



# Java – Class and Objects

B.Sc. 2<sup>nd</sup> Semester (Paper Code:CC3)

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# Class

- ▶ A class is a user defined blueprint or prototype from which objects are created. It represents the set of properties or methods that are common to all objects of one type. In general, class declarations can include these components, in order:
- ▶ **Modifiers** : A class can be public or has default access
- ▶ **Class name**: The name should begin with a initial letter.
- ▶ **Body**: The class body surrounded by braces, { }.

A class is declared by use of the **class** keyword

```
class Box {  
    double width;//instance variable  
    double height;  
    double depth;  
}
```



# A Generic Class

```
class classname {  
  
    type instance-variable1;  
    type instance-variable2;  
    // ...  
    type instance-variableN;  
    type methodname1(parameter-list) {  
        // body of method  
    }  
    type methodname2(parameter-list) {  
        // body of method  
    }  
    // ...  
    type methodnameN(parameter-list) {  
        // body of method  
    }  
}
```

# Sample Program

```
//Author: Paulami Basu Ray
//file name= BoxDemo.java

class Box {
    double width;//instance variable
    double height;
    double depth;
}
// This class declares an object of type Box.
class BoxDemo {
    public static void main(String args[]) {
        Box mybox = new Box();

        double vol;
        // assign values to mybox's instance variables
        mybox.width = 10;
        mybox.height = 20;
        mybox.depth = 15;
        // compute volume of box
        vol = mybox.width * mybox.height * mybox.depth;
        System.out.println("Volume is " + vol);
    }
}
```

# Output

```
Command Prompt
D:\P.K College\B.Sc. 2nd Sem\Java Programs>javac BoxDemo.java
D:\P.K College\B.Sc. 2nd Sem\Java Programs>java BoxDemo
Volume is 3000.0
D:\P.K College\B.Sc. 2nd Sem\Java Programs>
```