Assignment Questions

Question 1

Assume that there are two variables **var1 = 20** and **var2 = 30**

i. Write a code that swaps the values of these variables. After the swapping operation, **var1 = 30** and **var2 = 20**

ii. Write a code that swaps the values of these variables without using a temporary variable. You are only allowed to use the variables **var1** and **var2** to get your results.

Question 2

Consider the variable **x = 2.56000**
It has a precision of **5** which means five digits after the decimal.

i. Print the variable in the console. Does the precision change? What is the precision when the variable is printed?

ii. Print the variable in the console without losing the precision of the original data. If **5.56700** is printed in the console, it should get printed as **5.56700** instead of **5.567**

Question 3

Consider the numbers **125**, **25**, **69**, **625** and **341**. Calculate the square root of these numbers using the **** operator. Remove any decimal part from the results and display. If the result is **2.23519** then display it as **2.0** without changing the data type (should remain float).

Question 4

Consider the variable **my_string = "hello world welcome to Python!"**
Perform the following operations on the string:

i. Convert the string to UPPER CASE

ii. Replace the string Python with Python Programming. Try all possible approaches to achieve the result.

iii. Reverse the string **welcome** to **"emoclew"** and replace it. That is, the string should now read:

hello world "emoclew" to Python!

iv. Reverse the original string using string slicing operations. Also, reverse the string without using string slicing operations.

v. Slice the original string from **index 4** to the l**ast index** (the character at the last index must also be included) but calculate the last index value dynamically.

That is if the last index is known to be **13**, then calculate this value dynamically and save it to a variable. Use this variable as the value for **end_index** in the slicing operation.

vi. Slice the original string from **index 10** to **index 0** but in reverse order and calculate the value of index 0 dynamically (as explained above).

vii. Calculate the weight of the string **Escape Sequence**

The weight of a string is the sum of its ASCII characters. For the string **PytHoN** the weight is **578**.