**Java 8 Features**

Java 8 is a major feature release of JAVA programming language development.

There are several new features that are introduced:

**1.Lambda Expression**

Lambda expression is a new feature which is introduced in JAVA 8.It was intoduced to favor the functional interfaces and method references.Because lambda expression code like as though its a functional code.

Syntax:

(parameter/argument list)->{body}

**2.Functional Interfaces**

These are interfaces which contains exactly one abstract.To use lambda expression in JAVA,we need to either create our own functional interface provided by JAVA.While creating our own functional interface,mark it with @FunctionalInterfaces annotation,this annotation is intoduced in JAVA 8.

**3.Method References**

Method Reference is used to point/refer to the functional interface method.

The :: operator is used in method reference to seperate the class or object from the method name.

System.out::println

Types of Method References

Reference to a static method

Reference to an Instance method

Reference to a Constructor

**4.Optional**

This is a class newly intoduced as part of java and basically to deal with NullPointerExceptions.Using this class we can easily check whether a variable has null value or not.

**5.Stream**

A Stream in JAVA 8 can be defined as the sequence of elements from a source to destination.Streams supports aggregate operations on the data returned from collections, arrays, I/O operations.

Stream does not store the elements.It simply performs the aggregate operations to get the desired stream of data.

Aggregate operations that we perform on the collection, array or any other data source do not change the data of the source, they simply return a new stream.

**6.forEach()**

This method is to Iterate over collections and streams in JAVA.We can also use method reference in the forEach method.

Stream forEach() method performs an action for each element of the stream.

Input to the forEach() method is consumer which is Functional Interface.

Using forEach() method we will Iterate through all elements and print to console using lambda expression as well as method reference.

**7.Default method in Interface**

Default method is introduced in JAVA 8 to add the new methods in the existing interfaces in such a way so that they are backward compatible.Backard compatibility is adding new features without breaking the old code.

**8.Static method in Interface**

Static Methods in Interface are similar to default method so we need not to implement them in the Implementation classes.We can safely add them to the exixting interfaces without changing the code in the implementation classes.

**9.Collectors class**

Collectors is a final class that extends the object class which provided reduction operations ,such as accumulationg elements into collections,summerizing elements according to various criteria ,grouping etc.