```java
import java.util.Scanner;

class TwoDimensional{
    int x;
    int y;
    void setCoord(int a,int b){
        this.x = a;
        this.y = b;
    }
    void getCoord(){
        System.out.println(this.x);
        System.out.println(this.y);
    }
}
public class Main {
    public static void main(String[] args) {
        TwoDimensional coord = new TwoDimensional();
        Scanner input = new Scanner(System.in);
        int a = input.nextInt();
        int b = input.nextInt();
        coord.setCoord(a,b);
        coord.getCoord();
    }
}
```

```
/usr/lib/jvm/java-1.8.0-openjdk-amd64/bin/java ...
1
2
1
2
```

```java
import java.util.Scanner;

class TwoDimensional{
    int x1;
    int y1;
    void setCoord(int a,int b){
        this.x1 = a;
        this.y1 = b;
    }
    void getCoord(){
        System.out.println(this.x1);
        System.out.println(this.y1);
    }
}
public class Main {
    public static void main(String[] args) {
        TwoDimensional start = new TwoDimensional();
        TwoDimensional end = new TwoDimensional();
        Scanner input = new Scanner(System.in);
        int a1 = input.nextInt();
        int b1 = input.nextInt();
        int a2 = input.nextInt();
        int b2 = input.nextInt();
        start.setCoord(a1,b1);
        end.setCoord(a2,b2);
        System.out.print("The start coordinated are: \n");
        start.getCoord();
        System.out.print("The start coordinated are: \n");
        end.getCoord();
    }
}
```

```
/usr/lib/jvm/java-1.8.0-openjdk-amd64/bin/java ...
1
2
3
4
The start coordinated are:
1
2
The start coordinated are:
3
4
```

```java
class TwoDimensional{
    int x,y;
    void setCoord(int a,int b){
        this.x = a;
        this.y = b;
    }
    void createLine(int a,int b,int c,int d){
        int slope = (d-b)/(c-a);
        System.out.println("The line is y-"+this.y+"="+slope+"*(x-"+this.x+")");
    }
}
public class Main {
    public static void main(String[] args) {
        TwoDimensional first = new TwoDimensional();
        TwoDimensional second = new TwoDimensional();
        first.setCoord( a: 1, b: 2);
        second.setCoord( a: 3, b: 4);
        first.createLine(first.x,first.y,second.x,second.y);
    }
}
```

```
The line is y-2=1*(x-1)
```

```java
class Person{
    String name,address;
    int age;
    Person(String name,int age,String address){
        this.name = name;
        this.age= age;
        this.address= address;
    }
    void getDetails(){
        System.out.println("Name is "+this.name);
        System.out.print("Age is: "+ age + "\n");
        System.out.println("Address is: "+this.address);
    }
}
public class Main {
    public static void main(String[] args) {
        Person a = new Person( name: "Ritvik", age: 20, address: "Prayagraj");
        a.getDetails();
    }
}
```

```
Name is Ritvik
Age is: 20
Address is: Prayagraj
```

```java
class Student{
    String name,address,branch;
    int age,sem;
    Student(String name,int age,String address,String branch,int sem){
        this.name = name;
        this.age= age;
        this.address= address;
        this.branch = branch;
        this.sem = sem;
    }
    void getDetails(){
        System.out.println("Name is "+this.name);
        System.out.print("Age is: "+ age + "\n");
        System.out.println("Address is: "+this.address);
        System.out.println("Branch is: "+this.branch);
        System.out.println("Semester is:"+this.sem);
    }
}
public class Main {
    public static void main(String[] args) {
        Student a = new Student( name: "Ritvik", age: 20, address: "Prayagraj", branch: "CSE", sem: 4);
        a.getDetails();
    }
}
```

```
Name is Ritvik
Age is: 20
Address is: Prayagraj
Branch is: CSE
Semester is:4
```

```java
class Employee{
    String name,address,organization,designation;
    int age,sem,salary;
    Employee(String name,int age,String address,String organization,String designation,int salary){
        this.name = name;
        this.age= age;
        this.address= address;
        this.organization = organization;
        this.designation = designation;
        this.salary = salary;
    }
    void getDetails(){
        System.out.println("Name is "+this.name);
        System.out.print("Age is: "+ age + "\n");
        System.out.println("Address is: "+this.address);
        System.out.println("Organization is: "+this.organization);
        System.out.println("Designation is:"+this.designation);
        System.out.println("Salary is: "+this.salary);
    }
}
public class Main {
    public static void main(String[] args) {
        Employee a = new Employee( name: "Ritvik", age: 20, address: "Prayagraj", organization: "Microsoft", designation: "SDE", salary: 4700000);
        a.getDetails();
    }
}
```

```
Name is Ritvik
Age is: 20
Address is: Prayagraj
Organization is: Microsoft
Designation is:SDE
Salary is: 4700000
```

```
class Person{
    String name,address;
    int age;
    Person(String name,int age,String address){
        this.name = name;
        this.age= age;
        this.address= address;

  }
}
class Student extends Person{
    String branch;
    int sem;
    Student(String name,int age,String address,String branch,int sem){
        super(name, age, address);
        this.branch = branch;
        this.sem = sem;
    }
}
class Employee extends Student{
    String organization,designation;
    int salary;
    Employee(String name, int age, String address,String branch,int sem, String organization,String designation,int salary) {
        super(name, age, address,branch,sem);
        this.organization = organization;
        this.designation = designation;
        this.salary = salary;
    }
    void getDetails(){
        System.out.println("Person Detail:");
        System.out.println("Name: "+this.name);
        System.out.println("Age: "+this.age);
        System.out.println("Address: "+this.address);
        System.out.println("After becoming Student:");
        System.out.println("Branch: "+this.branch);
        System.out.println("Sem: "+this.sem);
        System.out.println("After Placement:");
```

```
        System.out.println("Organization is: "+this.organization);
        System.out.println("Designation is: "+this.designation);
        System.out.println("Salary is: "+this.salary);
    }
}
public class Main {
    public static void main(String[] args) {
        Employee a = new Employee( name: "Ritvik", age: 20, address: "Prayagraj", branch: "CSE", sem: 4, organization: "Microsoft", designation: "SDE", salary: 4700000);
        a.getDetails();
    }
}
```

```
Name: Ritvik
Age: 20
Address: Prayagraj
After becoming Student:
Branch: CSE
Sem: 4
After Placement:
Organization is: Microsoft
Designation is: SDE
Salary is: 4700000
```