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

Interpreter: 1-No intermediate object code is generated, hence are memory efficient.

2- Translates one statement of the program at time

And there for 3-Continues translating the program until the first error is met, in which case it stops.

Compiler: 1-Generates intermediate object code which further requires linking, hence requires more memory.

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

And that's why 3- It generates the error message only after scanning the whole program.

F) Find the difference between Python 2 and 3?

1- In python 2 the print function does not need brackets () While in Python 3 it is necessary to put them.

2- In python 2 if we divide two integer the result will be integer also, ex: print 3/2 out-put is : 1

While in Python 3 if we divide two integers the result will be in float, ex: print (3/2) out-put is : 1.5

3- The handling of exceptions had slightly changed between Python2, ex: except something, err:

But in Python3 the "as" had become a key-word, ex: except something as err

4- the Input function has changed also, in Python2 to make sure that the input is stored as string we have to put raw_input () But in Python3 the inputs are stored directly as strings input ().

5- rounding decimals, in Python3 the decimals are rounded to the nearest even number

Python 2:

5.5 is rounded to 6 and 6.5 is rounded to 6 also

Python 3:

5.5 is rounded to 6 and 6.5 is rounded to 7

Note: there is much more differences but, these are what I understood of them.

G) What is ASCII and UTF-8?

ASCII: stands for (American Standard Code for Information Interchange), it based on simple idea to use numbers to represent text. In ASCII alphabetic, numeric, special character are represented by 7-bit binary number. It is most used in emails, programming, text files and data conversions. But it is limited to represent 128 characters.

UTF-8: Unicode standard represents a wide range of characters and symbols, where every characters is identified by code point, where ASCII is limited to 128 character the Unicode standard solve this limitation by allowing to over 1 million code points, it can represent mathematical character, languages, emoji and other charactors.UTF-8 can be from 1-4 bits long, can represent any character In the Unicode standard and it is backward compatible with ASCII .