

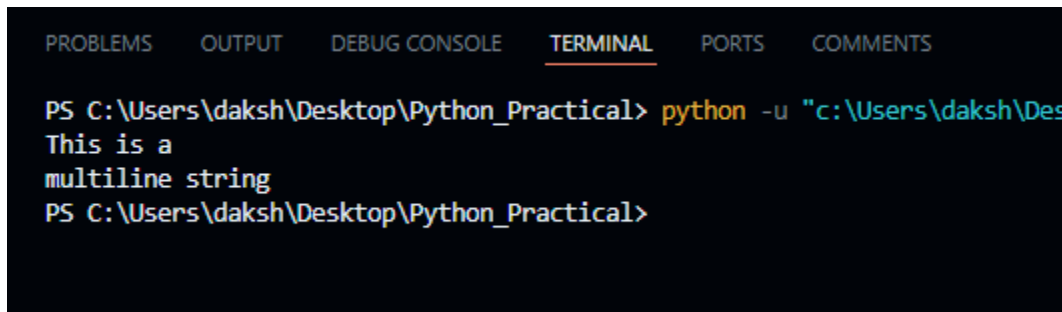
PYTHON ASSIGNMENT - 2

Q1. Declare a multiline string and print it.

Code:-

```
multiline_string = """This is a  
multiline string"""  
print(multiline_string)
```

Output:



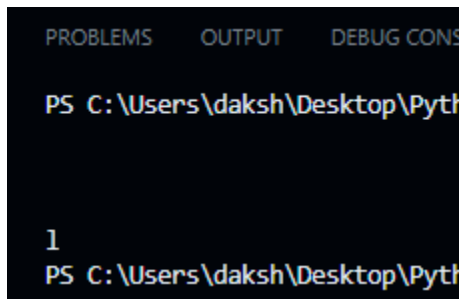
```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS COMMENTS  
PS C:\Users\daksh\Desktop\Python_Practical> python -u "c:\Users\daksh\Desktop\Python_Practical\...  
This is a  
multiline string  
PS C:\Users\daksh\Desktop\Python_Practical>
```

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

Code:-

```
string = "Hello, World!"  
print(string[2])
```

Output:



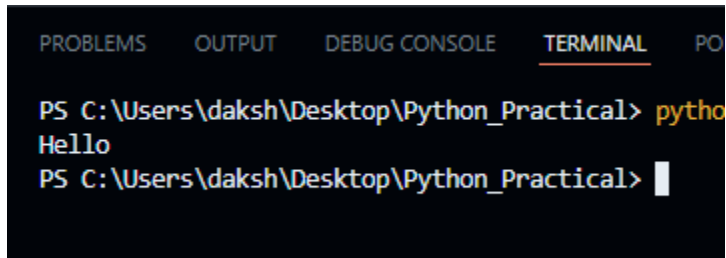
```
PROBLEMS OUTPUT DEBUG CONSOLE  
PS C:\Users\daksh\Desktop\Python_Practical> python -u "c:\Users\daksh\Desktop\Python_Practical\...  
  
l  
PS C:\Users\daksh\Desktop\Python_Practical>
```

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

Code:-

```
string = "Hello, World!"  
print(string[:5])
```

Output:-



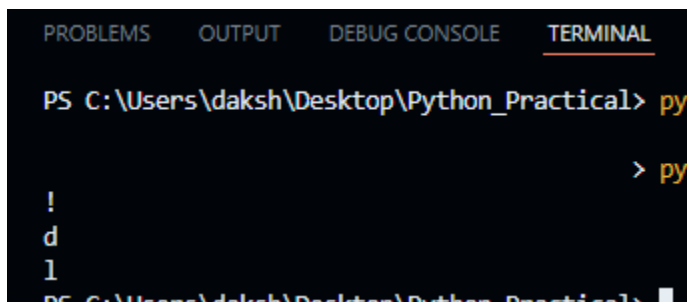
```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PO  
PS C:\Users\daksh\Desktop\Python_Practical> pytho  
Hello  
PS C:\Users\daksh\Desktop\Python_Practical> |
```

