

## Assignments-2

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**Pregrad**

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### Assignments Questions

Q1. Explain with an example each when to use a for loop and a while loop.

Q2. Write a python program to print the sum and product of the first 10 natural numbers using for and while loop.

Q4. Create a list of numbers from 1 to 100. Use for loop and while loop to calculate the cube of each number and if the cube of that number is divisible by 4 or 5 then append that number in a list and print that list.

Q5. Write a program to filter count vowels in the below-given string.  
string = "I want to become a data scientist"

Q6. Which keyword is used to create a function? Create a function to return a list of odd numbers in the range of 1 to 25.

Q7. Write a code to print odd numbers from 1 to 100 using list comprehension.

Q8. Create a function which will take a list as an argument and return the product of all the numbers after creating a flat list.

Use the below-given list as an argument for your function.

list1 = [1,2,3,4, [44,55,66, True], False, (34,56,78,89,34), {1,2,3,3,2,1}, {1:34, "key2": [55, 67, 78, 89], 4: (45, 22, 61, 34)}, [56, 'data science'], 'Machine Learning']

Note: All Answers must be submitted in pdf file.