Python Assignment 2

Week Two (2)

28th Oct, 2024

**Question 1**. Giving the different between Compiler and Interpreter?

Compiler: A compiler translates code from a high-level programming language into machine code before the program runs. Interpreter: An interpreter translates code written in a high-level programming language into machine code line-by-line as the code runs.

**Question 2**. Between compiler and interpreter which one is faster?

A compiler typically runs a program faster because it translates an entire program at once. Meanwhile, the interpreter translates a program line by line. This makes its overall speed and execution slower.

**Question 3**. List (5) five compiler and interpreter languages each?

Here are five (5) examples of compiler-based programming languages:

1. **C**: A compiler-based programming language
2. **C++**: A compiler-based programming language
3. **C#**: A compiler-based programming language
4. **Java**: A compiler-based programming language that can run on any platform that supports Java
5. **Go**: A compiler-based programming language

Here are five examples of interpreter-based programming languages:

1. **PHP**: An interpreter-based programming language
2. **PERL**: An interpreter-based programming language
3. **Ruby**: An interpreter-based programming language
4. **Python**: An interpreter-based programming language that can also be executed as a compiled program
5. **JavaScript**: An interpreter-based programming language

**Question 5**. What are the uses of comments in python?

Python comments are simple sentences that we use to make the code easier to understand. They explain your way of thinking and describe every step that you take to solve a coding problem. These sentences are not read by the Python interpreter when it executes the code.

However, Comments in Python can be used for a variety of purposes, including:

* **Explaining code**: Comments provide context and explanations to help others understand the code. This can make the code easier to read, maintain, and debug.
* **Documenting code**: Comments can be used to create documentation for the code. This can be helpful for other developers, including the original developer in the future.
* **Testing and debugging**: Comments can be used to prevent code from running when testing.
* **Creating reminders**: Comments can be used to create reminders for the developer.
* **Communicating logic**: Comments can be used to communicate logic, algorithms, and formulas in the source code.