**Tutorial -1 and 2**

Question:

1. Define the imperative programming paradigm

A step-by-step approach by changing states of the program through various assignment statements.

1. Compare imperative programming paradigm with functional programming paradigm.

A declarative programming paradigm is an expressional approach whereby it focuses on what needs to be done rather than how, emphasis is placed on the result that we want.

An imperative paradigm focuses on how it needs to be done however.

1. List the programming languages support functional concepts.

Haskell, APL, Clojure, Scala, SML.

1. Examine any **FIVE (5)** similarities and/ or differences between functional and imperative programming paradigm.
2. Examine how the functional programming paradigm may be deployed in a programming` language that is fundamentally non-functional in nature. Provide suitable examples to substantiate your answer.

Firstly, a function declaration made has to be ***pure***. This is said to be achieved when there are no side-effects, a condition where any state/variable/value/pointer is modified outside its local environment. Next, a function is said to be pure when it always returns the same output for the same input.

1. Consider the following Java code.

import java.util.\*;

public class Finder {

public static void main(String[] args) {

List<String> names =

Arrays.asList("Dory", "Gill", "Bruce", "Nemo");

findNemo(names);

}

public static void findNemo(List<String> names) {

boolean found = false;

for(String name : names) {

if(name.equals("Nemo")) {

found = true;

break;

}

}

if(found)

System.out.println("Found Nemo");

else

System.out.println("Sorry, Nemo not found");

}

}

Identify the programming style adopted in the above. Discuss how is this programming style used comparatively with declarative/functional programming style. In the discussion, the programming styles should be compared along with programming code, respectively, in Java for the same problem.

Refer to GitHub.