

### **For Loop with Numbers:**

1. Print numbers from 1 to 10.

```
for i in range(1,11):
```

```
    print(i)
```

2. Print even numbers from 1 to 20.

```
for i in range(1,21):
```

```
    if i % 2 == 0:
```

```
        print(i)
```

3. Print odd numbers from 1 to 20.

```
for i in range(1,21):
```

```
    if i % 2 != 0:
```

```
        print(i)
```

4. Print numbers from 10 to 1 in reverse.

```
for i in range(10,0,-1):
```

```
    print(i)
```

5. Print multiples of 5 up to 50.

```
for i in range(1,51):
```

```
    if i % 5 == 0:
```

```
        print(i)
```

or

```
for i in range(5,51,5):
```

```
    print(i)
```

6. Print the square of numbers from 1 to 5.

```
for i in range(1,6):
```

```
    print(i ** 2)
```

7. Print numbers from 1 to n (n taken from user).

```
n = int(input("enter the number : "))
```

```
for i in range(1,n+1):
```

```
    print(i)
```

8. Print all numbers between 1 and 100 divisible by 7.

```
for i in range(1,101):
```

```
    if i % 7 == 0:
```

```
        print(i)
```

9. Print numbers from 1 to 50. If number is even, print "Even", else print "Odd".

```
for i in range(1,51):
```

```
    if i % 2 == 0:
```

```
        print(f"{i} even")
```

```
    else:
```

```
        print(f"{i} odd")
```

10. Print first 10 natural numbers. For each number, print its square.

```
for i in range(1,11):
```

```
    print(f"{i} square is {i ** 2}")
```

### **For Loop with Lists:**

11. Print each element of a given list.

```
my_list = [1,2,3,4,5]
```

```
for i in my_list:
```

```
    print(i)
```

12. Find and print only positive numbers from a list.

```
my_list = [1,2,-10,-6,3,4,5,-1,-2,-3,6]
```

```
for i in my_list:
```

```
    if i>0:
```

```
        print(i)
```

13. Print numbers greater than 50 from a list.

```
my_list = [1000,20,300,40,50,60,7,80,90,5]
```

```
for i in my_list:
```

```
    if i>50:
```

```
        print(i)
```

14. Print all strings starting with letter 'A' from a list.

```
my_list = ["Tom","Ant","Jerry","Alice","Peter","Alen","Apple"]
```

```
for i in my_list:
```

```
    if i.startswith('A'):
```

```
        print(i)
```

15. Count how many even numbers are in a list.

```
my_list = [1,2,3,4,5,6,7,8,9,10]
```

```
count=0
```

```
for i in my_list:
```

```
    if i % 2 == 0:
```

```
        count += 1
```

```
print(f"Total even numbers are {count}")
```

16. Print all numbers in a list which are divisible by 3.

```
my_list = [1,3,6,9,15,21,27,24,28,100,81,90,16]
```

```
for i in my_list:
```

```
    if i % 3 == 0:
```

```
        print(i)
```

17. Find the maximum number in a given list using for loop.

```
my_list = [1,3,6,9,15,21,27,24,28,100,81,90,16]
```

```
maximum = my_list[0]
```

```
for i in my_list:
```

```
    if i > maximum:
```

```
        maximum = i
```

```
print(f"Maximum number is {maximum}")
```

18. Find the minimum number in a list using for loop.

```
my_list = [1,3,6,9,15,21,27,24,28,100,81,90,16]
```

```
minimum = my_list[0]
```

```
for i in my_list:
```

```
    if i < minimum:
```

```
        minimum = i
```

```
print(f"Minimum number is {minimum}")
```

19. Find the sum of all numbers in a list using for loop.

```
my_list = [1,2,3,4,5,6,7,8,9,10]
```

```
total=0
```

```
for i in my_list:
```

```
    total += i
```

```
print(f"Sum : {total}")
```

20. Find the average of all numbers in a list.

```
my_list = [1,2,3,4,5,6,7,8,9,10]#Find the sum of all numbers in a list using for loop.
```

```
avg=0
```

```
total=0
```

```
count = len(my_list)
```

```
for i in my_list:
```

```
    total += i
```

```
avg = total / count
```

```
print(f"Average : {avg}")
```

### **For Loop with Ranges and Conditions:**

21. Print all prime numbers between 1 and 50.

```
for num in range(2, 51):
```

```
    for i in range(2, num):
```

```
        if num % i == 0:
```

```
            break
```

```
    else:
```

```
        print(num)
```

22. Print all numbers between 1 and 100. If divisible by both 2 and 5, print the number.

```
for i in range(1, 101):#Print all numbers between 1 and 100. If divisible by both 2 and 5, print the number.
```

```
    if i % 2 == 0 and i % 5 == 0:
```

```
        print(i)
```

