**Error and Exception Handling:**

1. **Access Modifiers:**

**Private:**

The private access modifiers can be used for class, methods and variables.

* We cannot make the class as private.
* If we make the method as private, we cannot access them outside of the class. It is also accessible within the class.
* If we make variable as private, those variables can be accessed within that class. It cannot be accessed from other class.

**Default:**

* If we didn’t specify any access modifiers, it is considered as default modifires.
* If the class is default, we can access the class within the package the class file is created.
* If the method is set default, it can be accessed with in the class and within the package
* If the variable is set default, it can be accessed with in the class and within the package

**Protected:**

* We cannot make the class as protected.
* If the method is set protected, it can be accessed within the package and outside the package through subclass
* If the variable is set protected, , it can be accessed within the package and outside the package through subclass.

**Public:**

* If the class is public, we can access the class within and outside the package
* If the method is set public, we can access the class within and outside the package
* If the variable is set public, we can access the class within and outside the package

1. **Exception vs Error:**

**Exception:**

Unexpected behavior is called as Exception. It can be handled with throws or try catch block.

There are predefined exception and user defined exception. The user defined exception class should inherit the Exception class.

**Error:**

Error cannot be handled. It happens at the system level.

1. **Checked vs Unchecked Exception:**

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| **Checked Exception** | **Unchecked Exception** |
| Exception occur at compile Time | Exception occurs at Runtime |
| We can escape the exception using throws keyword | Exception is not thrown at compile time. |
| Eg: FileNotFound, IO Exception, SQL Exception | Eg: Arithmetic Exception, IndexOutOf Bound Exception |
| If a file path is incorrect, FileNotFound Exception will occur. | If any number is divided by zero, then the Arithmetic Exception occurs. |