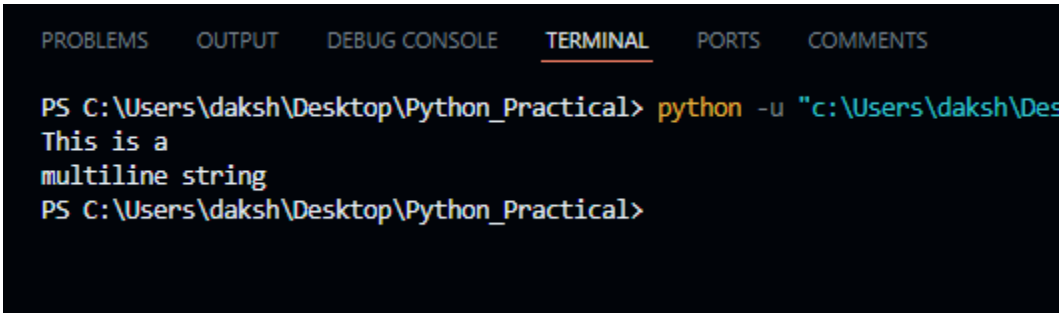
PYTHON ASSIGNMENT - 2

Q1. Declare a multiline string and print it.

Code:-

```
multiline_string = """This is a

multiline string"""

print(multiline_string)
```

Output:

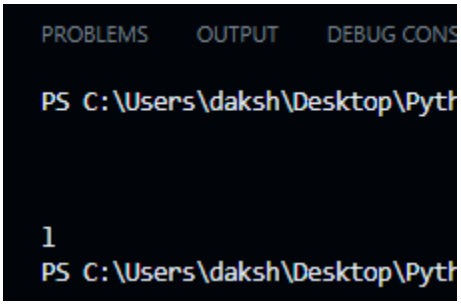


Q2. Access and print the third character from a given string

Code:-

```
string = "Hello, World!"

print(string[2])
```

Output:

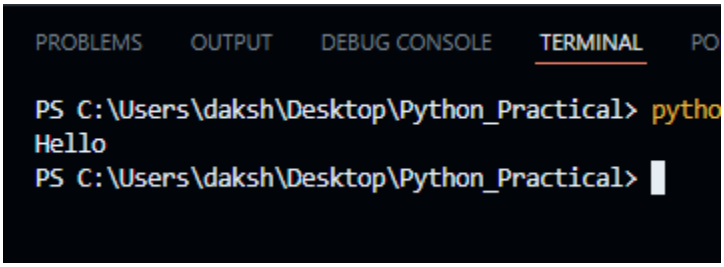


Q3. Slice a string to print only the first five.

Code:-

```
string = "Hello, World!"

print(string[:5])
```

Output:-

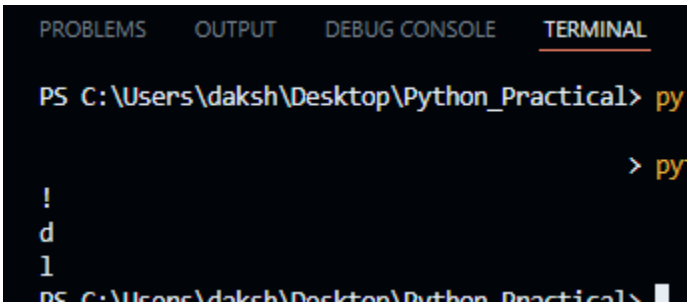


4. Write a program to demonstrate negative indexing in a string

Code:-

```
sample_string = "Hello, World!"

print(sample_string[-1])

print(sample_string[-2])

print(sample_string[-3])
```

Output:-



5. Concatenate two strings using both + and .join().

Code:-

```
string = ("Hello, World!")

string2 = ("Python")

print(string + string2)

print("".join([string, string2]))
```

Output:-

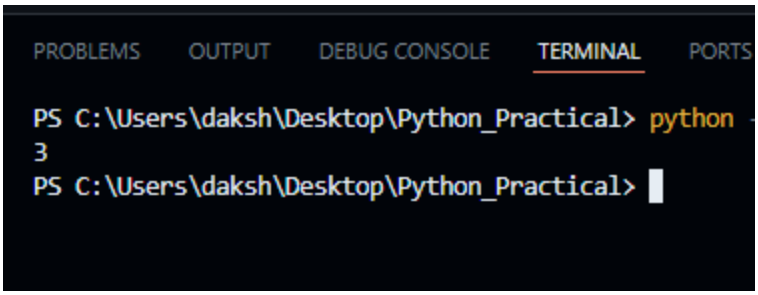
```
PS C:\Users\daksh\Desktop\Python_Practical> pytho
Hello, World!Python
Hello, World!Python
PS C:\Users\daksh\Desktop\Python_Practical>
```

