**Day 1 – Assignment**

Difference between Compiler & Interpreter

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| **Compiler** | **Interpreter** |
| 1. It is a translator which takes input i.e., High-Level Language, and produces an output of low-level language i.e. machine or assembly language. 2. Compiler scans the entire program and translates the whole of it into machine code at once. 3. A compiler takes a lot of time to analyze the source code. However, the overall time taken to execute the process is much faster. 4. A compiler always generates an intermediary object code. It will need further linking. Hence more memory is needed. 5. A compiler generates the error message only after it scans the complete program and hence debugging is relatively harder while working with a compiler. 6. Compliers are used by programming languages like C and C++ for example. | 1. An interpreter is a program that translates a programming language into a comprehensible language. 2. Interpreter translates just one statement of the program at a time into machine code. 3. An interpreter takes very less time to analyze the source code. However, the overall time to execute the process is much slower. 4. An interpreter does not generate an intermediary code. Hence, an interpreter is highly efficient in terms of its memory. 5. Keeps translating the program continuously till the first error is confronted. If any error is spotted, it stops working and hence debugging becomes easy. 6. Interpreters are used by programming languages like Ruby and Python for example. |