

Python if else, for loop, and range() Exercises with Solutions

AD

Exercise 1: Print First 10 natural numbers using while loop

Expected output:

```
1
2
3
4
5
6
7
8
9
10
```

Exercise 2: Print the following pattern

Write a program to print the following number pattern using a loop.

```
1
1 2
```

```
1 2 3
```

```
1 2 3 4
```

```
1 2 3 4 5
```

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Exercise 3: Calculate the sum of all numbers from 1 to a given number

Write a program to accept a number from a user and calculate the sum of all numbers from 1 to a given number

For example, if the user entered **10** the output should be **55** ($1+2+3+4+5+6+7+8+9+10$)

Expected Output:

```
Enter number 10
```

```
Sum is: 55
```

4: Write a program to print multiplication table of a given number

For example, $\text{num} = 2$ so the output should be

```
2
```

```
4
```

```
6
```

```
8
```

```
10
```

```
12
```

```
14
```

```
16
```

```
18
```

```
20
```

Exercise 5: Display numbers from a list using loop

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Write a program to display only those numbers from a list that satisfy the following conditions

- The number must be divisible by five
- If the number is greater than 150, then skip it and move to the next number
- If the number is greater than 500, then stop the loop

Given:

```
numbers = [12, 75, 150, 180, 145, 525, 50]
```

Expected output:

```
75
```

```
150
```

```
145
```

Exercise 7: Print the following pattern

Write a program to use `for` loop to print the following reverse number pattern

```
5 4 3 2 1
```

```
4 3 2 1
```

```
3 2 1
```

```
2 1
```

```
1
```

8: Print list in reverse order using a loop

Given:

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```
list1 = [10, 20, 30, 40, 50]
```

Expected output:

```
50
```

```
40
```

```
30
```

```
20
```

```
10
```

Exercise 9: Display numbers from -10 to -1 using for loop

Expected output:

```
-10
```

```
-9
```

```
-8
```

```
-7
-6
-5
-4
-3
-2
-1
```

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Exercise 10: Use else block to display a message “Done” after successful execution of for loop

For example, the following loop will execute without any error.

Given:

```
for i in range(5):  
    print(i)
```

Expected output:

0

1

2

3

4

Done!