

# Complier

----- Vs -----

# Interpreter



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## Compiler:

**Compiler scans the entire program and translates the whole of it into machine code at once.**

## Interpreter:

**Interpreter translates just one statement of the program at a time into machine code.**



## Compiler:

**A Compiler takes a lot of time to analyze the source code. However, the overall time taken to execute the process is much faster.**

## Interpreter:

**An Interpreter takes very less time to analyze the source code. However, the overall time to execute the process is much slower**



## Compiler:

**A Compiler always generates an intermediary object code. It will need further linking. Hence more memory is needed.**

## Interpreter:

**An Interpreter does not generate an intermediary code. Hence, an interpreter is highly efficient in terms of its memory.**



## Compiler:

**Compiler generates the error message only after it scans the complete program and hence debugging is relatively harder while working with a compiler.**

## Interpreter:

**Keeps translating the program continuously till the first error is confronted. If any error is spotted, it stops working and hence debugging becomes easy.**



## Compiler:

**Compilers are used by programming languages like C and C++ for example.**

## Interpreter:

**Compilers are used by programming languages like Python and Ruby for example.**