6. Count the occurrences of a specific character in a given string.

Code:-

```
string = "Hello, World!"

i=0

count = 0

target = "l"

while(i < len(string)):
    if string[i] == target:
        count += 1
    i += 1


print(count)
```

Output:-

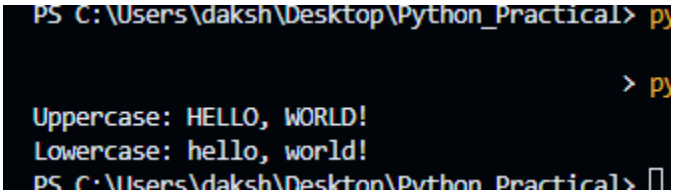


7. Convert a string to uppercase and lowercase

Code:-

```
sample_string = "Hello, World!"


# Convert to uppercase
upper_string = sample_string.upper()
print("Uppercase:", upper_string)


# Convert to lowercase
lower_string = sample_string.lower()
print("Lowercase:", lower_string)
```

Output:-



8. Replace all occurrences of 'a' in a string with 'o'

Code:-

```
string = "aaaaaaaaaaaaa"
print(string)
target = "a"
replacement = "o"
string = string.replace(target, replacement)
print(string)
```

Output:-

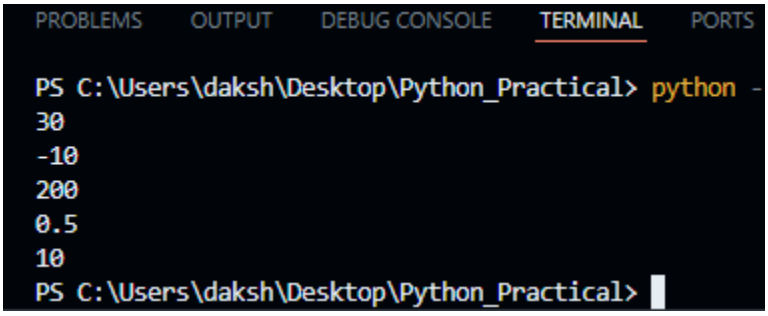
9. Write a program to demonstrate the use of arithmetic operators in Python

Code:-

```
# ADDITION
a = 10
b = 20
print(a + b)

# SUBTRACTION
a = 10
b = 20
print(a - b)

# MULTIPLICATION
a = 10
b = 20
print(a * b)
```

```
# DIVISION

a = 10

b = 20

print(a / b)


# MODULUS

a = 10

b = 20

print(a % b)
```

Output:-



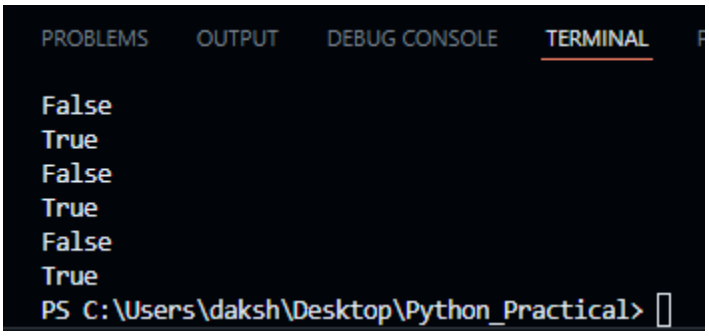
10. Compare two numbers using comparison operators and print the results.

Code:-

```
a = 10


b = 20


print(a == b)
```

```
print(a != b)

print(a > b)

print(a < b)

print(a >= b)

print(a <= b)
```

Output:-



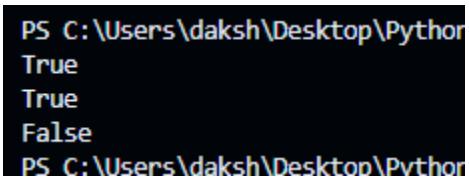
11. Demonstrate the use of logical operators (and, or, not) with examples.

