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| **INTERPRETER** | **COMPILER** |
| Interpreter translates just one statement of the program at a time into machine code | Compiler scans the entire program and translates the whole of it into machine code at once |
| An interpreter takes very less time to analyze the source code. However, the overall time to execute the process is much slower | A compiler takes a lot of time to analyze the source code. However, the overall time taken to execute the process is much faster |
| An interpreter does not generate an intermediary code. Hence, an interpreter is highly efficient in terms of its memory | A compiler always generates an intermediary object code. It will need further linking. Hence more memory is needed |
| Keeps translating the program continuously till the first error is confronted. If any error is spotted, it stops working and hence debugging becomes easy | A compiler generates the error message only after it scans the complete program and hence debugging is relatively harder while working with a compiler |
| Interpreters are used by programming languages like Ruby and Python | Compilers are used by programming languages like C and C++ |