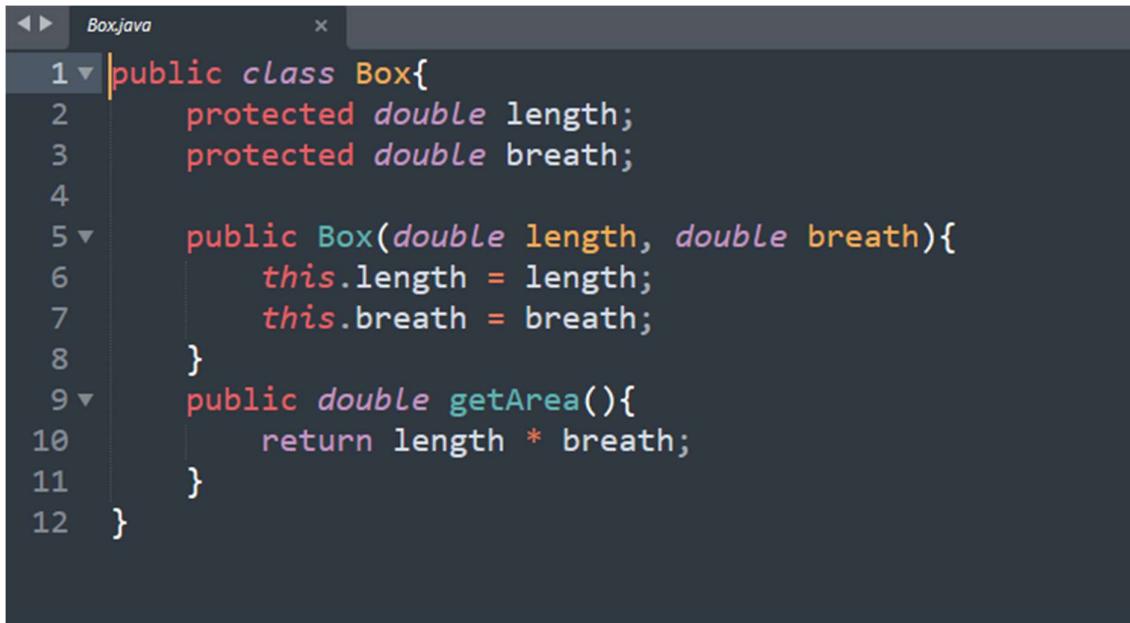


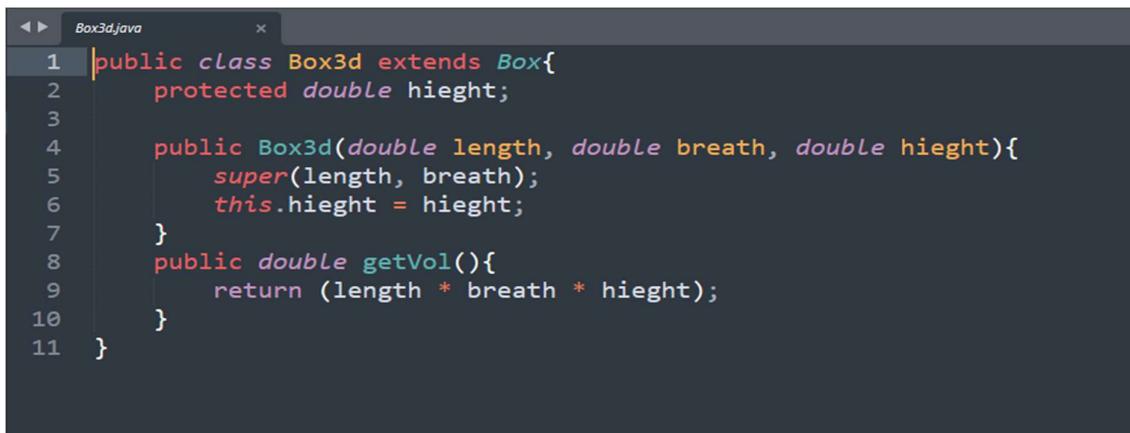
## Assignment 07

- YASH YADAV

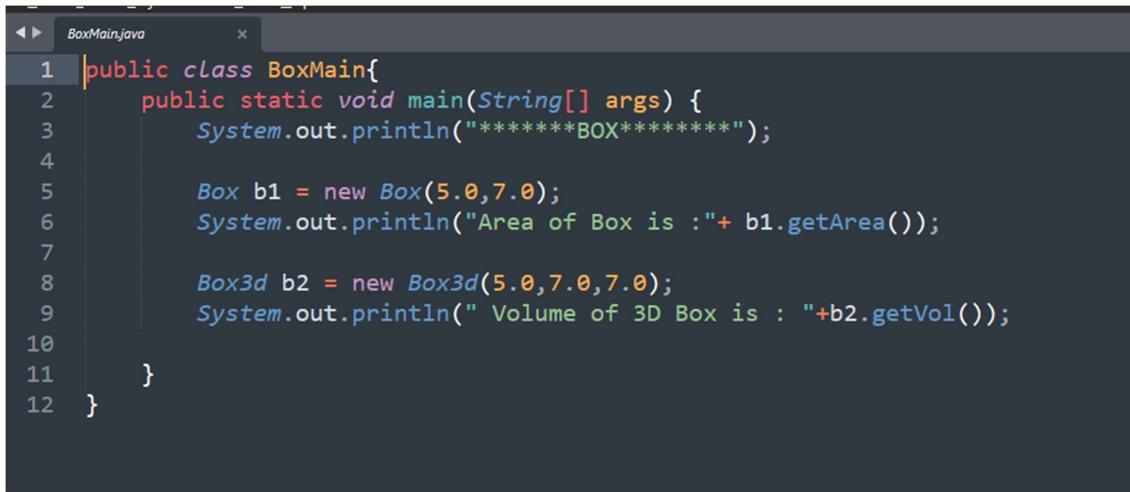
### Q1]Code



```
Box.java
1 public class Box{
2     protected double length;
3     protected double breath;
4
5     public Box(double length, double breath){
6         this.length = length;
7         this.breath = breath;
8     }
9     public double getArea(){
10        return length * breath;
11    }
12 }
```



```
Box3d.java
1 public class Box3d extends Box{
2     protected double hieght;
3
4     public Box3d(double length, double breath, double hieght){
5         super(length, breath);
6         this.hieght = hieght;
7     }
8     public double getVol(){
9         return (length * breath * hieght);
10    }
11 }
```



```
BoxMain.java
1 public class BoxMain{
2     public static void main(String[] args) {
3         System.out.println("*****BOX*****");
4
5         Box b1 = new Box(5.0,7.0);
6         System.out.println("Area of Box is :" + b1.getArea());
7
8         Box3d b2 = new Box3d(5.0,7.0,7.0);
9         System.out.println(" Volume of 3D Box is : " + b2.getVol());
10    }
11 }
12 }
```

## Output:

```
D:\CDAC Hyderabad\JAVA\Practice\Inheritance>java BoxMain.java
*****BOX*****
Area of Box is :35.0
Volume of 3D Box is : 245.0

D:\CDAC Hyderabad\JAVA\Practice\Inheritance>
```

## Q2]



```
Person.java
1 public class Person{
2     protected String name;
3     protected String phn;
4     protected int age;
5     protected String addrs;
6
7
8     public Person(String name, String phn ,int age, String addrs){
9         this.name = name;
10        this.phn = phn;
11        this.age = age;
12        this.addrs = addrs;
13    }
14    public void getdetail(){
15        System.out.println("Name : "+name+"\n Phone : "+phn+"\n Age : "+age+"\n Adrees : "+addrs);