Code:-

```
# AND

a = 10

b = 20

c = 30

print(a < b and b < c)
```

```
# OR

a = 10

b = 20

c = 30

print(a < b or b > c)


# NOT

a = 10

b = 20

print(not a < b)
```

Output:-



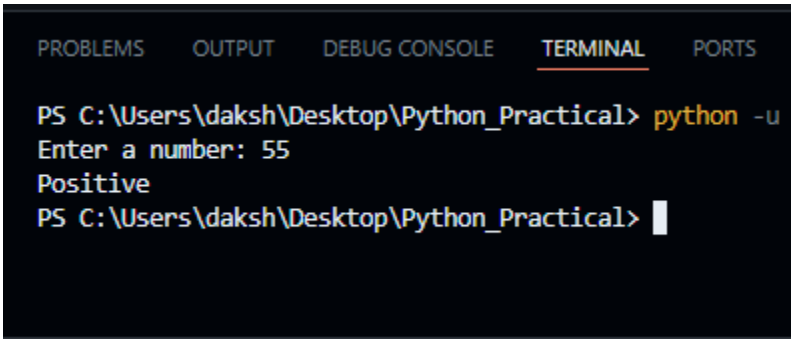
12. Write a Python program to check if a number is positive, negative, or zero using if statements

Code:-

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

if a > 0:

   print("Positive")

elif a < 0:
```

```
    print("Negative")
else:
    print("Zero")
```

Output:-

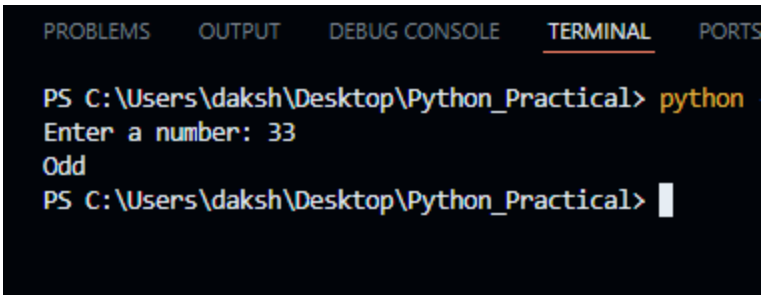


13. Create a program that checks if a given number is even or odd.

Code:-

```
a = int(input("Enter a number: "))
if a % 2 == 0:
    print("Even")
else:
    print("Odd")
```

Output:-

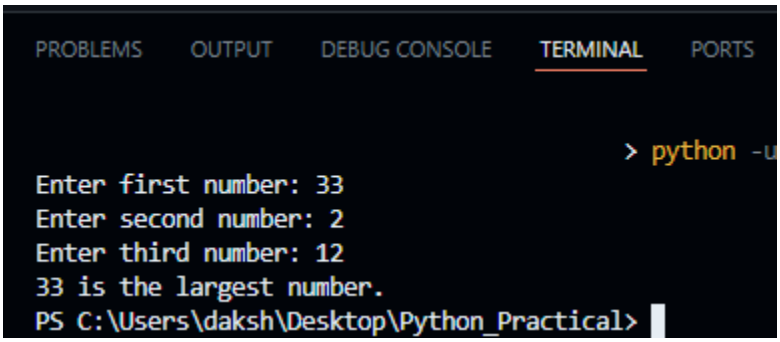


14. Write a Python program to find the largest among three numbers using if...elif...else.

Code:-

```
a = int(input("Enter first number: "))
b = int(input("Enter second number: "))
c = int(input("Enter third number: "))
if a > b and a > c:
   print(a, "is the largest number.")
elif b > a and b > c:
   print(b, "is the largest number.")
else:
   print(c, "is the largest number.")
```

Output:-

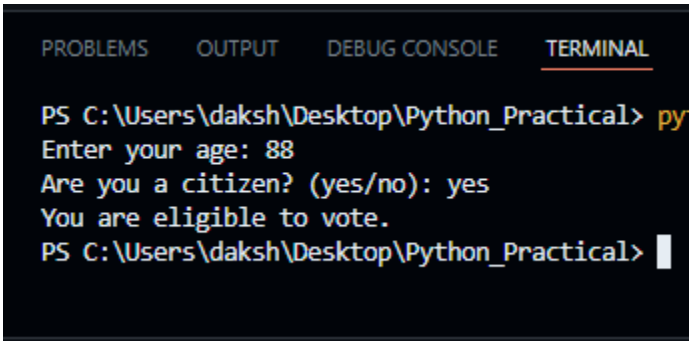


15. Create a nested if condition to check if a person is eligible to vote (age ≥ 18) and is a citizen.

Code:-

