NAME: PIYUSH TANDALE

REG NO: PROV/BCA/7/24/006

LINK: https://github.com/piyushT3003/Python-Assignment-/tree/main

PROGRAM 1:

```
a = float(input("Enter first number: "))
b = float(input("Enter second number: "))

print(a + b)
print(a - b)
print(a * b)
print(a / b)
print(a % b)
print(a ** b)
print(a // b)
```

EXPLAINATION: - In this question, I created a code that accepts two user inputs and does a number of basic arithmetic operations, such

as addition, subtraction, multiplication, division, and exponential as well as floor division.

PROGRAM 2:

```
a = int(input("Enter first number: "))#input taken no.1
b = int(input("Enter second number: "))#input taken  no.2
if a>b:
    print("A is greater than B")# it will print the condition if it satisfy the condition
elif a==b:
    print("A and B are equal") #it will print the condition elif it satisfy the condition
else:
    print("A is less than B") #it will print the condition else it satisfy the condition
else:
```

EXPLAINATION: Using the if else statement, the user input is compared in this question to determine if the first number is larger than, less than, or equal to the second number.

PROGRAM 3:

```
a=(input("Enter the first value:")).strip().lower()=="true" #input given by the user as boolean

b=(input("Enter the second vale:")).strip().lower()=="true"#input given by the user as boolean

c=(input("Enter the third value:")).strip().lower()=="true" #input given by the user as boolean

r1=a and b and c # it will use logic and give input

r2=a or b or c

r3= not a

r4= not b

r5= not c

print(f"The AND operator result:{r1}") # print the outputs we get .

print(f"The OR operator result:{r2}")

print(f"The NOT operator result:{r3}")

print(f"The NOT operator result:{r4}")

print(f"The NOT operator result:{r5}")
```

EXPLAINATION: The following logical operators—AND, OR, and NOT—are used to compare and report the three boolean inputs that the user enters in this question.

PROGRAM 4:

```
a=input("enter a string:") # the string input we give
print(len(a))# print the len of the string
print(a[0],a[-1])# print the first input and then second input
print(a[::-1])# print the list in reverse mode
print(a.upper(),a.lower()) # print the case in lower and upper
```

EXPLAINATION: The user inputs a string in this question, and the code changes its case, reverses it, determines how long the string is, and determines the first and last letter.

PROGRAM 5:

```
name = input("Enter your name: ")# user will give the input as name

age = int(input("Enter your age: "))# it will give the input as integer

print("Hello",name, "you are",age,"years old.")# print the output
```

EXPLAINATION: In this question the user inputs their name

and age and generates a personalised message.

PROGRAM 6:

```
sentence = input("Enter a sentence: ")# input given by the user
word = input("Enter a word to search: ")

if word in sentence:
    print(sentence.index(word))# if it satisfy the condition if then it will print the condition
else:
    print("Word not found")
```

EXPLAINATION: - In this question the user inputs a sentence and the word which needs to be found in the sentence. Using index position and if else statement the word is found in the sentence.

PROGRAM 7:

```
numbers = [float(input("Enter number: ")) for _ in range(5)]# five inputs give
print(sum(numbers)) # print the sum of numbers
print(max(numbers) , min(numbers))# print max and min number
```

EXPLAINATION: This program collects 5 numbers from the user and stores them in a list. The sum() function calculates the total of all elements, while max() and min() find the largest and smallest values in the list. Using list comprehensions simplifies the input collection process and makes the code cleaner

---

PROGRAM 8:

```
a=[]# input given by the user
```

```
for i in range(5):
    b=input(f"Enter the Fruit {i+1}:")
    a.append(b) # it appends the input b
print(f"The First list:{a}") #print the statement
c=input("Enter the fruit you want to add:") # one more input.
a.append(c) # it appends with c
print(f"The added fruit list:{a}")
d=a.pop(1) # now d is equal to the a input and pop the first value
print(f"The removed and updated list of fruits:{a}") # print the condition
```

EXPLAINATION: - In this question, user input is collected using the same technique, but it is entered as a string representing the names of fruits, and it is then added to the list. Including and excluding a fruit from the inventory

---

PROGRAM 9:

```
numbers = []# input given
```

```
while len(numbers) < 5:
    num = int(input("Enter a number: "))# input given are will be five
    numbers.append(num)# it appends the number
print("Ascending order:", sorted(numbers))# arrange in ascending order
print("Descending order:", sorted(numbers, reverse=True))# arrange in descending order
```

EXPLAINATION: The user can enter five digits into this software, and it will store them in a list. By default, the list is sorted using the sorted() method in ascending order. The reverse=True parameter is supplied to sorted() in order to sort in descending order. Both ascending and descending order results are shown.

PROGRAM 10:

```
numbers = [1, 2, 3, 4, 5, 6, 7, 8, 9, 10]# list name as number
print(numbers[:5])# print the conditions
```

```
print(numbers[5:])
print(numbers[2:8])
```

EXPLAINATION: - In this question the list is sliced in 2 parts first 5 values printed first and the second the last 5 values is printed.
