# TOPSTECHNOLOGIES
### Training | Outsourcing | Placement | Study Abroad

## Module 7) DA - Introduction to Python

## Assignment

1) What are the types of Applications?
2) What is programing?

3) What is Python?

4) Write a Python program to check if a number is positive, negative or zero.

5) Write a Python program to get the Factorial number of given numbers.

6) Write a Python program to get the Fibonacci series of given range.

7) How memory is managed in Python?
8) What is the purpose continuing statement in python?

9) Write python program that swap two number with temp variable and without temp variable.
10) Write a Python program to find whether a given number is even or odd, print out an appropriate message to the user.
11) Write a Python program to test whether a passed letter is a vowel or not.
12) Write a Python program to sum of three given integers. However, if two values are equal sum will be zero.

13) Write a Python program that will return true if the two given integer values are equal or their sum or difference is 5.
14) Write a python program to sum of the first n positive integers.

15) Write a Python program to calculate the length of a string.

16) Write a Python program to count the number of characters (character frequency) in a string
17) What are negative indexes and why are they used?

18) Write a Python program to count occurrences of a substring in a string.

19) Write a Python program to count the occurrences of each word in a

given sentence

20) 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.

21) Write a Python program to add 'in' 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.

22) Write a Python function to reverses a string if its length is a multiple of 4.

23) 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.

24) Write a Python function to insert a string in the middle of a string.

25) What is List? How will you reverse a list?

26) How will you remove last object from a list?

27) Suppose list1 is [2, 33, 222, 14, and 25], what is list1 [-1]?

28) Differentiate between append () and extend () methods?

29) Write a Python function to get the largest number, smallest num and sum of all from a list.

30) How will you compare two lists?

31) Write a Python program to count the number of strings where the string length is 2 or more and the first and last character are same from a given list of strings.

32) Write a Python program to remove duplicates from a list.

33) Write a Python program to check a list is empty or not.

34) Write a Python function that takes two lists and returns true if they have at least one common member.

35) Write a Python program to generate and print a list of first and last 5 elements where the values are square of numbers between 1 and 30.

36) Write a Python function that takes a list and returns a new list with unique elements of the first list.

37) Write a Python program to convert a list of characters into a string.

38) Write a Python program to select an item randomly from a list.

39) Write a Python program to find the second smallest number in a list.

40) Write a Python program to get unique values from a list

41) Write a Python program to check whether a list contains a sub list

42) Write a Python program to split a list into different variables.

43) What is tuple? Difference between list and tuple.

44) Write a Python program to create a tuple with different data types.

45) Write a Python program to unzip a list of tuples into individual lists.

46) Write a Python program to convert a list of tuples into a dictionary.

47) How will you create a dictionary using tuples in python?

48) Write a Python script to sort (ascending and descending) a dictionary by value.

49) Write a Python script to concatenate following dictionaries to create a new one.

50) Write a Python script to check if a given key already exists in a dictionary.

51) How Do You Traverse Through a Dictionary Object in Python?

52) How Do You Check the Presence of a Key in A Dictionary?

53) Write a Python script to print a dictionary where the keys are numbers between 1 and 15.

54) Write a Python program to check multiple keys exists in a dictionary

55) Write a Python script to merge two Python dictionaries

56) Write a Python program to map two lists into a dictionary
   Sample output: Counter ({'a': 400, 'b': 400,'d': 400, 'c': 300}).

57) Write a Python program to find the highest 3 values in a dictionary

58) Write a Python program to combine values in python list of dictionaries.
Sample data: [{'item': 'item1', 'amount': 400}, {'item': 'item2', 'amount': 300}, o {'item': 'item1', 'amount': 750}]
Expected Output:

- Counter ({'item1': 1150, 'item2': 300})

59) Write a Python program to create a dictionary from a string.
Note: Track the count of the letters from the string.

60) Sample        string:
'w3resource' Expected output:

- {'3': 1,'s': 1, 'r': 2, 'u': 1, 'w': 1, 'c': 1, 'e': 2, 'o': 1}

61) Write a Python function to calculate the factorial of a number (a nonnegative integer)

62) Write a Python function to check whether a number is in a given range

63) Write a Python function to check whether a number is perfect or not.

64) Write a Python function that checks whether a passed string is

palindrome or not

65) How Many Basic Types of Functions Are Available in Python?

66) How can you pick a random item from a list or tuple?

67) How can you pick a random item from a range?
68) How can you get a random number in python?
69) How will you set the starting value in generating random numbers?

70) How will you randomize the items of a list in place?

71) What is File function in python? What are keywords to create and write file.

72) Write a Python program to read an entire text file.

73) Write a Python program to append text to a file and display the text.

74) Write a Python program to read first n lines of a file.

75) Write a Python program to read last n lines of a file.

76) Write a Python program to read a file line by line and store it into a list

77) Write a Python program to read a file line by line store it into a variable.

78) Write a python program to find the longest words.

79) Write a Python program to count the number of lines in a text file.

80) Write a Python program to count the frequency of words in a file.

81) Write a Python program to write a list to a file.

82) Write a Python program to copy the contents of a file to another file.

83) Explain Exception handling? What is an Error in Python?

84) How many except statements can a try-except block have? Name Some built-in exception classes:

85) When will the else part of try-except-else be executed?

86) Can one block of except statements handle multiple exception?

87) When is the finally block executed?

88) What happens when „1"== 1 is executed?

89) How Do You Handle Exceptions with Try/Except/Finally in Python? Explain with coding snippets.

90) Write python program that user to enter only odd numbers, else will raise an exception.