

Class & Object in Java



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Content

1. what is class ?
2. How to create object ?
3. Method & constructor
4. Method overloading
5. Constructor overloading
6. Static
7. 1D & 2D array

Class

- Class is an user defined data type.
- Class is a template for an object.
- Class is a blue print for an object.
- Class is a collection of data and methods to work upon those data

Example - box0.java

- ✓ Methods and variables defined within a class are called members of the class.
- ✓ The variables declared within a class are called Instance variables.

Object

- Object is an instance of a class.

Ex - mybox.java

Method

- Non-parameterized method
- Parameterized method

■ Constructor

- Non-parameterized constructor
- Parameterized constructor

- Default constructor

Ex - box.java

method overloading

```
void add(int a, int b)
    {System.out.println("Sum is :"+a+b);
    }
void add(int a, int b, int c)
    {System.out.println("Sum is :"+a+b+c);
    }
void add(int c, int d)
    {System.out.println("Sum is :"+c+d);
    }
void add(float a, int b)
    {System.out.println("Sum is :"+a+b);
    }
int add(int p, int q)
    { return (p+q);
    }
```

Constructor overloading

```
class box0 {  
    float length;  
    float width;  
    float height;  
  
    box0( float p)  
        { length=p;  
          width=p;  
          height=p;  
        }  
  
    box0(float l,float w, float h)  
        { length=l;  
          width=w;  
          height=h;  
        }  
}
```

Static

- need of static
- static variable
 - variable is global
- static method
 - It can access only static members
 - It can only call static methods
- Example -stat0.java
 usestatic.java

Static

- static block
 - It will be executed only once prior to creation of first object of the class
- Example -statB1.java
 usestatB.java

Array

Array is implemented as object.

```
int month [];  
month= new int[12];
```

```
int month[]= new int[12];  
int month[]= {31,28,31,30,31,30};
```

Length instance variable of array object indicates size of the array.

Array

For .. each statement

```
int nums[] = {1,12,9,23,4};
```

```
for (int p: nums){  
    System.out.println (p+" ");  
}
```

2D Array

- Syntax for 2D array declaration

```
int marks[][]= new int[70][2];
```

- 2D array can be declared with the first dimension only.

```
int demo[][]= new int [3][];
```

```
. . . . .
```

```
demo[0] = new int[2];
```

```
demo[1] = new int[3];
```

```
demo[2] = new int[2];
```



Thank you