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NPTEL (<https://swayam.gov.in/explorer?ncCode=NPTEL>) » **Programming in Java (course)**

Announcements (announcements)

About the Course (https://swayam.gov.in/nd1_noc20_cs08/preview) Ask a Question (forum)

Progress (student/home) Mentor (student/mentor)

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Course
outline
 How does an
NPTEL online
course work?

Week 0 :

Week 1 :

Week 2 :

Week 3 :

 ● Lecture 11 :
Java Static
Scope Rule
(unit?
unit=4&lesson=25)

 ● Lecture 12 :
Demonstration-
V (unit?
unit=4&lesson=26)

Java Week 3: Q3

Due on 2020-02-20, 23:59 IST

A class Shape is defined with two overloading constructors in it. Another class Test1 is partially defined which inherits the class Shape. The class Test1 should include two overloading constructors as appropriate for some object instantiation shown in main() method. You should define the constructors using the super class constructors. Also, override the method calculate() in Test1 to calculate the volume of a Shape.

 Select the Language for this assignment. Java ▾

 File name for this program : Test1.java

```

1 import java.util.Scanner;
2 class Shape{
3     double length, breadth;
4     Shape(double l, double b){ //Constructor to initialize a Shape
5         length = l;
6         breadth= b;
7     }
8     Shape(double len){ //Constructor to initialize another Shape
9         length = breadth = len;
10    }
11    double calculate(){ // To calculate the area of a shape object
12        return length * breadth ;
13    }
14 }
15 public class Test1 extends Shape{
16
17
18
19 //Override the method calculate() in the derived class to calculate the volume of a Shape
20
21 double a,b,c;
22 Test1(double x,double y)
23 {
24     super(x,y);
25     a=x;
26     b=y;
27
28 }
```

Lecture 13 :
Inheritance
(unit?
unit=4&lesson=27)

Lecture 14 :
Demonstration-
VI (unit?
unit=4&lesson=28)

Lecture 15 :
Information
Hiding (unit?
unit=4&lesson=29)

Quiz :
Assignment 3
(assessment?
name=95)

Java Week 3:
Q1
(/noc20_cs08/progassignment?
name=107)

Java Week 3:
Q2
(/noc20_cs08/progassignment?
name=108)

Java Week 3:
Q3
(/noc20_cs08/progassignment?
name=109)

Java Week 3:
Q4
(/noc20_cs08/progassignment?
name=110)

Java Week 3:
Q5
(/noc20_cs08/progassignment?
name=111)

Feedback For
Week 3 (unit?
unit=4&lesson=124)

Week 4 :

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VIDEOS

Assignment
Solution

```

29 Test1(double x,double y,double z)
30 {
31     super(x,y);
32     c=z;
33 }
34 double calculate(){ // To calculate the area of a shape ob
35     if(c==0)
36     {
37         return super.calculate()*a;
38     }
39     else
40     {
41         return super.calculate()*c ;
42     }
43 }

0 public static void main(String args[]){
1     Scanner sc = new Scanner(System.in); //Create an object to r
2     double l=sc.nextDouble(); //Read length
3     double b=sc.nextDouble(); //Read breadth
4     double h=sc.nextDouble(); //Read height
5     Test1 myshape1 = new Test1(l,h);
6     Test1 myshape2 = new Test1(l,b,h);
7     double volume1;
8     double volume2;
9     volume1 = myshape1.calculate();
10    volume2=myshape2.calculate();
11    System.out.println(volume1);
12    System.out.println(volume2);
13 }
14 }
15

```

You may submit any number of times before the due date. The final submission will be considered for grading.

This assignment has Public Test cases. Please click on "Compile & Run" button to see the status of Public test cases. Assignment will be evaluated only after submitting using Submit button below. If you only save as or compile and run the Program , your assignment will not be graded and you will not see your score after the deadline.

Save as Draft

Compile & Run

Submit

Reset

Sample Test Cases

	Input	Output
Test Case 1	2.0 3.0 4.0	16.0 24.0

