Exercise 002

Computer Programming Paradigms

# Task 1:

What does the term “Computer Programming Paradigm” mean?

*(Short paragraph)*

Computer program paradigms refers to the different styles of computer programming in software development.

# Task 2:

List three computer programming paradigms and explain each in detail.

*(Short paragraph per each paradigm)*

1.Procedural programming paradigm: refers to when a program is executed from top to bottom line by line. E.g. Python

2.Object-oriented programming paradigm: is focused on protecting data within a program and any code that can change data too. It is modular which makes it easier to maintain compared to large programs. E.g. Java

3.Event-driven programming paradigm: refers to programs where external events such as user input determine the flow of the program. It suits GUI development and web development as both display a window or web page and wait for a user’s interaction.

# Task 3:

List three advantages and three disadvantages of the Object-Oriented Programming paradigm.

*(Bullet points)*

**Advantages**

* Time efficient as it supports the re-use of code
* Large applicants can be broken down to smaller segments making it easier to maintain and work on
* Protects data and code

**Disadvantages**

* Techniques such as inheritance and polymorphisms can be hard to understand and program
* Can take longer to learn compared to other programming paradigms
* Typically, OOP programs are much larger than procedural programs

# Task 4:

Why would a global software company, with offices in all the major cities of each continent on the planet, decide to use the OOP paradigm to develop its software.

*(Short paragraph)*

The OOP paradigm would be a good choice for a global software company as it allows for all sensitive data to be protected and for only permitted employees to change code that involves data. It would also allow them to break down large applications into smaller modules so code can be developed and shared by many developers, leading to improved productivity. Finally OOP paradigm also supports the re-use of code which allows faster software development.