Java 8 and 11

From java8 onward

1. From java8 onward interface can contains method with body. But we need to use static or default keyword.

```
interface Bank {
    void withdraw();
    void deposit();
    default void rateOfInterest(){}
}
class Hsbc implements Bank {
            void withdraw(){}
            void deposit(){}
}
class Sbi implements Bank {
            void withdraw(){}
            void deposit(){}
}
```

Default method we can override but static method we can’t override part of java8 interface.

2. Functional interface : the interface contains only one abstract method is known as functional interface. It can contains more than one default as well as static method but only one abstract method.
3. Lambda expression
   But from java8 onward java also known a functional programming language(we can use nested function features).

   If we want to achieve lambda expression we need functional interface. Lambda is like an arrow function in JavaScript.

   Lambda expression also known as anonymous method or functions. Syntax

   InterfaceName refereceName = (parameterList)->body;

   Lambda expression method return data without return keyword like arrow.

Java8 provided lot of pre defined functional interface part of function package.

Function is part of util package or sub package of util package.

Top most 4 functional interface

Function : it contains apply method which takes T as parameter and return R value

Supplier :it contains get() method no passing parameter but return T value.

Predicate : it contains test() method take t parameter and return Boolean value.

Consumer: it contains accept method take T parameter and no return type.

Stream API

Collection Framework : Collection framework is known as in memory data structure.

Stream : flow of data. Stream hold the data for temporary purpose.

On demand we can load the data with help of stream and apply business logic on those data.

Collection or

Array -→ Stream → Intermediate operator 1-→ Intermediate operator 2 --→ Intermediate operator 3 --→ Terminal operator

Intermediate operator return type stream itself. And terminal operator return type can be void or any other data types.

forEach is a type of terminal operator.

Java 11 Features

New method introduce in string class.

Before java 11 we can create stream for only collection of classes and array.

But from java 11 onward we can make String as stream with help of lines methods.

In Lambda expression we can use var keyword to declare the parameter variable.

We can declare local variable using var keyword in java 11 onwards.

From java 11 onward we can run the java program directly without compiling

java Demo.java

java filename.java

java 11 onward we can do file handling program very easily because it provided few more methods in do file handling programs.

Using IO package we can do file handling program byte wise as well as character.

MVC : Model View Controller

View -→ HTML or JSP This view replace by Angular or React JS

Model -→ Java Bean, Service Class, Dao class, Resource Class

Controller -→ Servlet Servlet program replace by Rest API

Rest Controller

Bridge between

View Rest Controller

JSOn Data