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:-



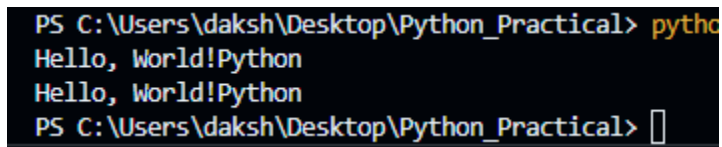
```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL  
PS C:\Users\daksh\Desktop\Python_Practical> py  
!  
d  
l  
PS C:\Users\daksh\Desktop\Python_Practical> |
```

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

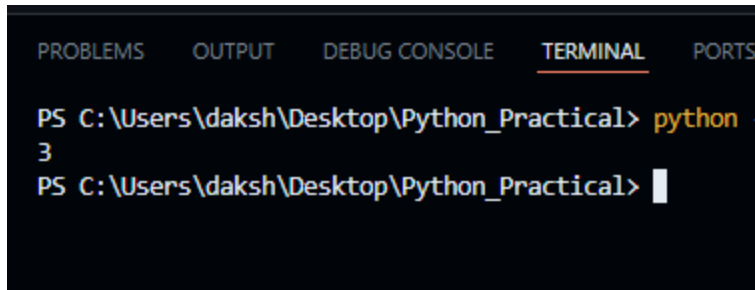
6. Count the occurrences of a specific character in a given string.

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:-



```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
PS C:\Users\daksh\Desktop\Python_Practical> python 3
PS C:\Users\daksh\Desktop\Python_Practical>
```

7. Convert a string to uppercase and lowercase

Code:-

```
sample_string = "Hello, World!"
```

```
# Convert to uppercase
```

```
upper_string = sample_string.upper()
```

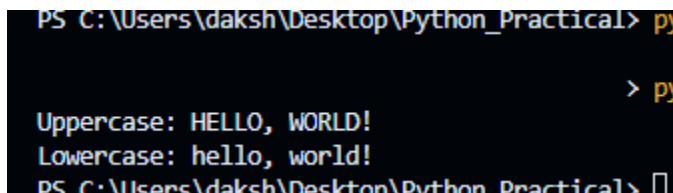
```
print("Uppercase:", upper_string)
```

```
# Convert to lowercase
```

```
lower_string = sample_string.lower()
```

```
print("Lowercase:", lower_string)
```

Output:-



```
PS C:\Users\daksh\Desktop\Python_Practical> py
> py
Uppercase: HELLO, WORLD!
Lowercase: hello, world!
PS C:\Users\daksh\Desktop\Python_Practical>
```

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)
```

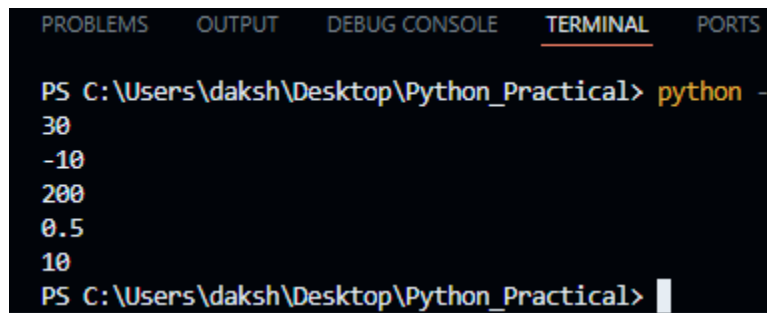
```
# MODULUS
```

```
a = 10
```

```
b = 20
```

```
print(a % b)
```

Output:-

A screenshot of a Python terminal window. The window has tabs for PROBLEMS, OUTPUT, DEBUG CONSOLE, TERMINAL (which is active), and PORTS. The terminal shows the command 'python -' followed by the output of the previous code: '30', '-10', '200', '0.5', and '10'. The prompt 'PS C:\Users\daksh\Desktop\Python_Practical>' is visible at the bottom.

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS  
PS C:\Users\daksh\Desktop\Python_Practical> python -  
30  
-10  
200  
0.5  
10  
PS C:\Users\daksh\Desktop\Python_Practical>
```

