Difference Between Complier and Interpreter

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| Basis of difference | Compiler | Interpreter |
| Programming Steps | * Create the program. * Compile will parse or analyses all of the language statements for its correctness. If incorrect, throws an error * If no error, the compiler will convert source code to machine code. * It links different code files into a runnable program(know as exe) * Run the Program | * Create the Program * No linking of files or machine code generation * Source statements executed line by line DURING Execution |
| Advantage | The program code is already translated into machine code. Thus, it code execution time is less. | Interpreters are easier to use, especially for beginners. |
| Disadvantage | You can’t change the program without going back to the source code. | Interpreted programs can run on computers that have the corresponding interpreter. |
| Machine code | Store machine language as machine code on the disk | Not saving machine code at all. |
| Running time | Compiled code run faster | Interpreted code run slower |
| Error execution | Compiler displays all errors and warning at the compilation time. Therefore, you can’t run the program without fixing errors | The interpreter reads a single statement and shows the error if any. You must correct the error to interpret next line. |
| Usage | It is best suited for the Production Environment | It is best suited for the program and development environment. |
| Pertaining Programming languages | C,C++,C#, Scala, Java all use complier. | PHP, Perl, Ruby uses an interpreter. |