

# Access Modifiers in Java



# INTRODUCTION

- The Access Modifiers In Java Specifies The Accessibility 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:
- Private
- Default
- Protected
- Public



# PRIVATE

- The Private Access Modifier Is Accessible Only Within The Class.
- If You Make Any Class Constructor Private, You Cannot Create The Instance Of That Class From Outside The Class.
- A Class Cannot Be Private Or Protected Except Nested Class.

```
CLASS A{  
    PRIVATE A(){}
    //PRIVATE CONSTRUCTOR  
    VOID MSG(){  
        SYSTEM.OUT.PRINTLN("PRIVATE CONSTRUCTOR");  
    };  
}  
  
PUBLIC CLASS SIMPLE{  
    PUBLIC STATIC VOID MAIN(STRING ARGS[]){  
        A OBJ=NEW A(); //COMPILE TIME ERROR  
    }  
}
```



# DEFAULT

- If We Don't Use Any Modifier, It Is Treated As Default By Default.
- The Default Modifier Is Accessible Only Within Package.
- It Cannot Be Accessed From Outside The Package. It Provides More Accessibility Than Private. But, It Is More Restrictive Than Protected, And Public.

```
PACKAGE PACK;  
CLASS A{  
    VOID MSG(){  
        SYSTEM.OUT.PRINTLN("DEFAULT");  
    }  
}
```





```
PACKAGE MYPACK;  
IMPORT PACK.*;  
CLASS B{  
    PUBLIC STATIC VOID MAIN(STRING ARGS[]){  
        A OBJ = NEW A(); //COMPILE TIME ERROR  
        OBJ.MSG(); //COMPILE TIME ERROR  
    }  
}
```



# PROTECTED

- The Protected Access Modifier Is Accessible Within Package And Outside The Package But Through Inheritance Only.
- The Protected Access Modifier Can Be Applied On The Data Member, Method And Constructor. It Can't Be Applied On The Class.

```
PACKAGE PACK;  
PUBLIC CLASS A{  
    PROTECTED VOID MSG(){  
        SYSTEM.OUT.PRINTLN("PROTECTED");  
    }  
}
```



```
PACKAGE MYPACK;  
IMPORT PACK.*;  
CLASS B EXTENDS A{  
    PUBLIC STATIC VOID MAIN(STRING ARGS[]){  
        B OBJ = NEW B();  
        OBJ.MSG();  
    }  
}
```



# PUBLIC

- The Public Access Modifier Is Accessible Everywhere. It Has The Widest Scope Among All Other Modifiers.
- 

Package Pack;

```
Public Class A{
```

```
    Public Void Msg(){
```

```
        System.Out.Println("Public");
```

```
}
```

```
}
```

Package Mypack;

```
Import Pack.*;
```

```
Class B{
```

```
    Public Static Void Main(String Args[]){
```

```
        A Obj = New A();
```

```
        Obj.Msg();}
```

```
}
```

