```java
interface BankInterface{
    void getBalance();
    void getInterestRate();
}
class BankA implements BankInterface{
    public void getBalance()
    {
        System.out.println("Bank A Deposit:10000");
    }
    public void getInterestRate()
    {
        System.out.println("Bank A interest rate 7%");
        double bal=1.07*10000;
        System.out.println("Bank A balance:"+bal);
        System.out.println("_____");
    }
}
class BankB implements BankInterface{
    public void getBalance()
    {
        System.out.println("Bank B Deposit:150000");
    }
    public void getInterestRate()
    {
        System.out.println("Bank B interest rate 7.4%");
        double bal=1.074*150000;
        System.out.println("Bank B balance:"+bal);
        System.out.println("_____");
    }
}
class BankC implements BankInterface{
    public void getBalance()
    {
        System.out.println("Bank C Deposit:200000");
    }
    public void getInterestRate()
    {
        System.out.println("Bank C interest rate 7.9%");
        double bal=1.079*200000;
        System.out.println("Bank C balance:"+bal);
    }
}
class Bank{
    public static void main(String[] args) {
        BankInterface obj;
        obj=new BankA();
        obj.getBalance();
        obj.getInterestRate();
```

```
        obj=new BankB();
        obj.getBalance();
        obj.getInterestRate();
        obj=new BankC();
        obj.getBalance();
        obj.getInterestRate();
    }
}
```

```
PS C:\Users\anush\Desktop\Christ\Java\Labs\Lab 5> javac .\Bank.java
PS C:\Users\anush\Desktop\Christ\Java\Labs\Lab 5> java Bank
Bank A Deposit:10000
Bank A interest rate 7%
Bank A balance:10700.0
_____________________________________________
Bank B Deposit:150000
Bank B interest rate 7.4%
Bank B balance:161100.0
_____________________________________________
Bank C Deposit:200000
Bank C interest rate 7.9%
Bank C balance:215800.0
```

```
import java.util.*;
interface WaterConservationSystem{
    void calculateTrappedWater(int[] blockHeights);
}
abstract class RainySeasonConservation implements WaterConservationSystem{
    public abstract void calculateTrappedWater(int[] blockHeights);
}
class CityBlockConservation extends RainySeasonConservation{
    public void calculateTrappedWater(int[] blockHeights){
        int total=0;
        int n=blockHeights.length;
        int flag[]=new int[n];
        for(int i=0;i<n;i++){
            flag[i]=1;
        }
        //Firstly we will create an array and assign 0 if a house can collect
water
        for(int i=1;i<n-1;i++){
            int flag1=0;
            int flag2=0;
            for(int j=i-1;j>=0;j--){
                if(blockHeights[i]<blockHeights[j]){
                    flag1=1;
                    break;
                }
            }
            for (int j=i+1;j<n;j++){
                if(blockHeights[i]<blockHeights[j]){
                    flag2=1;
                    break;
                }
            }
            if(flag1==1 && flag2==1){
                flag[i]=0;
            }
        }
        //calculate water capacity for house with value assignes 0 from
previous step
        for(int i=1;i<n-1;i++){
            int value1=0;
            int value2=0;
            if(flag[i]==0){
                for(int j=i-1;j>=0;j--){
                    if(flag[j]==1){
                        value1=blockHeights[j];
                        break;
                    }
                }
```

```
                for(int j=i+1;j<n;j++){
                    if(flag[j]==1){
                        value2=blockHeights[j];
                        break;
                    }
                }
                if(value1>value2){
                    total+=value2-blockHeights[i];
                }
                else{
                    total+=value1-blockHeights[i];
                }
            }
        }
        System.out.println("Total collection="+total);
    }
}
class Conservation{
    public static void main(String[] args) {
        Scanner sc=new Scanner(System.in);
        CityBlockConservation obj=new CityBlockConservation();
        int a=0;
        do
        {
            System.out.println("Enter the number of houses ");
            int b=sc.nextInt();
            int array[]=new int[b];
            for(int i=0;i<b;i++){
                System.out.println("Enter height of house "+(i+1));
                array[i]=sc.nextInt();
            }
            obj.calculateTrappedWater(array);
            System.out.println("Do you want to:1.Try Again  2.Exit");
            a=sc.nextInt();
        }while(a!=2);
        System.out.println("Thank you");
    }
}
```

```
PS C:\Users\anush\Desktop\Christ\Java\Labs\Lab 5> java Conservation
Enter the number of houses
5
Enter height of house 1
3
Enter height of house 2
0
Enter height of house 3
```

```
2
Enter height of house 4
0
Enter height of house 5
4
Total collection=7
Do you want to:1.Try Again  2.Exit
```