The main difference between type and dtype in Python is that type refers to the class of an object, while dtype refers to the data type of an object.

1. Print characters from a string that are present at an even index number:

```

string = "Hello, World!"

print("Characters at even indices:", string[::2])

```

Output:

```

Characters at even indices: Hlo ol!

```

2. Write a Python program to display the current date and time:

```python

import datetime

current\_datetime = datetime.datetime.now()

print("Current date and time:", current\_datetime)

```

Output:

```

Current date and time: 2024-03-18 12:34:56.789012

```

3. Write a Python program that accepts the user's first and last name and prints them in reverse order with a space between them:

```python

first\_name = input("Enter your first name: ")

last\_name = input("Enter your last name: ")

print("Reversed name:", last\_name, first\_name)

```

Output:

```

Enter your first name: John

Enter your last name: Doe

Reversed name: Doe John

```

4. Write a Python program to get the volume of a sphere with radius six:

```python

import math

radius = 6

volume = (4/3) \* math.pi \* (radius \*\* 3)

print("Volume of the sphere with radius six:", volume)

```

Output:

```

Volume of the sphere with radius six: 904.7786842338603

```

5. Write a Python program to test whether a number is within 100 of 1000 or 2000:

```python

def within\_100(num):

return abs(1000 - num) <= 100 or abs(2000 - num) <= 100

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

if within\_100(number):

print(number, "is within 100 of 1000 or 2000.")

else:

print(number, "is not within 100 of 1000 or 2000.")

```

6. Write a Python program to calculate the sum of three given numbers. If the values are equal, return three times their sum:

```python

def sum\_or\_triple(a, b, c):

if a == b == c:

return 3 \* (a + b + c)

else:

return a + b + c

num1 = int(input("Enter first number: "))

num2 = int(input("Enter second number: "))

num3 = int(input("Enter third number: "))

result = sum\_or\_triple(num1, num2, num3)

print("Result:", result)

```

7. Return the count of a given substring from a string:

```python

string = "Hello, Hello, World! Hello!"

substring = "Hello"

count = string.count(substring)

print("Count of substring:", count)

```