**Module-4**

**Assignment-3**

**Code:**

**buildings interface:**

package Module\_4;

public interface buildings {

int rooms(int n,int area);

void display(int total);

}

**residential class**:

package Module\_4;

public class residential {

int n;

residential(){

n=0;

}

residential(int w){

n=w;

}

void display() {

System.out.println("The number of rooms: "+n);

}

}

**commercial class:**

package Module\_4;

public class commercial {

int n;

commercial(){

n=0;

}

commercial(int y){

n=y;

}

void display() {

System.out.println("The number of rooms: "+n);

}

}

**apartments class:**

package Module\_4;

public class apartments extends residential implements buildings {

int n;

int area;

apartments(){

n=0;

area=0;

}

apartments(int w){

super(w);

}

@Override

public int rooms(int w,int x) {

n=w;

area=x;

int total=0;

total=n\*area;

return total;

}

@Override

public void display(int total) {

super.display();

System.out.println("The price of the apartment: "+total);

}

}

**hostels class:**

package Module\_4;

public class hostels extends residential implements buildings {

int n;

int area;

hostels(){

n=0;

area=0;

}

hostels(int w){

super(w);

}

@Override

public int rooms(int w,int x) {

n=w;

area=x;

int total=0;

total=n\*area;

return total;

}

@Override

public void display(int total) {

super.display();

System.out.println("The price of the hostel: "+total);

}

}

**offices class:**

package Module\_4;

public class offices extends commercial implements buildings {

int n;

int area;

offices(){

n=0;

area=0;

}

offices(int y){

super(y);

}

@Override

public int rooms(int y,int z) {

n=y;

area=z;

int total=n\*area;

return total;

}

@Override

public void display(int total) {

super.display();

System.out.println("The price of the office: "+total);

}

}

**malls class:**

package Module\_4;

public class offices extends commercial implements buildings {

int n;

int area;

offices(){

n=0;

area=0;

}

offices(int y){

super(y);

}

@Override

public int rooms(int y,int z) {

n=y;

area=z;

int total=n\*area;

return total;

}

@Override

public void display(int total) {

super.display();

System.out.println("The price of the office: "+total);

}

}

main class:

package Module\_4;

import java.io.\*;

public class main {

public static void main(String args[])throws IOException{

InputStreamReader isr=new InputStreamReader(System.in);

BufferedReader br=new BufferedReader(isr);

System.out.println("What do you want to buy?");

System.out.println("1. Apartment");

System.out.println("2. Hostel");

System.out.println("3. Office");

System.out.println("4. Shopping Mall");

System.out.println("Enter the user's choice: ");

int ch=Integer.parseInt(br.readLine());

switch(ch) {

case 1:System.out.println("Enter the price per unit area: ");

int n1=Integer.parseInt(br.readLine());

System.out.println("Enter the area: ");

int area1=Integer.parseInt(br.readLine());

apartments ob1=new apartments(n1);

int total1=ob1.rooms(n1, area1);

ob1.display(total1);

break;

case 2:System.out.println("Enter the price per unit area: ");

int n2=Integer.parseInt(br.readLine());

System.out.println("Enter the area: ");

int area2=Integer.parseInt(br.readLine());

hostels ob2=new hostels(n2);

int total2=ob2.rooms(n2, area2);

ob2.display(total2);

break;

case 3:System.out.println("Enter the price per unit area: ");

int n3=Integer.parseInt(br.readLine());

System.out.println("Enter the area: ");

int area3=Integer.parseInt(br.readLine());

offices ob3=new offices(n3);

int total3=ob3.rooms(n3, area3);

ob3.display(total3);

break;

case 4:System.out.println("Enter the price per unit area: ");

int n4=Integer.parseInt(br.readLine());

System.out.println("Enter the area: ");

int area4=Integer.parseInt(br.readLine());

malls ob4=new malls(n4);

int total4=ob4.rooms(n4, area4);

ob4.display(total4);

break;

default:System.out.println("Enter a valid choice");

}

}

}

**Output:**

**Output 1:**

What do you want to buy?

1. Apartment

2. Hostel

3. Office

4. Shopping Mall

Enter the user's choice:

1

Enter the price per unit area:

1000

Enter the area:

900

The number of rooms: 1000

The price of the apartment: 900000

**Output 2:**

What do you want to buy?

1. Apartment

2. Hostel

3. Office

4. Shopping Mall

Enter the user's choice:

4

Enter the price per unit area:

2000

Enter the area:

2000

The number of rooms: 2000

The price of the mall: 4000000