

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

1	6	11	16	21	26	31	36	41	46
2	7	12	17	22	27	32	37	42	47
3	8	13	18	23	28	33	38	43	48
4	9	14	19	24	29	34	39	44	49
5	10	15	20	25	30	35	40	45	50

There are some of the things that you should know about the program to run it. First, you need to have a compiler that can run C++ programs. Second, you need to have a text editor that can write C++ code. Third, you need to have a way to run the program, like a command prompt or a terminal window. Fourth, you need to have a way to see the output of the program, like a window or a file. Fifth, you need to have a way to save the program, like a file or a folder. Sixth, you need to have a way to delete the program, like a file or a folder. Seventh, you need to have a way to rename the program, like a file or a folder. Eighth, you need to have a way to move the program, like a file or a folder. Ninth, you need to have a way to copy the program, like a file or a folder. Tenth, you need to have a way to paste the program, like a file or a folder. Eleventh, you need to have a way to print the program, like a file or a folder. Twelfth, you need to have a way to delete the program, like a file or a folder. Thirteenth, you need to have a way to rename the program, like a file or a folder. Fourteenth, you need to have a way to move the program, like a file or a folder. Fifteenth, you need to have a way to copy the program, like a file or a folder. Sixteenth, you need to have a way to paste the program, like a file or a folder. Seventeenth, you need to have a way to print the program, like a file or a folder. Eighteenth, you need to have a way to delete the program, like a file or a folder. Nineteenth, you need to have a way to rename the program, like a file or a folder. Twentieth, you need to have a way to move the program, like a file or a folder. Twenty-first, you need to have a way to copy the program, like a file or a folder. Twenty-second, you need to have a way to paste the program, like a file or a folder. Twenty-third, you need to have a way to print the program, like a file or a folder. Twenty-fourth, you need to have a way to delete the program, like a file or a folder. Twenty-fifth, you need to have a way to rename the program, like a file or a folder. Twenty-sixth, you need to have a way to move the program, like a file or a folder. Twenty-seventh, you need to have a way to copy the program, like a file or a folder. Twenty-eighth, you need to have a way to paste the program, like a file or a folder. Twenty-ninth, you need to have a way to print the program, like a file or a folder. Thirtieth, you need to have a way to delete the program, like a file or a folder. Thirty-first, you need to have a way to rename the program, like a file or a folder. Thirty-second, you need to have a way to move the program, like a file or a folder. Thirty-third, you need to have a way to copy the program, like a file or a folder. Thirty-fourth, you need to have a way to paste the program, like a file or a folder. Thirty-fifth, you need to have a way to print the program, like a file or a folder. Thirty-sixth, you need to have a way to delete the program, like a file or a folder. Thirty-seventh, you need to have a way to rename the program, like a file or a folder. Thirty-eighth, you need to have a way to move the program, like a file or a folder. Thirty-ninth, you need to have a way to copy the program, like a file or a folder. Fortieth, you need to have a way to paste the program, like a file or a folder. Forty-first, you need to have a way to print the program, like a file or a folder. Forty-second, you need to have a way to delete the program, like a file or a folder. Forty-third, you need to have a way to rename the program, like a file or a folder. Forty-fourth, you need to have a way to move the program, like a file or a folder. Forty-fifth, you need to have a way to copy the program, like a file or a folder. Forty-sixth, you need to have a way to paste the program, like a file or a folder. Forty-seventh, you need to have a way to print the program, like a file or a folder. Forty-eighth, you need to have a way to delete the program, like a file or a folder. Forty-ninth, you need to have a way to rename the program, like a file or a folder. Fiftieth, you need to have a way to move the program, like a file or a folder. Fifty-first, you need to have a way to copy the program, like a file or a folder. Fifty-second, you need to have a way to paste the program, like a file or a folder. Fifty-third, you need to have a way to print the program, like a file or a folder. Fifty-fourth, you need to have a way to delete the program, like a file or a folder. Fifty-fifth, you need to have a way to rename the program, like a file or a folder. Fifty-sixth, you need to have a way to move the program, like a file or a folder. Fifty-seventh, you need to have a way to copy the program, like a file or a folder. Fifty-eighth, you need to have a way to paste the program, like a file or a folder. Fifty-ninth, you need to have a way to print the program, like a file or a folder. Sixtieth, you need to have a way to delete the program, like a file or a folder. Sixty-first, you need to have a way to rename the program, like a file or a folder. Sixty-second, you need to have a way to move the program, like a file or a folder. Sixty-third, you need to have a way to copy the program, like a file or a folder. Sixty-fourth, you need to have a way to paste the program, like a file or a folder. Sixty-fifth, you need to have a way to print the program, like a file or a folder. Sixty-sixth, you need to have a way to delete the program, like a file or a folder. Sixty-seventh, you need to have a way to rename the program, like a file or a folder. Sixty-eighth, you need to have a way to move the program, like a file or a folder. Sixty-ninth, you need to have a way to copy the program, like a file or a folder. Seventieth, you need to have a way to paste the program, like a file or a folder. Seventy-first, you need to have a way to print the program, like a file or a folder. Seventy-second, you need to have a way to delete the program, like a file or a folder. Seventy-third, you need to have a way to rename the program, like a file or a folder. Seventy-fourth, you need to have a way to move the program, like a file or a folder. Seventy-fifth, you need to have a way to copy the program, like a file or a folder. Seventy-sixth, you need to have a way to paste the program, like a file or a folder. Seventy-seventh, you need to have a way to print the program, like a file or a folder. Seventy-eighth, you need to have a way to delete the program, like a file or a folder. Seventy-ninth, you need to have a way to rename the program, like a file or a folder. Eightieth, you need to have a way to move the program, like a file or a folder. Eighty-first, you need to have a way to copy the program, like a file or a folder. Eighty-second, you need to have a way to paste the program, like a file or a folder. Eighty-third, you need to have a way to print the program, like a file or a folder. Eighty-fourth, you need to have a way to delete the program, like a file or a folder. Eighty-fifth, you need to have a way to rename the program, like a file or a folder. Eighty-sixth, you need to have a way to move the program, like a file or a folder. Eighty-seventh, you need to have a way to copy the program, like a file or a folder. Eighty-eighth, you need to have a way to paste the program, like a file or a folder. Eighty-ninth, you need to have a way to print the program, like a file or a folder. Ninetieth, you need to have a way to delete the program, like a file or a folder. Ninety-first, you need to have a way to rename the program, like a file or a folder. Ninety-second, you need to have a way to move the program, like a file or a folder. Ninety-third, you need to have a way to copy the program, like a file or a folder. Ninety-fourth, you need to have a way to paste the program, like a file or a folder. Ninety-fifth, you need to have a way to print the program, like a file or a folder. Ninety-sixth, you need to have a way to delete the program, like a file or a folder. Ninety-seventh, you need to have a way to rename the program, like a file or a folder. Ninety-eighth, you need to have a way to move the program, like a file or a folder. Ninety-ninth, you need to have a way to copy the program, like a file or a folder. One hundredth, you need to have a way to paste the program, like a file or a folder.

