

Access Modifiers in Java :-

→ There are two types of modifiers in Java:

* Access modifiers

* non Access modifiers

→ The access modifiers in Java specifies the accessibility or scope of a field method, constructor, or class.

→ we can change the access level of fields, constructors, methods, and class by applying the access modifier on it.

→ There are four types of java access modifiers;

1. private :-

→ The access level of a private modifier is only within the class.

→ It cannot be accessed from outside the class.

Example :-

```
class A {
    private int data = 40;
    private void msg() { System.out.println("Hello Java"); }
```

```
}
public class Simple {
```

```
    public static void main (String args[]) {
```

```
        A obj = new A();
```

```
        System.out.println(obj.data);
```

```
        obj.msg();
```

```
    }
```

```
}
```


Role of private constructor:

```
class A {  
    private A() {}  
    void msg() { System.out.println("Hello Java"); }  
}
```

```
public class Simple {  
    public static void main(String args[]) {  
        A obj = new A();  
    }  
}
```

2. Default:-

- The access level of a default modifier is only within the package.
- It cannot be accessed from outside the package.

Example:-

```
package pack;  
class A {  
    void msg() { System.out.println("Hello"); }  
}
```

```
→ package my pack;  
import pack.*;  
class B {  
    public static void main(String args[]) {  
        A obj = new A();  
        obj.msg();  
    }  
}
```


3. protected:-

→ The access level of a protected modifier is within the package and outside the package through child class.

Example:-

// save by A.java

```
package pack;
```

```
public class A {
```

```
protected void msg() { System.out.println("Hello");
```

```
}
```

// save by B.java

```
package my.pack;
```

```
import pack.*;
```

```
class B extends A {
```

```
public static void main (String args []) {
```

```
    B obj = new B();
```

```
    obj.msg();
```

```
}
```

```
}
```

4. public:-

→ The access level of a public modifier is everywhere.

→ It can be accessed from within the class, outside the class within the package and outside the package.

Example:

```
# save by A.java
package pack;
public class A {
    public static msg() { System.out.println("Hello"); }
}
```

save by B.java

```
package mypack;
```

```
import pack.A;
```

```
class B {
```

```
    public static void main(String args[])
```

```
    {
```

```
        A obj = new A();
```

```
        obj.msg();
```

```
    }
```

```
}
```