

Q.1 Suppose you have designed an application for an online ticket booking system and validated the password entered by the user. Write pseudocode and program to validate the password based on the following rules:

Primary conditions for password validation:

1. Minimum 8 characters.
2. The alphabets must be between [a-z]
3. At least one alphabet should be of Upper Case [A-Z]
4. At least 1 number or digit between [0-9].
5. At least 1 character from [_ or @ or \$].

Input Format:

Password entered by the user

Output Format:

Valid password

Invalid password

Q.2 Write a Python program to count the number of characters (character frequency) in a string.

Q.3 Write a Python program to get a string made of the first 2 and the last 2 chars from a given a string. If the string length is less than 2, return instead of the empty string.

Sample String : 'w3resource'

Expected Result : 'w3ce'

Sample String : 'w3'

Expected Result : 'w3w3'

Sample String : ' w'

Expected Result : Empty String

Q.4 Write a Python program to get a single string from two given strings, separated by a space and swap the first two characters of each string.

Sample String : 'abc', 'xyz'

Expected Result : 'xyc abz'

Q.5 Write a Python program to add 'ing' at the end of a given string (length should be at least 3). If the given string already ends with 'ing' then add 'ly' instead. If the string length of the given string is less than 3, leave it unchanged.

Sample String : 'abc'
Expected Result : 'abcing'

Q.6 Write a Python function that takes a list of words and return the longest word and the length of the longest one.

Sample Output:

Longest word: Exercises

Length of the longest word: 9

Q.7 Write a Python script that takes input from the user and displays that input back in upper and lower cases.

Q.8 Write a Python program to count the occurrences of each word in a given sentence.

Q.9 Write a Python program to remove the characters which have odd index values of a given string.

Q.10 Write a Python function to convert a given string to all uppercase if it contains at least 2 uppercase characters in the first 4 characters.

Q.11 Write a python code to check the validity of a PAN number entered by the user at run time.