16    }
17
18 }
```

The image shows a Java code editor with two tabs open. The top tab is titled 'Emp.java' and contains the following code:

```
1 public class Emp extends Person{
2     protected int e_id;
3     protected String cmp;
4     protected String post;
5
6     public Emp(String name, String phn ,int age, String addrs,int e_id, String cmp,String post){
7
8         super(name,phn,age, addrs);
9         this.e_id = e_id;
10        this.cmp = cmp;
11        this.post = post;
12    }
13
14    public void getdetail(){
15        System.out.println("Name : "+name+"\nPhone : "+phn+"\nAge : "+age+"\nAdrees : "+addrs);
16        System.out.println("Employee ID : "+e_id+"\nCompany : "+cmp+"\nPost: "+post);
17    }
18
19 }
```

The bottom tab is titled 'Details.java' and contains the following code:

```
1 public class Details{
2     public static void main(String[] args) {
3         System.out.println("*****Details*****");
4         Emp e = new Emp("Yash","8999136003",23,"Maharashtra",001,"Google","HR");
5         e.getdetail();
6     }
7 }
8 //String name, int phn ,int age, String addrs,int e_id, String cmp,String post
```

## Output:

```
D:\CDAC Hyderabad\JAVA\Practice\Inheritance>java Details.java
*****
Name : Yash
Phone : 8999136003
Age : 23
Adrees : Maharashtra
Employee ID : 1
Company : Google
Post: HR
```

**Q3]**

The screenshot shows a Java code editor with two tabs open: Person.java and Employee.java. The Person.java tab is active, displaying the following code:

```
1 public class Person {  
2     String name;  
3  
4     // Base class constructor  
5     public Person(String name) {  
6         this.name = name;  
7         System.out.println("Person constructor called");  
8     }  
9 }  
10
```

The Employee.java tab is visible but contains no code at the moment.

