**NAME: ADEWALE AFIFABI IFAKOREDE**

**MATRIC NUMBER: 17/SCI01/005**

**COURSE CODE: CSC 310**

**QUESTION**

Make a comparative analysis of Assembly language, Machine Language and High level languages respectively.

**ANSWERS**

**Assembly language**

Assembly language is a language which is used in writing codes for microprocessor. It is also a kind of low level language and they are also not that human readable until u know their syntax and implementation. Like if u wrote some code in assembly language for microprocessor 8086.

**Machine language**

Machine language is formed of 0 and 1 and it is not human readable language. So only machine can understand. So whatever language you use to write code that code is converted into machine level language for making it machine understandable.

**High level language**

High level languages are very much developer/human understandable and these are the types of languages which are widely famous now. Example: Python, Javascript, etc

**Assembly language VS high-level language**

* In **assembly language** programs written for one processor will not run on another type of processor. In **high-level language** programs run independently of processor type.
* Performance and accuracy of **assembly language** code are better than a **high-level**.
* Code of **assembly language** is difficult to understand and debug than a **high-level**.
* One or two statements of **high-level language** expand into many **assembly language** codes.
* In **assembly language**, we can directly read pointers at a physical address which is not possible in **high-level.**
* Assembler is used to translate code in **assembly language** while the compiler is used to compile code in the **high-level**.

**Machine language VS Assembly language**

* **Machine languages** comprise of binary digits 0s and 1s. **Assembly languages** have a syntax that is similar to the English language; therefore, they can be understood by programmers and users alike.
* **Machine language** serves as a machine code only. **Assembly languages** are used for real-time systems and microprocessor-based applications/devices.
* **Machine languages** are first-generation programming languages. **Assembly languages** are second-generation programming languages.
* **Machine languages** does not support any change. **Assembly languages** can be modified easily.
* Binary codes cannot be memorized in **machine language**. It is possible to memorize the commands given in **assembly languages**.