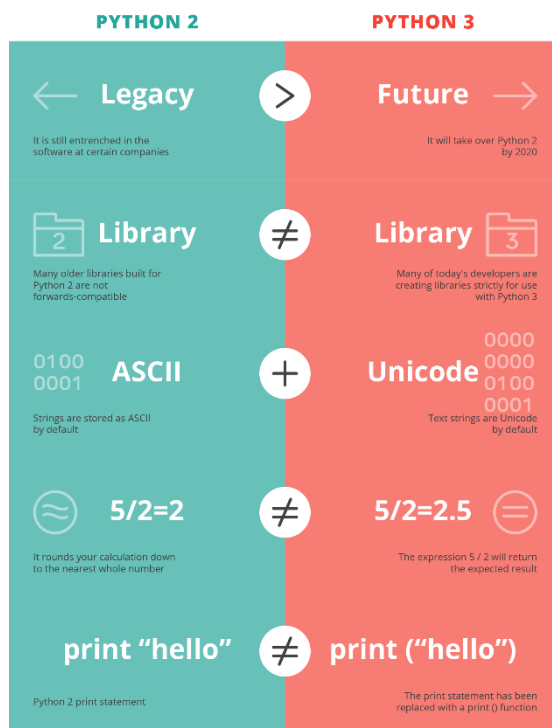




E) Find 3 differences between a compiler and an interpreter.

No	Compiler	Interpreter
1	Compiler Takes Entire program as input	Interpreter Takes Single instruction as input .
2	Intermediate Object Code is Generated	No Intermediate Object Code is Generated
3	Conditional Control Statements are Executes faster	Conditional Control Statements are Executes slower
4	Memory Requirement : More (Since Object Code is Generated)	Memory Requirement is Less
5	Program need not be compiled every time	Every time higher level program is converted into lower level program
6	Errors are displayed after entire program is checked	Errors are displayed for every instruction interpreted (if any)
7	Example : C Compiler	Example : BASIC

F) Find the difference between Python 2 and 3?





G) What is ASCII and UTF-8?

ASCII : it stands for American Standard Code for Information Interchange.

It's a method that codes [A-Z] , [a-z] and [0-9] (only American characters) in binary system , for example the character (a) have the code 110 0001 which equals in decimal the number 97. Also the symbol (!) have the code 010 0001 which equals 33 in decimal system , and so on, it starts from 32 to 127 in decimal. Each symbol should consist of single byte with 8 bits. Life was good. Heck they even sent people to the moon! That is if you spoke English .

UTF-8 : it's used to encode text in any language , it came to overcome the shortage in ASCII coding that only works for English language and the need of special coding for each language.

How does UTF-8 solve the problem?!

In UTF-8, every code-point from 0–127 is stored in a single byte. Code points above 128 are stored using 2, 3, and in fact, up to 6 bytes.