

In java we have four superpowers which are most popularly known as OOPS features

1. Encapsulation
2. Inheritance
3. Polymorphism
4. Abstraction

Abstraction

It is a process of hiding the implementation details from the user and showing only necessary details to the user

In java we have 3 basic java programming elements

- 1) Class (nearly 90%)
- 2) Interface (8 to 10%) if we want to achieve ABSTRACTION in our project
- 3) Enum (less than 2%) if our project has universal constants

In java we are having 4 access modifiers

But for Java class we can use only 2 access modifiers

- 1) public
- 2) package private (default)

Class

```
<Access Modifier>class<ClassNames>
```

```
{
```

```
    Variable;
```

```
    Methods;
```

```
    Create objects;
```

```
    Blocks;
```

```
}
```

Example for java class:

```
Public class ClassA
```

```
{
```

```
    -----;
```

```
    -----;
```

```
}
```

Example 2

```
class ClassB
```

```
{
```

```
    -----;
```

```
    -----;
```

```
}
```

If we are not writing access modifier in example 2 because we do not need to write for default (package-private) if we write, we get an error

Q) What is the Java Method?

A) It is a place where we will be writing the BUSINESS LOGIC.

Syntax of java method

```
<AccessModifier><Return Type><MethodName>()  
{  
.....;  
-----; // Method Body (or) Method Functionality (or) Method  
Implementation  
.....;  
}
```

For Method we can use 4 access modifiers

Note always there should be return type before method name

Return Type: [4 options]

- 1) Void (if we don't want to return anything)
- 2) All the 8 primitive Datatypes
(int, byte, short, long, float, double, char & Boolean)
- 3) Classes
- 4) Interfaces

Example 1

```
Public void meth1()
```

```
{  
}
```

Example 2

```
Private void meth2()
```

```
{  
}
```

Example 3

```
Protected void meth3()
```

```
{  
}
```

Example 4

```
void meth4()
```

```
{  
}
```

Q) How many methods can we write inside a Java Class?

A) We can write any number of methods.

Q) When will a java method be executed?

Example

```
public class ClassA
{
    public void method1()
    {
    }
    public void method2()
    {
    }
}
```