

1. Write a program to print all even numbers from 1 to 50 using a loop.

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

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

```
        print(i)
```

2. Use a loop to count and print the number of vowels in a string.

```
text = "Hello, how are you?"
```

```
vowels = "aeiou"
```

```
count = 0
```

```
for char in text.lower():
```

```
    if char in vowels:
```

```
        count += 1
```

```
print("Number of vowels:", count)
```

3. Write a program to print the factorial of a given number using a loop.

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

```
factorial = 1
```

```
for i in range(2, number + 1):
```

```
    factorial *= i
```

```
print(f"The factorial of {number} is {factorial}.")
```

4. Write a program to find the average of 5 numbers.

5. Write a program to print the below pattern

```
*
```

```
* *
```

```
* * *
```

```
* * * *
```

```
* * * * *
```

```
rows = 5
```

```
for i in range(rows + 1):
```

```
print('* ' * i)
```

6. Write a program to display the multiplication table of a number entered by the user.

```
num = int(input("Enter the number of which table you want: "))
for i in range(1, 11):
    result = num * i
    print(f'{num} x {i} = {result}')
```

7. Use a loop to calculate the sum of the first 100 natural numbers.

```
total = 0
for i in range(1, 101):
    total += i

print(f"The sum of the first 100 natural numbers is: {total}')
```

8. Write a program to check if a given number is divisible by 2 and 4.

```
number = int(input("Enter a number: "))
if number % 2 == 0 and number % 4 == 0:
    print(f'{number} is divisible by both 2 and 4.')
else:
    print(f'{number} is not divisible by both 2 and 4.')
```

9. Check if a given number is odd or even.

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

if number % 2 == 0:
    print(f'{number} is even.')
else:
    print(f'{number} is odd.')
```

10. Write a program to check if a string contains the character 't' in it.

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

```
if 't' in string:
    print("The string contains the character 't'.")
else:
    print("The string does not contain the character 't'.")
```

11. Write a program to check if a number is divisible by 5 and 11.
string = input("Enter a string: ")

```
if 't' in string:
    print("The string contains the character 't'.")
else:
    print("The string does not contain the character 't'.")
```

12. Write a program to check if a string contains the character 'a' in it.
string = input("Enter a string: ")

```
if 'a' in string:
    print("The string contains the character 'a'.")
else:
    print("The string does not contain the character 'a'.")
```

13. Convert a list into a tuple using type-cast.

```
my_list = [1, 2, 3, 4, 5] my_tuple = tuple(my_list) print(f"The tuple is: {my_tuple}")
```

14. Take two sets and find their intersection.
set1 = {1, 2, 3, 4, 5}
set2 = {4, 5, 6, 7, 8}

```
intersection = set1.intersection(set2)
print(f"The intersection of the sets is: {intersection}")
```

15. Write a Python program to find the largest and smallest number in a list.

```
numbers = [10, 25, 3, 48, 7, 15]
```

```
largest = max(numbers)  
smallest = min(numbers)
```

```
print(f"The largest number in the list is: {largest}")  
print(f"The smallest number in the list is: {smallest}")
```

16. Take a list of numbers and print the sum of all even numbers.

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

```
even_sum = 0  
for number in numbers:  
    if number % 2 == 0:  
        even_sum += number
```

```
print(f"The sum of all even numbers in the list is: {even_sum}")
```

17. Create a program to sort a list of integers in descending order.

```
numbers = [10, 25, 3, 48, 7, 15]  
numbers.sort(reverse=True)
```

```
print(f"The list sorted in descending order is: {numbers}")
```

18. Take a list of words and print the words that start with a vowel.

```
words = ["apple", "banana", "orange", "grape", "umbrella", "kiwi"]
```

```
for word in words:  
    if word[0].lower() in "aeiou":  
        print(word)
```