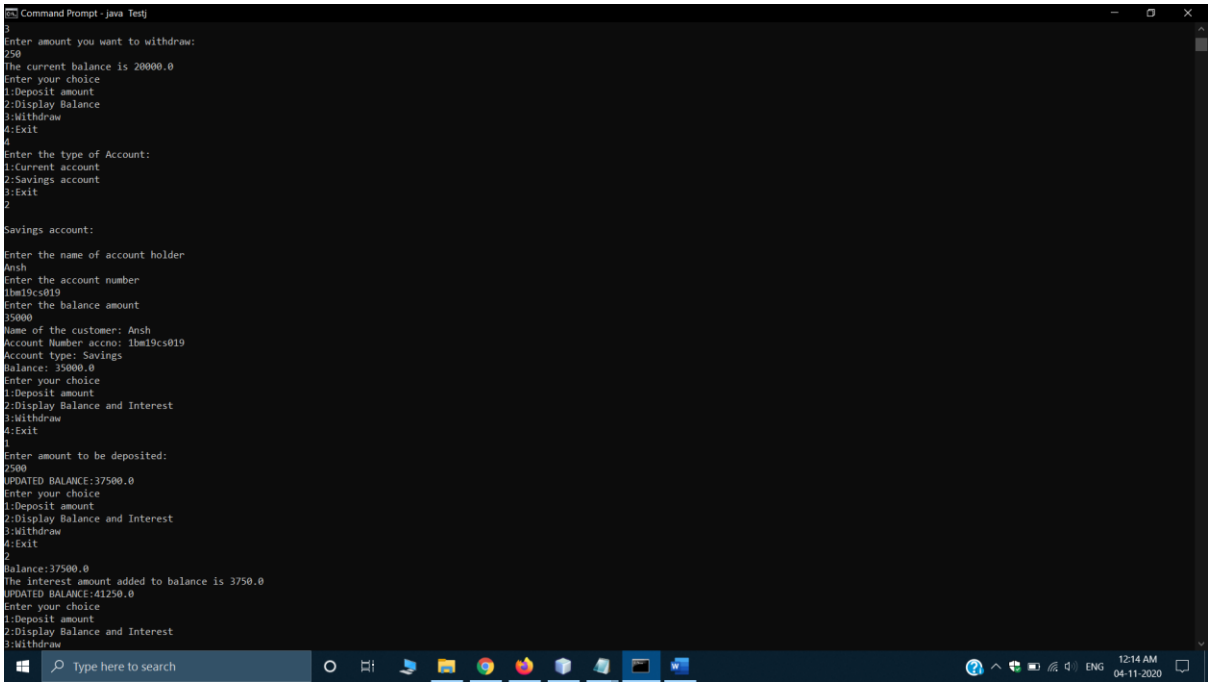
```
    }

    void interest()
    {
        int rate=10,time=1;
        float ci=(float)(this.balance*Math.pow(1+rate/100.0,time)-this.balance);
        System.out.println("The interest amount added to balance is "+ci);
        this.balance=this.balance+ci;
        System.out.println("UPDATED BALANCE:"+this.balance);
    }

    void withdrawal(double amount)
    {
        this.balance=this.balance-amount;
        System.out.println("UPDATED BALANCE:"+this.balance);
    }
    void display()
    {
        System.out.println("Balance:" +this.balance);
    }
}



class Testj{
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        double amount;
        int flag = 0;
        while(flag == 0){
```