23. Print numbers between 1 and 30. If number is divisible by 3 print "Fizz", else print the number.

```
for i in range(1,31):
```

```
    if i % 3 == 0:
```

```
        print("Fizz")
```

```
    else:
```

```
        print(i)
```

24. Print "Hello" 5 times using for loop.

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

```
    print("Hello")
```

25. Find and print the factorial of a given number using for loop.

```
n = int(input("Enter number: "))
```

```
fact = 1
```

```
for i in range(1, n + 1):
```

```
    fact *= i
```

```
print("Factorial:", fact)
```

26. Count all vowels in a given string using for loop.

```
s = input("Enter a string: ")
```

```
vowels = "aeiouAEIOU"
```

```
count = 0
```

```
for ch in s:
```

```
    if ch in vowels:
```

```
        count += 1
```

```
print("Vowel count:", count)
```

27. Reverse a given string using for loop.

```
s = input("Enter a string: ")
```

```
rev = ""
```

```
for ch in s:
```

```
    rev = ch + rev
```

```
print("Reversed:", rev)
```

28. Find the sum of digits of a number using for loop.

```
num = input("Enter a number: ")

sum_digits = 0

for ch in num:

    sum_digits += int(ch)

print("Sum of digits:", sum_digits)
```

29. Print a multiplication table of a given number using for loop.

```
n = int(input("Enter number: "))

for i in range(1, 11):

    print(f"{n} x {i} = {n * i}")
```

30. Check if a number is palindrome using for loop.

```
num = int(input("Enter a number: "))

original = num

reverse = 0

digits = len(str(num))

for i in range(digits):

    digit = num % 10

    reverse = reverse * 10 + digit

    num = num // 10

if original == reverse:

    print("It is a palindrome.")

else:

    print("It is not a palindrome.")
```



### **If-Else with User Input:**

31. Take a number from user. Check if it is positive, negative, or zero.

```
n = int(input("Enter a number: "))
```

```
if n > 0:
```

```
    print("Positive")
```

```
elif n < 0:
```

```
    print("Negative")
```

```
else:
```

```
    print("Zero")
```

32. Take a year from user. Check if it is a leap year.

```
year = int(input("Enter year: "))
```

```
if (year % 4 == 0 and year % 100 != 0) or (year % 400 == 0):
```

```
    print("Leap year")
```

```
else:
```

```
    print("Not a leap year")
```

33. Take a number from user. Check if it is even or odd.

```
n = int(input("Enter number: "))
```

```
if n % 2 == 0:
```

```
    print("Even")
```

```
else:
```

```
    print("Odd")
```

34. Take a number from user. Check if it is divisible by 5 and 11.

```
n = int(input("Enter number: "))  
  
if n % 5 == 0 and n % 11 == 0:  
  
    print("Divisible by both 5 and 11")  
  
else:
```

```
    print("Not divisible by both 5 and 11")
```

35. Take a character from user. Check if it is a vowel or consonant.

```
ch = input("Enter a character: ")  
  
if ch.lower() in "aeiou":
```

```
    print("Vowel")
```

```
else:
```

```
    print("Consonant")
```

36. Take a number from user. Check if it is a three-digit number.

```
n = int(input("Enter a number: "))  
  
if 100 <= n <= 999:
```

```
    print("Three-digit number")
```

```
else:
```

```
    print("Not a three-digit number")
```

37. Take a character from user. Check if it is uppercase or lowercase.

```
ch = input("Enter a character: ")
```

```
if ch.isupper():
```

```
    print("Uppercase")
```

```
elif ch.islower():
```

```
    print("Lowercase")
```

```
else:
```

```
    print("Not an alphabet")
```

38. Take age from user. Check if person is eligible to vote ( $\text{age} \geq 18$ ).

```
age = int(input("Enter your age: "))
```

```
if age >= 18:
```

```
    print("Eligible to vote")
```

```
else:
```

```
    print("Not eligible")
```

39. Take a number from user. Check if it is divisible by 2, 3, or both.

```
n = int(input("Enter number: "))
```

```
if n % 2 == 0 and n % 3 == 0:
```

```
    print("Divisible by both")
```

```
elif n % 2 == 0:
```

```
    print("Divisible by 2")
```

```
elif n % 3 == 0:
```

```
    print("Divisible by 3")
```

```
else:
```

```
    print("Not divisible by 2 or 3")
```

40. Take a number from user. Print whether it is even, odd, or zero.

```
n = int(input("Enter number: "))
```

```
if n == 0:
```

```
    print("Zero")
```

```
elif n % 2 == 0:
```

```
    print("Even")
```

```
else:
```

```
    print("Odd")
```