Interpreter Vs Compiler

Interpreter

1 Translates program one statement at a time.

2 It takes less amount of time to analyze the source code but the overall execution time is slower

3 No intermediate object code is generated, hence are memory efficient.

4 Continues translating the program until the first error is met, in which case it stops. Hence debugging is easy.

5 Programming languages like Python, Ruby use interpreters.

Compiler

1 Scans the entire program and translates it as a whole into machine code.

2 It takes a large amount of time to analyze the source code but the overall execution time is comparatively faster.

3 Generates intermediate object code which further requires linking, hence requires more memory.

4 It generates the error message only after scanning the whole program. Hence debugging is comparatively hard.

5 Programming languages like C, C++, Java use compilers.