# 2.2 Access Modifiers

This section will guide you to:

- Create a Java project in your IDE
- Write a program in Java to verify the working of access modifiers

This lab has three subsections, namely:

2.2.1 Writing a program in Java to implement access modifiers
2.2.2 Executing the program and verifying how the access modifiers work
2.2.3 Pushing the code to your GitHub repositories

**Step 2.2.1:** Writing a program in Java to implement access modifiers

There are two ways you can perform this step; you can create a new Java project, or you can create a new Java class in the existing project. It is preferable to create a new Java class in the existing project but feel free to explore the first option. The steps mentioned below will work once you create a project in Java.

- *Open Eclipse*
- *[Right click]* on the **src** folder of the project
- Select *New -> Java Class* -> Enter the filename (follow camelCasing)
- Execute the code below resolving the warning and errors due compatibility-related issues

```
//1. Class is having Default access modifier
class defAccessSpecifier
{
  void display()
     {
         System.out.println("You are using defalut access specifier");
     }
}

public class accessSpecifiers1 {

       public static void main(String[] args) {
             //default
             System.out.println("Dafault Access Specifier");
             defAccessSpecifier obj = new defAccessSpecifier();
        obj.display();

       }
}
```

```java
//2. using private access specifiers
class priaccessspecifier
{
   private void display()
    {
        System.out.println("You are using private access specifier");
    }
}

public class accessSpecifiers2 {

	public static void main(String[] args) {
		//private
		System.out.println("Private Access Specifier");
		priaccessspecifier  obj = new priaccessspecifier();
	  //trying to access private method of another class
	  //obj.display();

	}
}



//3. using protected access specifiers

package pack1;

public class proaccessspecifiers {

	protected void display()
    {
        System.out.println("This is protected access specifier");
    }
}



//create another package

package pack2;

import pack1.*;

public class accessSpecifiers3 extends proaccessspecifiers {

	public static void main(String[] args) {
		accessSpecifiers3 obj = new accessSpecifiers3 ();
		 obj.display();
	}

}
```

```java
//4. using public access specifiers
package pack1;

public class pubaccessspecifiers {

	public void display()
    {
	  System.out.println("This is Public Access Specifiers");
    }
}


//create another package

package pack2;
import pack1.*;

public class accessSpecifiers4 {

	public static void main(String[] args) {

		pubaccessspecifiers obj = new pubaccessspecifiers();
	  obj.display();

	}
}
```

**Step 2.2.2:** Executing the program and verifying how the access modifiers work

Before you execute the program, check for syntactical corrections. If no errors are found, follow the steps mentioned below:

- ***[Right click]*** in the program space
- Select *Run As Java Application*

```
Dafault Access Specifier
You are using defalut access specifier

This is protected access specifier


This is Public Access Specifiers
```

**Step 2.2.3:** Pushing the code to your GitHub repositories

Open your command prompt and navigate to the folder where you have created your files.

cd  java_program

Initialize your repository using the following command:

git init

Add all the files to your git repository using the following command:

git add .

Commit the changes using the following command:

git commit .  -m “Changes have been committed.”

Push the files to the folder you initially created using the following command:

git push -u origin master