ASSIGNMENT-02

Programming Fundamental

SWE-102T

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BSE-20F-022

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Programming Fundamentals (SWE-102) Assignment # 2

Semester: I **Batch: 2020**
Max Points: 10

Instructions:

- Attempt all questions
- Do not copy or cheat from any one, make your own effort. If any assignment found copied it will straight away be rejected.
- All questions solution contains Source Code and Output snapshot using Python Thonny IDE.
- There is no maximum page limit.
- Assignment should be in MS Word document. The Word file should be submitted by converting it to a single PDF file.
- Mention your full name and roll number on the first / front page. The page numbers must be mentioned at the right bottom corner in the whole assignment.
- The maximum font size for text is 12 and for heading is 14. The font could be Arial or the Time New Roman

Question 1 **[5 points]**

Write down the description, syntax and example of the following methods in python.

a) upper() b) lower() c) title() d) print() e) strip()
f) rstrip() g) lstrip() h) split() i) input() j) eval()

Example Solution

Method	Syntax	Description	Example
upper()	*string*.upper()	The upper() method returns a string where all characters are in upper case. Symbols and Numbers are ignored.	**Code:** var=”hello” print(var.upper()) print(“python”.upper()) **Output:** >>> %Run string.py HELLO PYTHON
lower()	string.lower()	The lower() method returns a string where all characters are in lower case Symbols and numbers are ignored.	**CODE:** string = "Hello my FRIENDS" x = string.lower() print(x) **OUTPUT:** >>> %Run 'assignment 2 1.py' hello my friends >>>

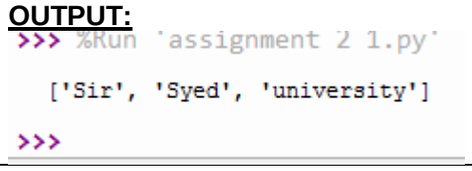
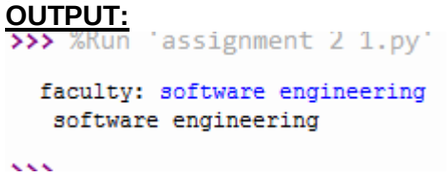
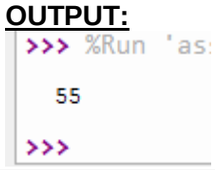
title()	String.title()	The title() method returns a string where the first character in every word is uppercase. Like header, or a title.
		
		If the word contains a number or a symbol, the first letter after that will be converted to upper case.
			CODE:
			var = "Welcome to the python"
			x = var.title()
			print(x)
			
			OUTPUT:
			`>>> %Run 'assignment 2 1.py'`
			`Welcome To The Python`
			`>>>`

print()	Print(assigned variable)	The print() function prints the specified message on the screen, or other standard output devices.
		
		The message can be a string, or any other object, the object that will be converted into a string before written to the screen.
			CODE:
			print("Hello World")
			
			OUTPUT:
			`>>> %Run 'assignment 2 1.py'`
			`Hello World`
			`>>>`

strip()	String.strip(characters)	The strip() method removes any leading and trailing characters.	**CODE:**
			var = " Syed "
			v = var.strip()
			print("Sir", v, "university")
			
			OUTPUT:
			`>>> %Run 'assignment 2 1.py`
			`Sir Syed university`

rstrip()	String.rstrip(characters)	The rstrip() method removes any trailing characters, spaces is the default trailing character to remove	**CODE"**
			var = " Syed "
			v = var.rstrip()
			print("Sir", v, "university")
			
			OUTPUT:
			`>>> %Run 'assignment 2 1.p`
			`Sir  Syed university`
			`>>>`

lstrip()	String.lstrip(characters)	The lstrip() method removes any leading characters.	**CODE:**
			var = " Syed "
			v = var.lstrip()
			print("Sir", v, "university")
			
			OUTPUT:
			`>>> %Run 'assignment 2 1.p`
			`Sir Syed  university`

Split()	String.split(separator)	The split() method splits a string into a list. You can specify the separator, default separator is any whitespace.	**CODE:** var = "Sir Syed university" v=var.split() print(v) **OUTPUT:** 
Input()	Input(prompt)	The input() function allows user to input.	**CODE:** x= input("faculty:") print(x) **OUTPUT:** 
Eval()	Eval(expression)	The eval() function evaluates the specified expression, if the expression is a legal python statement, it will be executed.	**CODE:** x="print(55)" eval(x) **OUTPUT:** 

Question 2 **[5 points]**

Write a python program to take string phrase input from the user through keyboard. The program should be able to print the following.

(a) Total Vowels (upper or lower case character) in the given string phrase.
(b) Total Consonants (upper or lower case character) in the given string phrase.
(c) Total Spaces in the given string phrase.
(d) Total words in the given string phrase.
(e) Total characters in the given string phrase excluding spaces.

Sample Output:

Enter a string phrase = Python is Fun
Total Vowel = 3
Total Consonant = 8
Total Spaces = 2
Total Words = 3
Total Characters = 11

CODE:

```
# Abdul Moiz Chishti BSE=20F-022
str = input("Enter the string phrase : ")
vowels = 0
characters = 0
consonants = 0
spaces = 0
words = 0
str = str.lower()
#Vowels, Consonents and space count
for i in range(0, len(str)):
    if (str[i] == 'a' or str[i] == 'e' or str[i] == 'i' or str[i] == 'o' or str[i] == 'u'):
        vowels = vowels + 1
    elif((str[i] >= 'a' and str[i] <= 'z')):
        consonants = consonants + 1
    elif (str[i] ==' '):
        spaces = spaces + 1
#total word count
words=1
for i in range(len(str)):
    if(str[i] == ' ' or str == '\n' or str == '\t'):
        words = words + 1
#Total Character count
characters=0
for i in str:
    characters = vowels + consonants
print("Total Vowels: ", vowels)
print("Total Consonants: ", consonants)
print("Total spaces: ", spaces)
print("Total words : ", words)
print("Total Characters: ", characters)
```

OUTPUT:

```
>>> %Run 'Assignment 2.py'

  Enter the string phrase : Python is an interpreted, object-oriented, high-level programming language with dynamic semantics
  Total Vowels:  29
  Total Consonants:  54
  Total spaces:  10
  Total words :  11
  Total Characters:  83
```