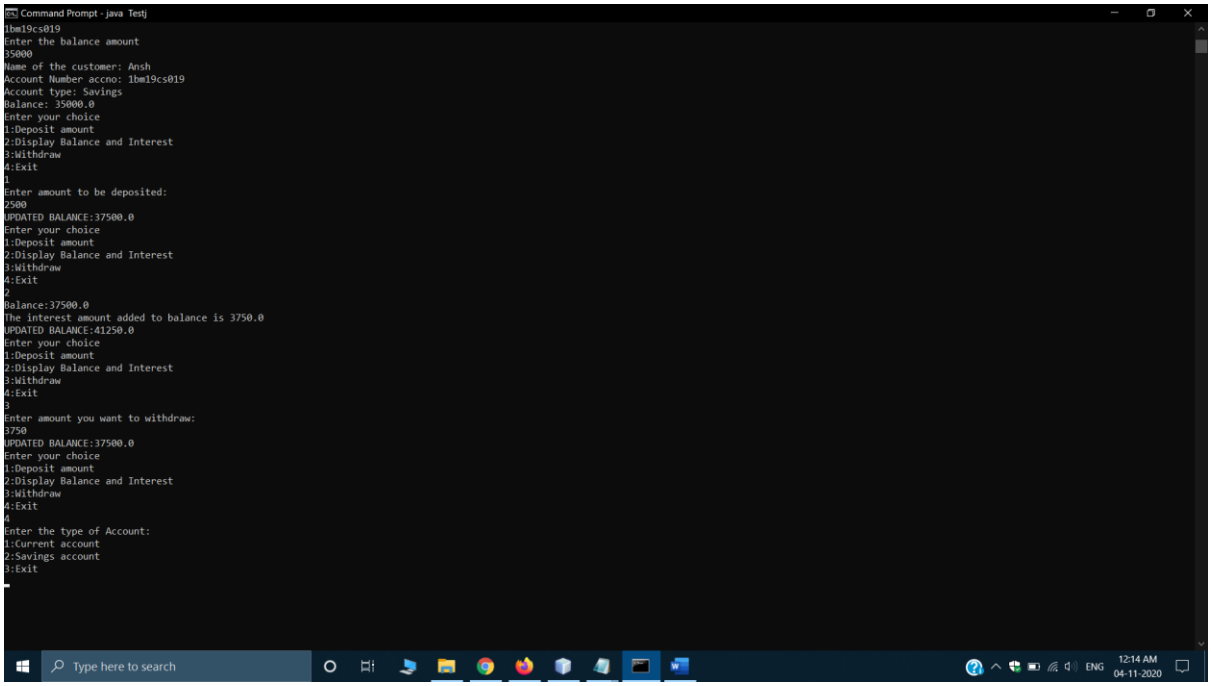
```
System.out.println("Enter the type of Account:\n1:Current account\n2:Savings account\n3:Exit");
int choice=sc.nextInt();
switch(choice){
case 1:
System.out.println("\nCurrent account:\n");
System.out.println("Enter the name of account holder");
String name1=sc.next();
System.out.println("Enter the account number");
String a_no1=sc.next();
System.out.println("Enter the balance amount");
double balance_am1=sc.nextDouble();

Curr_acct c = new Curr_acct(name1,a_no1,"current",balance_am1);
int flag1 = 0;
while( flag1 == 0)
{
   System.out.println("Enter your choice\n1:Deposit amount\n2:Display Balance\n3:Withdraw\n4:Exit");
   int choice1= sc.nextInt();
   switch (choice1)
   {
      case 1:
      System.out.println("Enter amount to be deposited:");
      amount = sc.nextDouble();
      c.deposit(amount);
      break;
      case 2:
      c.display();
      break;
      case 3:
      System.out.println("Enter amount you want to withdraw:");
```

```
            amount = sc.nextDouble();
            c.withdrawal(amount);
            break;
            default:
            flag1 = 1;
          }
        }
        break;

        case 2:
        System.out.println("\nSavings account:\n");
        System.out.println("Enter the name of account holder");
        String name2=sc.next();
        System.out.println("Enter the account number");
        String a_no2=sc.next();
        System.out.println("Enter the balance amount");
        double balance_am2=sc.nextDouble();
        Sav_acct s = new Sav_acct(name2,a_no2,"Savings",balance_am2);
        int flag2 = 0;
        while(flag2 == 0)
        {
          System.out.println("Enter your choice\n1:Deposit amount\n2:Display Balance and
Interest\n3:Withdraw\n4:Exit");
          int choice2 = sc.nextInt();
          switch (choice2)
          {
            case 1:System.out.println("Enter amount to be deposited:");
                amount = sc.nextDouble();
                s.deposit(amount);
                break;
            case 2:
```

```
            s.display();
            s.interest();
            break;
            case 3:
            System.out.println("Enter amount you want to withdraw:");
            amount = sc.nextDouble();
            s.withdrawal(amount);
            break;
            default:
            flag2 =1;
          }
        }
        break;
        default:flag=1;
     }
    }
   }
}
```


Command Prompt - java Testj
D:\Java programs>Javac Test.java
D:\Java programs>java Testj
Enter the type of Account:
1:Current account
2:Savings account
3:Exit
1
Current account:
Enter the name of account holder
Ansh
Enter the account number
1bm19cs019
Enter the balance amount
20000
Name of the customer: Ansh
Account Number accno: 1bm19cs019
Account type: current
Balance: 20000.0
Enter your choice
1:Deposit amount
2:Display Balance
3:Withdraw
4:Exit
1
Enter amount to be deposited:
250
Enter your choice
1:Deposit amount
2:Display Balance
3:Withdraw
4:Exit
2
Balance is: 20250.0
Enter your choice
1:Deposit amount
2:Display Balance
3:Withdraw
4:Exit
3
Enter amount you want to withdraw:
250
The current balance is 20000.0
Enter your choice
1:Deposit amount
2:Display Balance
3:Withdraw
Type here to search
ENG
12:13 AM
04-11-2020


Command Prompt - java Testj
3
Enter amount you want to withdraw:
250
The current balance is 20000.0
Enter your choice
1:Deposit amount
2:Display Balance
3:Withdraw
4:Exit
4
Enter the type of Account:
1:Current account
2:Savings account
3:Exit
2
Savings account:
Enter the name of account holder
Ansh
Enter the account number
1bm19cs019
Enter the balance amount
35000
Name of the customer: Ansh
Account Number accno: 1bm19cs019
Account type: Savings
Balance: 35000.0
Enter your choice
1:Deposit amount
2:Display Balance and Interest
3:Withdraw
4:Exit
1
Enter amount to be deposited:
2500
UPDATED BALANCE:37500.0
Enter your choice
1:Deposit amount
2:Display Balance and Interest
3:Withdraw
4:Exit
2
Balance:37500.0
The interest amount added to balance is 3750.0
UPDATED BALANCE:41250.0
Enter your choice
1:Deposit amount
2:Display Balance and Interest
3:Withdraw
Type here to search
ENG
12:14 AM
04-11-2020


Command Prompt - java Testj
1bm19cs019
Enter the balance amount
35000
Name of the customer: Ansh
Account Number accno: 1bm19cs019
Account type: Savings
Balance: 35000.0
Enter your choice
1:Deposit amount
2:Display Balance and Interest
3:Withdraw
4:Exit
1
Enter amount to be deposited:
2500
UPDATED BALANCE:37500.0
Enter your choice
1:Deposit amount
2:Display Balance and Interest
3:Withdraw
4:Exit
2
Balance:37500.0
The interest amount added to balance is 3750.0
UPDATED BALANCE:41250.0
Enter your choice
1:Deposit amount
2:Display Balance and Interest
3:Withdraw
4:Exit
3
Enter amount you want to withdraw:
3750
UPDATED BALANCE:37500.0
Enter your choice
1:Deposit amount
2:Display Balance and Interest
3:Withdraw
4:Exit
4
Enter the type of Account:
1:Current account
2:Savings account
3:Exit
Type here to search
ENG
12:14 AM
04-11-2020