**Day 6\_Java Assignment**

**1. Problem Description:**

What are the access modifiers in Java?

**2. My Solution:**

There are 4 type of access modifiers in Java as follows:

* public
* protected
* default
* private

**Public:** Variables, methods, and objects in a class are accessible anywhere of the project.

**Private:** Variables, methods, and objects in a class are accessible only within the class.

**Default:** Variables, methods, and objects in a class are accessible anywhere inside the same package in which the class is present.

**Protected:** Variables, methods, and objects in a class are accessible anywhere inside the same package in which the class is present and also any class (it could be located anywhere of the project) which extends this class.

**Public:**

* Public access modifier can be applied to methods, allowing them to be accessed from anywhere. This includes access from within the class itself, within the package but outside the class, as well as from outside the package. Outside the package, access can be established through relationships, such as inheritance or association, even without any direct relationship between the classes also can access.

**Protected:**

* Protected access modifiers can be applied to classes, allowing them to be accessed from anywhere. This includes access from within the class itself, within the package but outside the class, as well as from outside the package. Outside the package, access can be established through relationships, such as inheritance or association. However, without any established relationship, access is restricted.

**Default:**

* If no access modifier is specified, then by default, the class, method, or variable is considered to have default access and is accessible only within the same package. This access level is also known as "package-private".

**Private:**

* The private access modifier restricts access to the class, method, or variable to only within the same class. It cannot be accessed from outside the class, not even from subclasses. Private variables can access using getters and setters.

**Private:** Accessible only within the same class.

**Default (No modifier):** Accessible only within the same package.

**Protected:** Accessible within the same package and by subclasses.

**Public:** Accessible from anywhere.