Task 8:- Implement Python generator and decorators

Aim:- write a python program to implement Python generator and decorator.

Algorithm:-

1. Define Generator function:
 - Define the function number_sequence
2. Initialize Current value:
 - Set current to the value of start.
3. Generate sequence:
 - while current is less than or equal to end:
 - Yield the current value of current
 - Increment current by step.
4. Get user Input:
 - Read the starting number from user input.
 - Read the ending number from user input.
 - Read the step value from user input.
5. Create Generator Object:
 - create a generator object by calling number_sequence
6. Print Generated Sequence:
 - Iterate over the values produced by generator object
 - Print each value.

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(start, end, step)
```

```
# Print the generated sequence of numbers
```

```
for number in sequence_generator:
```

```
    print(number)
```

Result:- Thus the python program for generating the sequence of numbers was successfully verified.

Output:- 0
1
2

8.7(b)

Aim: To write the Python program my-generator using loop statements.

Algorithm:-

1. Start Function:
 - Define the function my-generator(n) that takes a parameter n.
2. Initialize Counter: Set values to 0.
3. Generate values: While value is less than n:
 - yield current value
 - Increment by value 1
4. Create Generator Object:
 - Call my-generator(11) to create a generator object.
5. Iterate and Print values:
 - For each value produced by the generator object

```
def my-generator(n):
```

```
# initialize counter
```

```
value = 0
```

```
# loop until counter is less than n
```

```
while value < n:
```

```
    # produce the current value of the counter
```

```
    yield value
```

```
# Iterate over the generator object produced by my-generator.
```

```
for value in my-generator(3):
```

```
    # Print each value produced by generator
```

```
    print(value)
```

Result:-

Thus the python program my-generator using loop statements was successfully executed.

Output: I AM CREATED BY A FUNCTION PASSED AS AN ARGUMENT

I am created by a function passed as an argument.

1. I am created by a function passed as an argument.
2. I am created by a function passed as an argument.
3. I am created by a function passed as an argument.
4. I am created by a function passed as an argument.
5. I am created by a function passed as an argument.
6. I am created by a function passed as an argument.
7. I am created by a function passed as an argument.
8. I am created by a function passed as an argument.
9. I am created by a function passed as an argument.
10. I am created by a function passed as an argument.

1. I am created by a function passed as an argument.
2. I am created by a function passed as an argument.
3. I am created by a function passed as an argument.
4. I am created by a function passed as an argument.
5. I am created by a function passed as an argument.
6. I am created by a function passed as an argument.
7. I am created by a function passed as an argument.
8. I am created by a function passed as an argument.
9. I am created by a function passed as an argument.
10. I am created by a function passed as an argument.

Aim:- ^{to} write a python program using functions they decorate by converting the text case.

1. Create Decorators:

- Define uppercase_decorator to convert the result of a function to uppercase.

2. Define functions:

- Define shout function to return the input text.

3. Define greet function:

- Accepts a function(func) as input.
- Print the result.

4. Execute the program.

- call greet to print text.

```
def uppercase_decorator(func):
```

```
    def wrapper(text):
```

```
        return func(text).upper()
```

```
    return wrapper
```

```
def lowercase_decorator(func):
```

```
    def wrapper(text):
```

```
        return func(text).lower()
```

```
    return wrapper
```

```
@uppercase_decorator
```

```
def shout(text):
```

```
    return text
```

```
@lowercase_decorator
```

```
def whisper(text):
```

```
    return text
```

```
def greet(func):
```

```
    greeting = func("Hi, I am created by a function  
        Passed as an argument.")
```

```
    print(greeting)
```

```
greet(shout)
```

```
greet(whisper)
```

VEL TECH	
LC No.	8
PERFORMANCE (%)	5
RESULT AND ANALYSIS	5
VIVA VOCE (3)	5
RECORD (4)	
TOTAL (15)	
SIGNATURE DATE	15

Result: Thus, the python program to implement python generator and decorators was successfully executed and the output was verified.