```
age = int(input("Enter your age: "))
citizen = input("Are you a citizen? (yes/no): ")

if age >= 18:
    if citizen == 'yes':
        print("You are eligible to vote.")
    else:
        print("You are not eligible to vote.")
```

Output:-



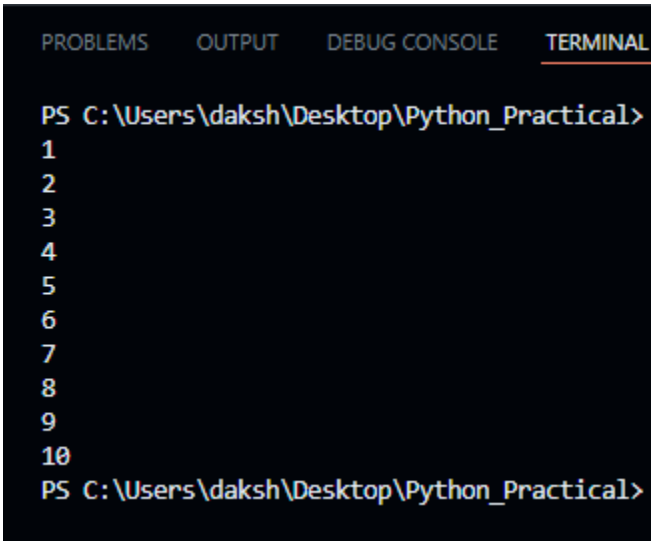
16. Write a program that prints numbers from 1 to 10 using a while loop.

Code:-

```
i = 1
while i <= 10:
    print(i)
```

```
    i += 1
```

Output:-

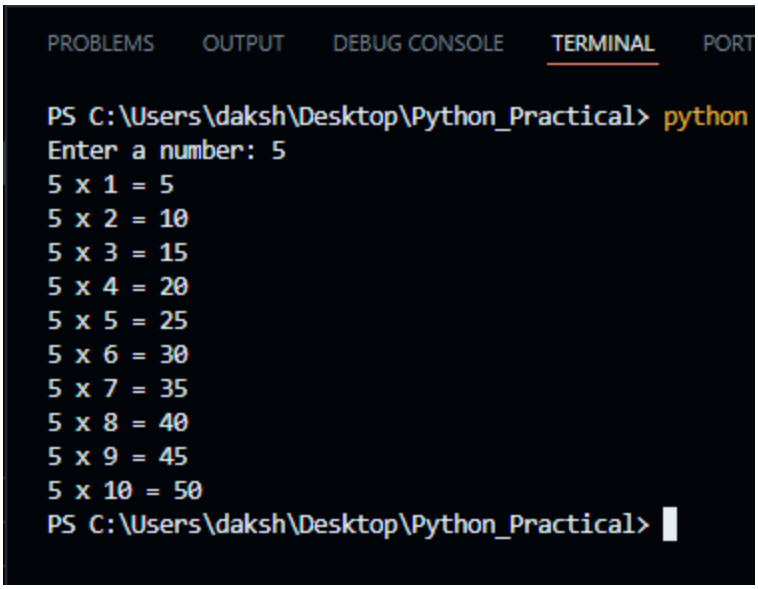


17. Create a program that prints the multiplication table of a given number using a for loop.

Code:-

```
a = int(input("Enter a number: "))
i = 1
while i<=10:
    print(a, "x", i, "=", a*i)
    i += 1
```

Output:-

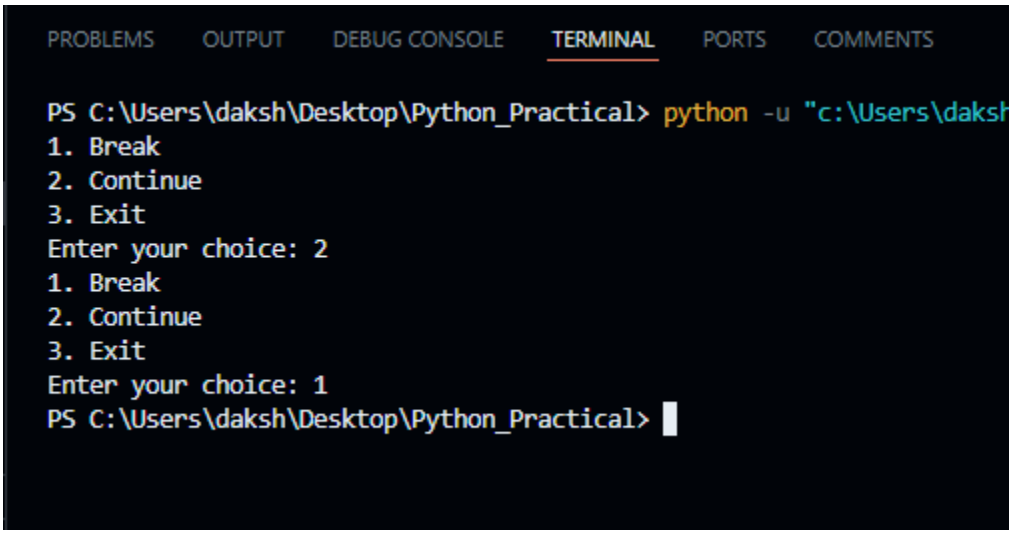


18. Write a program to demonstrate the use of break and continue statements in loops.

Code:-

