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**Exercise 4**

What is a computer? And what are the main components of computer hardware?

* A computer is a device that receives, stores, processes, and outputs data. The main components of computer hardware include the CPU, RAM, storage, and networking and I/O devices.

Explain the compilation process.

* Compilation is when code is converted from higher level syntax to machine code (binary), a format in which the computer can then understand and execute commands.

What is the difference between an interpreter and a compiler?

* An interpreter processes each line of code one at a time, converting it to machine code and running it. This is different than a compiler, which takes the entire computer program and converts it to binary, then runs it at once.

What is Java Virtual Machine?

* A Java Virtual Machine is a platform that can read and understand compiled Java code (bytecode). The purpose of the JVM is to interpret Java code and convert it to a format that the computer’s specific processor can understand, regardless of which operating system is being used. It allows Java to be more universal.

Define the following terms:

*High Level Language*

* A high level language is a programming language in which the syntax is more representative of human speech rather than machine code.

*Machine Language*

* Machine language is binary code, consisting of 0s and 1s. It is the language understood by computer processors.

*Software Development*

* Software development is the process in which a piece of software is created, but only written by one of the various available programming languages, but also documented and tested as well.

*Programming*

* Programming is the process in which code is being written line by line in order to develop a more wholesome computer program.

*Algorithm*

* An algorithm is a detailed set of rules that a computer processor can follow in order to accomplish a specific task

*Integrated Development Environment*

* An integrated development environment (or IDE) is a software package that allows one to write, compile, run, and debug code all within a single program.

**Exercise 5**

5.1) There is no closing brace for the declaration of “*public static void main(String[] args)” –* in this example it can be included in line 5

5.2) This image appears to be identical to 5.1.

5.3) While the closing brace is now included in this example, there is now a missing semicolon after calling the println() method at the end of line 4.