The screenshot shows a Java code editor with three tabs: Person.java, Employee.java, and ConstructorDemo.java. The Employee.java tab is active, displaying the following code:

```
1 public class Employee extends Person {  
2     int empId;  
3  
4     // Derived class constructor calling base class constructor  
5     public Employee(String name, int empId) {  
6         super(name);    // Call Person constructor  
7         this.empId = empId;  
8         System.out.println("Employee constructor called");  
9     }  
10 }  
11
```

The Person.java tab is visible at the top left. The ConstructorDemo.java tab is also visible but contains no code.

**Q4]**

```
File Edit Goto Tools Project Preferences Help
Person.java Employee.java ConstructorDemo.java
1 public class ConstructorDemo {
2     public static void main(String[] args) {
3         // Creating object of Person
4         System.out.println("Creating Person object:");
5         Person p = new Person("John");
6
7         System.out.println();
8
9         // Creating object of Employee
10        System.out.println("Creating Employee object:");
11        Employee e = new Employee("Alice", 101);
12    }
13 }
```

```
D:\CDAC Hyderabad\JAVA\Rough>java ConstructorDemo.java
Creating Person object:
Person constructor called

Creating Employee object:
Person constructor called
Employee constructor called
```

## Q5]

```
File Edit Goto Tools Project Preferences Help
Person.java Manager.java Parent.java Child.java MainDemo.java
1 public class Parent {
2     public void displayParent() {
3         System.out.println("This is parent class");
4     }
5 }
6
```

```
File Edit Goto Tools Project Preferences Help
Person.java Manager.java Parent.java Child.java MainDemo.java
1 public class Child extends Parent {
2     public void displayChild() {
3         System.out.println("This is child class");
4     }
5 }
6
```

```
Person.java      Manager.java      Parent.java      Child.java      MainDemo.java
1 public class MainDemo {
2     public static void main(String[] args) {
3
4         Parent p = new Parent();
5         p.displayParent();
6
7         Child c = new Child();
8         c.displayChild();
9
10        c.displayParent();
11    }
12 }
13
```

```
D:\CDAC Hyderabad\JAVA\Rough>javac MainDemo.java
```

```
D:\CDAC Hyderabad\JAVA\Rough>java MainDemo.java
This is parent class
This is child class
This is parent class
```

## Q6]

```
package member;

public class Member {
    String name;
    int age;
    String phoneNumber;
    String address;
    double salary;

    void printSalary() {
        System.out.println("Salary: " + salary);
    }

    void displayDetails() {
        System.out.println("Name: " + name);
        System.out.println("Age: " + age);
        System.out.println("Phone Number: " + phoneNumber);
        System.out.println("Address: " + address);
        printSalary();
    }
}
```

```
1 package member;
2
3
4 public class Emp extends Member{
5     String specialization;
6
7     void displayEmployeeDetails() {
8         displayDetails();
9         System.out.println("Specialization: " + specialization);
10    }
11 }
```

```
1 package member;
2
3
4
5 public class Manager extends Member {
6     String department;
7
8     void displayManagerDetails() {
9         displayDetails();
10        System.out.println("Department: " + department);
11    }
12
13 }
14
```

```
package member;

public class Main {
    public static void main(String[] args) {
        // Create Employee object
        Emp emp = new Emp();
        emp.name = "Maanu";
        emp.age = 25;
        emp.phoneNumber = "987568945";
        emp.address = "India";
        emp.salary = 50000;
        emp.specialization = "Software Development";

        // Create Manager object
        Manager mgr = new Manager();
        mgr.name = "Aljbbh";
        mgr.age = 40;
        mgr.phoneNumber = "9123456780";
        mgr.address = "Caia";
        mgr.salary = 80000;
        mgr.department = "IT";

        System.out.println("== Employee Details ==");
        emp.displayEmployeeDetails();|  

        System.out.println("\n== Manager Details ==");
        mgr.displayManagerDetails();
    }
}
```

The screenshot shows an IDE interface with a code editor and a terminal window. The code editor contains the Java code provided above. The terminal window has tabs for 'Problems', 'Javadoc', 'Declaration', and 'Console'. It displays the output of the program's execution.

```
<terminated> Main (4) [Java Application] C:\Users\KULDE\Download  
== Employee Details ==  
Name: Maanu  
Age: 25  
Phone Number: 987568945  
Address: India  
Salary: 50000.0  
Specialization: Software Development  
  
== Manager Details ==  
Name: Aljbbh  
Age: 40  
Phone Number: 9123456780  
Address: Caia  
Salary: 80000.0  
Department: IT
```