```
while True:
    print("1. Break")
    print("2. Continue")
    print("3. Exit")
    choice = int(input("Enter your choice: "))
    if choice == 1:
        break
    elif choice == 2:
        continue
    elif choice == 3:
        break
    else:
        print("Invalid choice")
```

Output:-

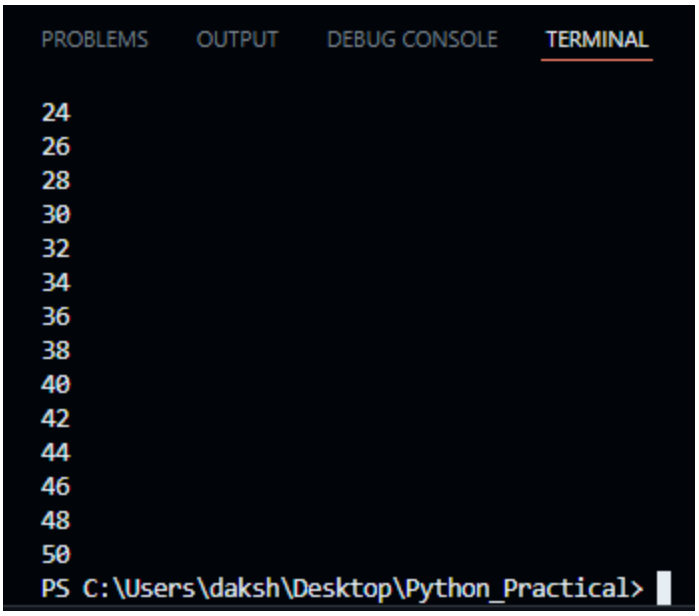


19. Print all even numbers from 1 to 50 using a for loop.

Code:-

```
for i in range(1, 51):
    if i % 2 == 0:
        print(i)
```

Output:-

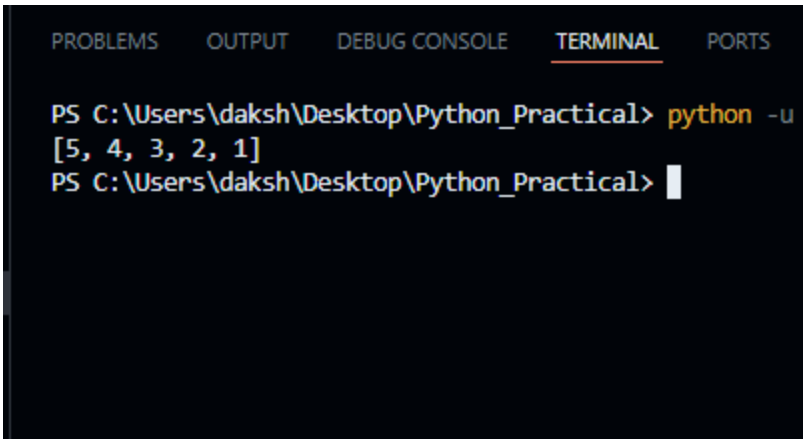


20. Write a program to reverse a list using a loop.

Code:-

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

b = []

i = len(a)-1

while i >= 0:

   b.append(a[i])

   i -= 1

print(b)
```

Output:-



21. Create a program that demonstrates the use of append(), pop(), and sort() methods in a list.

Code:-

```
a = [1,22,65,91,12,3,4,5,6,7,8,9,10]
while True:
  print("1. Append")
  print("2. Pop")
  print("3. Sort")
  print("4. Exit")
  choice = int(input("Enter your choice: "))
  if choice == 1:
    a.append(int(input("Enter a number: ")))
  elif choice == 2:
      a.pop()
  elif choice == 3:
    a.sort()
```

```
    elif choice == 4:
        break
    else:
        print("Invalid choice")

print(a)
```

Output:-