**Tutorial 5**

**Ques 1:** A string slice can take a third index that specifies the “step size;” that is, the number

of spaces between successive characters. A step size of 2 means every other character; 3 means every third, etc.

>>> fruit = 'banana'

>>> fruit[0:5:2]

'bnn'

A step size of -1 goes through the word backwards, so the slice [::-1] generates a reversed string.

Use this idea to write a one-line version of palindrome.

**Ques 2:** Write a pseudocode and program to check if the string contains any lower case letter. If yes, print a True otherwise print a False. Use a while loop and if-then-else statement.

Strings have many handy methods, whose specifications can be found at the following URL:

<https://docs.python.org/3/library/stdtypes.html#string-methods>

**Ques 3.** ROT13 is a weak form of encryption that involves “rotating” each letter in a word

by 13 places. To rotate a letter means to shift it through the alphabet, wrapping around to the

beginning if necessary, so ’A’ shifted by 3 is ’D’ and ’Z’ shifted by 1 is ’A’.

Write a program that takes a string and an integer as parameters, and that

returns a new string that contains the letters from the original string “rotated” by the given amount.

For example, “cheer” rotated by 7 is “jolly” and “melon” rotated by -10 is “cubed”.

You might want to use the built-in functions **ord**, which converts a character to a numeric code,

and **chr**, which converts numeric codes to characters.