Java Programming Zero to Hero – Day 1

Assignment 1

Difference between Compiler and Interpreter

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| No | Compiler | Interpreter |
| 1. | Compiler scans the entire program and translates the whole of it into machine code at once. | Interpreter translates just one statement of the program at a time into machine code |
| 2. | A compiler takes a lot of time to analyse the source code. However, the overall time taken to execute the process is much faster. | An interpreter takes very less time to analyse the source code. However, the overall time to execute the process is much slower. |
| 3. | A compiler always generates an intermediary object code. It will need further linking. Hence more memory is needed. | An interpreter does not generate an intermediary code. Hence, an interpreter is highly efficient in terms of its memory. |
| 4. | A compiler generates the error message only after it scans the complete program and hence debugging is relatively harder while working with a compiler. | Keeps translating the program continuously till the first error is confronted. If any error is spotted, it stops working and hence debugging becomes easy. |
| 5. | Compliers are used by programming languages like C and C++ for example. | Interpreters are used by programming languages like Ruby and Python for example. |
| 6. | Errors are displayed after entire program checked. | Errors are displayed for every instruction interpreted(if any) |
| 7. | Example: C Compiler | Example: BASIC |