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

Code:-

```
a = 10
```

```
b = 20
```

```
print(a == b)
```

```
print(a != b)
```

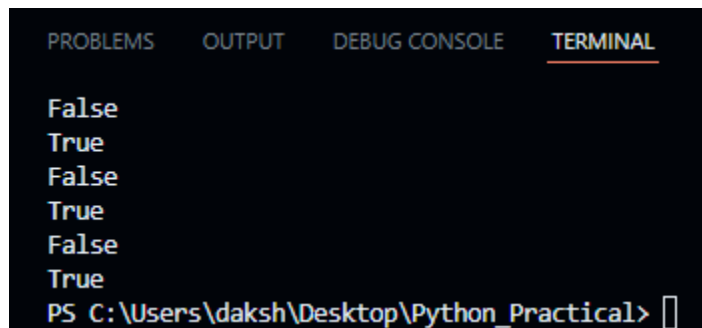
```
print(a > b)
```

```
print(a < b)
```

```
print(a >= b)
```

```
print(a <= b)
```

Output:-



```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL F
False
True
False
True
False
True
PS C:\Users\daksh\Desktop\Python_Practical> 
```

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)
```

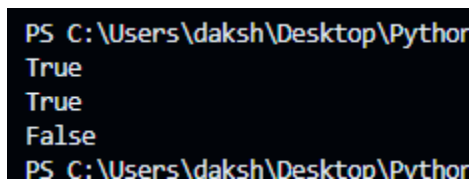
```
# NOT
```

```
a = 10
```

```
b = 20
```

```
print(not a < b)
```

Output:-



```
PS C:\Users\daksh\Desktop\Pythor
True
True
False
PS C:\Users\daksh\Desktop\Pythor
```

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:
```

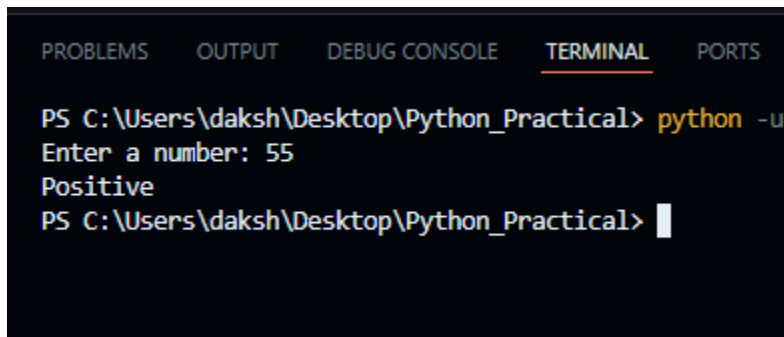
```
    print("Positive")
```

```
elif a < 0:
```



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

Output:-

A screenshot of a Python IDE's terminal window. The terminal has tabs for 'PROBLEMS', 'OUTPUT', 'DEBUG CONSOLE', 'TERMINAL' (which is selected and underlined), and 'PORTS'. The terminal text shows a command prompt 'PS C:\Users\daksh\Desktop\Python_Practical>' followed by the command 'python -u'. Below this, the program's output is displayed: 'Enter a number: 55' followed by 'Positive'. The prompt returns to 'PS C:\Users\daksh\Desktop\Python_Practical>' with a cursor.

```
PS C:\Users\daksh\Desktop\Python_Practical> python -u
Enter a number: 55
Positive
PS C:\Users\daksh\Desktop\Python_Practical> 
```

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:-

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS  
PS C:\Users\daksh\Desktop\Python_Practical> python  
Enter a number: 33  
Odd  
PS C:\Users\daksh\Desktop\Python_Practical> |
```

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:-

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS  
PS C:\Users\daksh\Desktop\Python_Practical> python -u  
Enter first number: 33  
Enter second number: 2  
Enter third number: 12  
33 is the largest number.  
PS C:\Users\daksh\Desktop\Python_Practical> |
```

