Lab 4 Section A

CSE101 : Introduction to Programming

(Monsoon 2019)

September 4, 2019

Create a module **YourRollNumber_string_functions.py** and implement the functions mentioned in the tasks below. You only have to use string methods to implement the functions. DO NOT use conditional statements and loops, marks will not be awarded for those.

Task 1 :

Implement the function **get_every_fourth(S)** that takes in string **S** as a parameter, and returns the subsequence containing every fourth character in S, ending at the last character of S (see examples for better understanding). The string S can contain leading and trailing white spaces, so make sure to remove those.

For eg.

get_every_fourth ("doc**u**men**t**") will return "ut"
get_every_fourth ("w**o**rld**s**") will return "os"
get_every_fourth (" int**r**odu**c**tio**n** ") will return "rcn" and not "ndi "

Note : A **subsequence** of string S is a string obtained after deleting 0 or more characters from S. Click on the link to know more about subsequences - https://en.wikipedia.org/wiki/Subsequence

Task 2 :

Implement the function **get_every_kth(S, k, i)** that takes in string **S** as a parameter, and returns the subsequence containing every **k-th** character in S, ending at the character at index **i** (see examples for better understanding). The string S can contain leading and trailing white spaces, so make sure to remove those.

For eg.

get_every_kth ("d**o**c**u**m**e**nt", 2, 5) will return "oue"
get_every_kth ("d**o**cu**m**ent", 3, 4) will return "om"
get_every_kth (" int**r**o**d**uc**t**ion ", 3, 8) will return "tdt" and not "iru"

Task 3 :

You are a big fan of cryptography and love playing with strings. One day your friend gave you an encoded alphanumeric string S (consisting of alphabets and numbers). The string is segmented into various segments (at least two) and each segment is separated by a **'_'** (underscore).

For eg. An encoded string S could be -

S = "abc_dEf_xy45_12_mNOp"

Your friend is very interested in the second last segment of the string as he/she believes that the key to decode S and crack the message is hidden in the second last segment. Unfortunately, he/she doesn't know how to get the second last segment, so they ask you to help them. Can you help your friend decode the given string S?

Implement the function **decode_string(S)** that takes in string **S** as a parameter and returns the second last segment of string S.

For eg.

decode_string("abc_dEf_xy45_12z_mNOp") will return "12z"

decode_string("heLLO_WoRLd_123") will return "WoRLd"

GOOD! You have completed all the Tasks. Now compress all the files into zip format.

Files to be zipped:

1. my_string_functions.py

The zipped file should be named as <name>_<rollno>.zip for example bhavye_17038.zip

Upload the zipped file on classroom and Turn it In.