FACULTY OF Engineering & Technology

Access Modifiers:

1. The access modifiers in Java specifies the accessibility or scope of a field, method, constructor, or class.
2. It specifies where we can and to whom we can access

An access modifier restricts the access of a class, constructor, data member and method in another class. In java we have four access modifiers:

1. **Default**
2. **private**
3. **protected**
4. **public**

Default access modifier:

1. The scope of this modifier is limited to the package only. This means that if we have a class with the default access modifier in a package, only those classes that are in this package can access this class
2. default method or data member in a class, it would not be visible in the class of another package

Private access modifier

The scope of private modifier is limited to the class only.

1. Private Data members and methods are only accessible within the class

Class and **Interface** cannot be declared as private

2. If a class has **private constructor** then you cannot create the object of that class from outside of the class because this private constructor can not be called by outside the class

```
class demo
{
private  num = 100;
private int square(int a)
{
 return a*a;
 }
 }
```

Here num variable and square method is declared as private and can not be accessible from outside the demo class

Protected Access Modifier

1. Protected data member and method are only accessible by the classes of the same package and the subclasses present in any package.
2. this protected access modifier can be applied on the data member, method and constructor.
3. It can't be applied on the class.
4. It provides more accessibility than the default modifier.

```
package pack1;
public class A
{
protected void display(){System.out.println("Hello");}
}

package pack2;
import pack1.*;
 class B extends A
{
  public static void main(String args[]){
   B obj = new B();
   obj.display();
  }
}
```

Output:Hello