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* **MATRIC NUMBER: 17/SCI01/009**
* **COURSE CODE: CSC310**
* **COURSE TITLE: Computer Architecture and Organisation II**

**ASSIGNMENT**

**Q1**

A translator is a programming language processor that converts a [computer program from one language](https://teachcomputerscience.com/programming-languages/) to another.  It takes a program written in source code and converts it into machine code.  It discovers and identifies the error during translation.

**Q2**

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| **INTERPRETOR** | **COMPILER** | **ASSEMBLER** |
| Translates high level language into machine code | Translates high level language into machine code | Translates assembly language into machine code |
| Translates a source one line at a time | Translates all code at one time | Uses the processors instruction set to convert |
| Needed everytime you run the program | Only needed to create an executable file | Runs quickly as conversation between two low level languages is reliant on the processors instruction set |
| Returns a list of errors found and on which lines | Will only inform you of the first error found |  |
| Runs more slowly as it is being translated everytime the code is run | Onced compiled runs quickly but compiling can take a long time |  |

**Q3**

1. High-level languages are programmer-friendly. They are easy to write, debug and maintain.
2. It provides a higher level of abstraction from machine languages.
3. It is a machine-independent language.
4. Easy to learn.
5. Less error-prone, easy to find and debug errors.
6. High-level programming results in better programming productivity.