Q.1. What is difference between Compiler and Interpreter?

→

Compiler	Interpreter
1. Translates the entire source code of a program into machine code before execution. 2. Generates an executable file. 3. Converts source code to machine code in one go. 4. Executes the machine code produced after the entire program is compiled. 5. 6. Faster execution of the final program as machine code is	1. Translates source code into machine code line-by-line during execution. 2. Does not produce a separate executable file. 3. Executes the source code directly, interpreting one instruction at a time. 4. Translation and execution occur simultaneously. 5. Slower execution as each instruction is translated during runtime. 6. Faster start-up time as no initial

ready before execution. 7. Slower initial compilation time. 8. Displays errors after compiling the entire source code. 9. Error identification happens before execution.	compilation is needed. 7. Stops and displays errors immediately when encountered. 8. Errors are identified during execution. 9. Uses less memory as it translates and executes code line-by-line.