**11. Packages and Access Modifiers**

• **Theory:**

1. **. Java Packages: Built-in and User-Defined Packages:-**

* **Built-in Packages:-** Java provides several built-in packages that contain a wide variety of classes and interfaces.

### User-Defined Packages:- User-defined packages are created by developers to organize their own classes and interfaces. This helps maintain code structure and prevents naming conflicts between classes in different packages.

**2. Access Modifiers: Private, Default, Protected, Public.**

* **Private:-** Members (variables and methods) declared as private are accessible only within the same class.
* **Default**:- If no access modifier is specified, the member is accessible only within classes in the same package. This is often referred to as "default" access or "package-private".
* **Protected:-** Members declared as protected are accessible within the same package and also by subclasses, even if they are in different packages.
* **Public:-** Members declared as public are accessible from any other class in any package.

### 3.Importing Packages and Classpath

### Importing Packages:- When you want to use classes or interfaces from a package, you need to import them into your Java file. This is done using the import statement.

#### Syntax:- import packageName.ClassName; // Import a specific class

import packageName.\*; // Import all classes from a package

* **Classpath:-** The classpath is a parameter in the Java environment that tells the Java Virtual Machine (JVM) and Java compiler where to look for classes and packages.

**Eg:-** java -cp path/to/classes Main