

Assignment (E, F and G)

E) Find 3 differences between a compiler and an interpreter.

Compiler	Interpreter
Translates program one statement at a time	Scans the entire program and translates it as a whole into machine code
Continues translating the program until the first error is met, in which case it stops. Hence debugging is easy	It generates the error message only after scanning the whole program. Hence debugging is comparatively hard.
It takes less amount of time to analyze the source code but the overall execution time is slower.	It takes large amount of time to analyze the source code but the overall execution time is comparatively faster.

F) Find the difference between Python 2 and 3?

Python 2	Python 3
It simply returns an integer to the nearest whole number when dividing two integers.	It makes integer division more intuitive by using the division for integers and floats.
It is more stable and transparent version of the python programming language.	It is the future of python designed to address the design flaws in the previous versions.
ASCII string type is used by default to store strings.	Unicode is the implicit string type by default

G) What is ASCII and UTF-8?

ASCII:

ASCII (American Standard Code for Information Interchange) is the most common format for text files in computers and on the Internet. In an ASCII file, each alphabetic, numeric, or special character is represented with a 7-bit binary number (a string of seven 0s or 1s). 128 possible characters are defined.

UTF-8

UTF-8 is a variable width character encoding capable of encoding all 1,112,064 valid code points in Unicode using one to four 8-bit bytes. The encoding is defined by the Unicode standard, and was originally designed by Ken Thompson and Rob Pike. The name is derived from Unicode (or Universal Coded Character Set) Transformation Format – 8-bit.