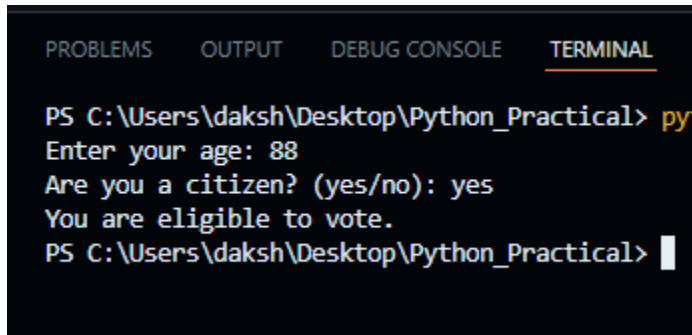
15. Create a nested if condition to check if a person is eligible to vote ($\text{age} \geq 18$) and is a citizen.

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:-



```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  
  
PS C:\Users\daksh\Desktop\Python_Practical> py  
Enter your age: 88  
Are you a citizen? (yes/no): yes  
You are eligible to vote.  
PS C:\Users\daksh\Desktop\Python_Practical> |
```

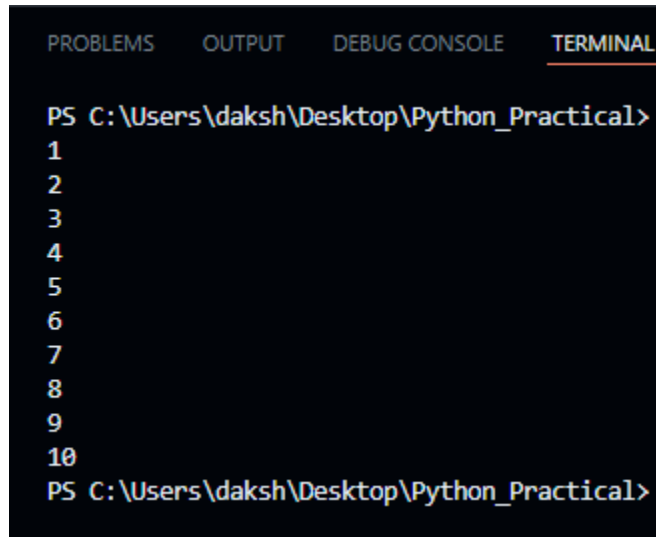
16. Write a program that prints numbers from 1 to 10 using a while loop.

Code:-

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

```
i += 1
```

Output:-



```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL

PS C:\Users\daksh\Desktop\Python_Practical>
1
2
3
4
5
6
7
8
9
10
PS C:\Users\daksh\Desktop\Python_Practical>
```

