

Task 7: Implement python generator & decorators

Aim: write a program to implement python generator & decorators..

7.1. Produce a sequence of number when provided with start, end & step values.

Algorithm:

1. Define Generator Function
2. Initialize current value
3. Generate sequence
4. Get user input
5. Create generator object
6. Print generator sequence.

Program:

```
def number - sequence (start, end, step=1):  
    current = start  
    while current <= end:  
        yield current  
        current += step  
    start = int (input ("Enter the starting number:"))  
    end = int (input ("Enter the ending number:"))  
    step = int (input ("Enter the step value:"))  
  
    # create the generator  
    sequence_generator = number - sequence.  
  
    # print the generated sequence of numbers for  
    # number for  
    print (number).
```

output :

Enter the starting number : 1

Enter the ending number : 50

Enter the step value : 5

1

6

11

16

21

26

31

36

41

46

VER. TECH
EX. NO.
PERFORMANCE (%)
RESULT AND ANALYSIS (%)
MARKS (%)
RECORD (%)
TOTAL (%)

7.2 Imagine you are working on a messaging application that needs to format message differently based on the user's preferences.

Algorithm:

1. Create Decorators
2. Define function
3. Define greet function
4. Execute the program

Program:

```
def uppercase_decorator(func):  
    def wrapper(text):  
        return func(text).upper()  
    return wrapper  
  
def lowercase_decorator  
def wrapper.  
    return func(text).lower()  
    return wrapper.  
  
@uppercase_decorator  
def shout(text)  
    return text  
  
@lowercase_decorator  
def shout(text):  
    return text  
  
@lowercase_decorator  
def shout(text)  
    return text  
  
def greet(name):  
    greeting = func("Hi", name created by a function  
        passed as argument
```

created by a FUNCTION PASSED as argument
created by a function Passed as argument

print (greeting)
greet (shout)
greet (whisper)

VEL TECH	
EX NO.	
PERFORMANCE (5)	7
RESULT AND ANALYSIS (5)	5
VIVA VOCE (5)	5
RECORD (5)	5
TOTAL (20)	
SIGN WITH DATE	15

✓

Result: The Python program to implement python
generator and decorators was successfully
executed & output was verified.