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:-

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORT

PS C:\Users\daksh\Desktop\Python_Practical> python
Enter a number: 5
5 x 1 = 5
5 x 2 = 10
5 x 3 = 15
5 x 4 = 20
5 x 5 = 25
5 x 6 = 30
5 x 7 = 35
5 x 8 = 40
5 x 9 = 45
5 x 10 = 50
PS C:\Users\daksh\Desktop\Python_Practical> |
```

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

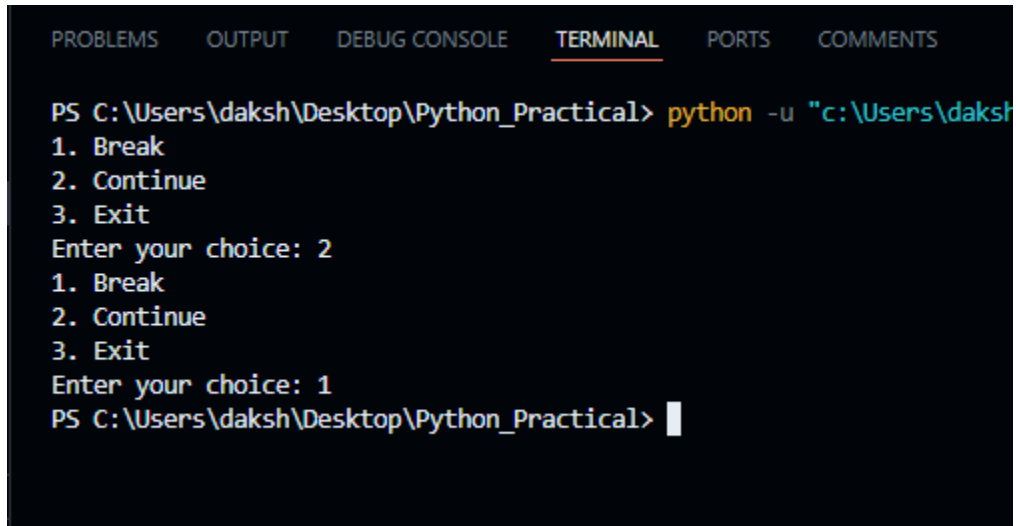
 elif choice == 3:

 break

 else:

 print("Invalid choice")

Output:-



```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS COMMENTS

PS C:\Users\daksh\Desktop\Python_Practical> python -u "c:\Users\daksh\Desktop\Python_Practical\19.py"
1. Break
2. Continue
3. Exit
Enter your choice: 2
1. Break
2. Continue
3. Exit
Enter your choice: 1
PS C:\Users\daksh\Desktop\Python_Practical>
```

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:-

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL

24
26
28
30
32
34
36
38
40
42
44
46
48
50
PS C:\Users\daksh\Desktop\Python_Practical>
```

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:-

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS

PS C:\Users\daksh\Desktop\Python_Practical> python -u
[5, 4, 3, 2, 1]
PS C:\Users\daksh\Desktop\Python_Practical> |
```

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:
```

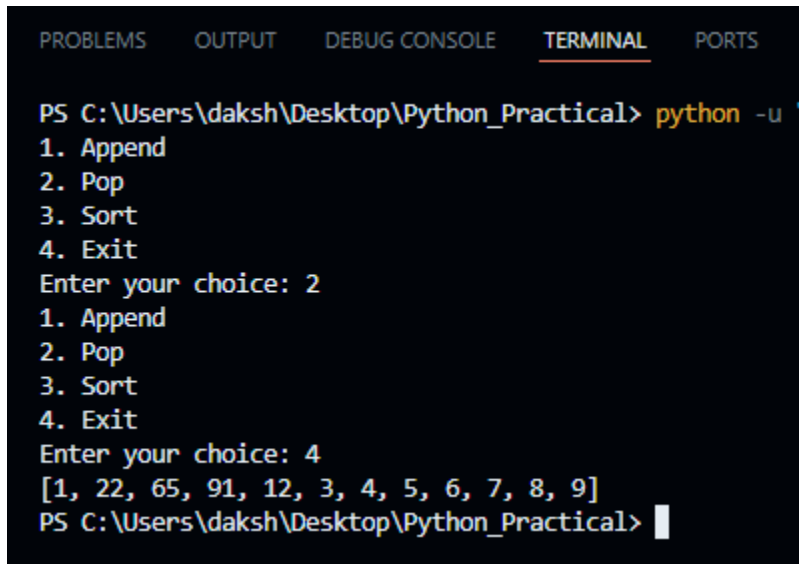
```
    break
```

```
else:
```

```
    print("Invalid choice")
```

```
print(a)
```

Output:-



```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS

PS C:\Users\daksh\Desktop\Python_Practical> python -u "
1. Append
2. Pop
3. Sort
4. Exit
Enter your choice: 2
1. Append
2. Pop
3. Sort
4. Exit
Enter your choice: 4
[1, 22, 65, 91, 12, 3, 4, 5, 6, 7, 8, 9]
PS C:\Users\daksh\Desktop\Python_Practical> |
```