1. First Question - PYTHON LIST OPERATIONS

Source Code:

```
number of commands = int(input())

my list = []
for i in range(0, number_of_commands):
    user_input = input().split()
    if user_input[0] == "insert":
        my_list.insert(int(user_input[1]), int(user input[2]))
    elif user_input[0] == "append":
        my list.append(int(user input[1]))
    elif user_input[0] == "pop":
        my_list.pop()
    elif user_input[0] == "print":
        print(my_list)
    elif user_input[0] == "remove":
        my_list.remove(int(user_input[1]))
    elif user_input[0] == "sort":
        my_list.sort()
    else:
        my_list.reverse()
```

OUTPUT


~/Downloads → python temp.py
3
insert 1 0
print
[0]
pop
~/Downloads → python temp.py
4
insert 4 5
print
[5]
pop
print
[]

2. Calculator.py

SOURCE CODE

```
# Define the function to add two numbers
def add(x, y):
    return x + y

# Define the function to subtract two numbers
def subtract(x, y):
    return x - y

# Define the function to multiply two numbers
def multiply(x, y):
    return x * y

# Define the function to divide two numbers
def divide(x, y):
    return x / y


# Main driver code to execute above functions
print("Select operation.")
print("1.Add")
print("2.Subtract")
```

```
print("3.Multiply")
print("4.Divide")

# Take input from the user
choice = input("Enter choice(1/2/3/4): ")

# Check if choice is one of the four options
if choice in ('1', '2', '3', '4', '5', '6', '7'):
    num1 = float(input("Enter first number: "))
    num2 = float(input("Enter second number: "))

    if choice == '1':
        print(num1, "+", num2, "=", add(num1, num2))
    elif choice == '2':
        print(num1, "-", num2, "=", subtract(num1, num2))
    elif choice == '3':
        print(num1, "*", num2, "=", multiply(num1, num2))
    elif choice == '4':
        print(num1, "/", num2, "=", divide(num1, num2))
else:
    print("Invalid Input")
```

OUTPUT

```
~/Downloads → python temp.py
Select operation.
1.Add
2.Subtract
3.Multiply
4.Divide
Enter choice(1/2/3/4): 1
Enter first number: 2
Enter second number: 3
2.0 + 3.0 = 5.0
~/Downloads → python temp.py
Select operation.
1.Add
2.Subtract
3.Multiply
4.Divide
Enter choice(1/2/3/4): 2
Enter first number: 4
Enter second number: 5
4.0 - 5.0 = -1.0
```

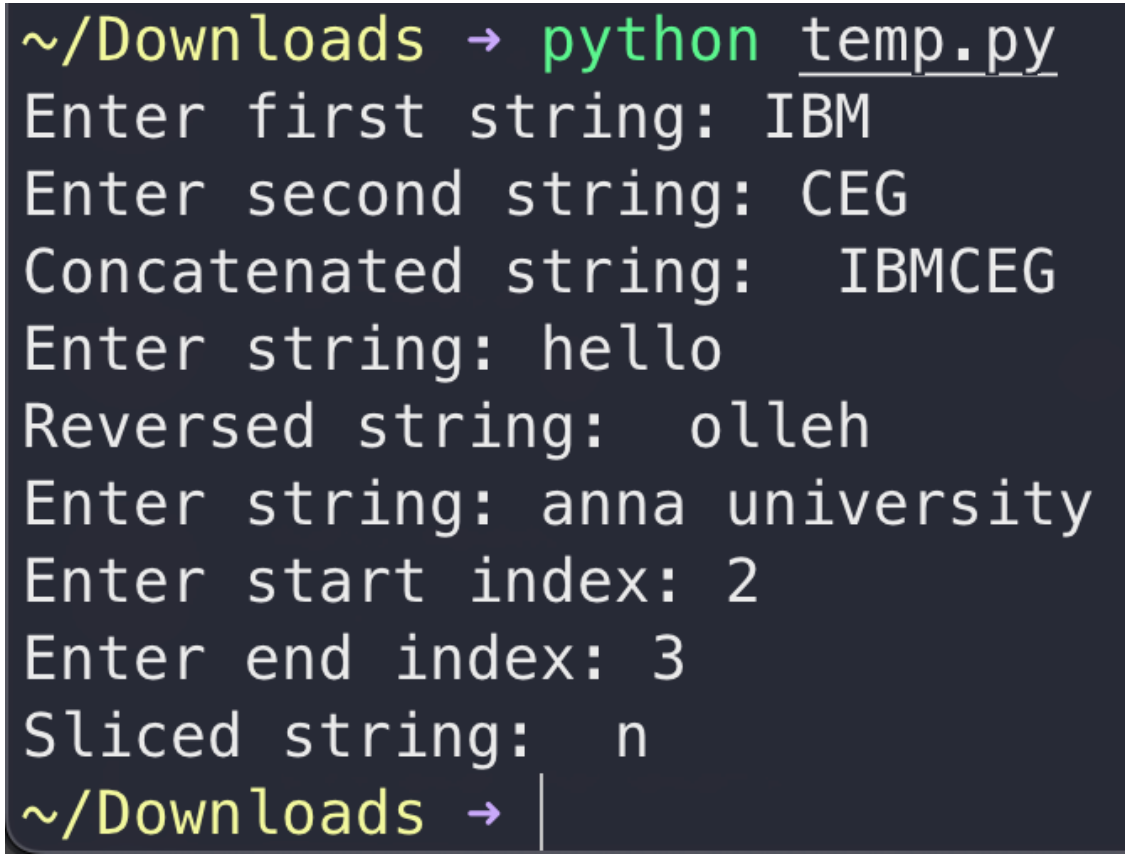
```
~/Downloads → python temp.py
Select operation.
1.Add
2.Subtract
3.Multiply
4.Divide
Enter choice(1/2/3/4): 3
Enter first number: 1
Enter second number: 32
1.0 * 32.0 = 32.0
~/Downloads → python temp.py
Select operation.
1.Add
2.Subtract
3.Multiply
4.Divide
Enter choice(1/2/3/4): 4
Enter first number: 2
Enter second number: 4
2.0 / 4.0 = 0.5
~/Downloads →
```

3. Third Question – String Operations

```
# Program to concatenate, reverse and slice strings

# Concatenate strings
# Input two strings
str1 = input("Enter first string: ")
str2 = input("Enter second string: ")
# Concatenate strings
str3 = str1 + str2
# Print concatenated string
print("Concatenated string: ", str3)

# Reverse string
# Input string
str1 = input("Enter string: ")
# Reverse string
str2 = str1[::-1]
# Print reversed string
print("Reversed string: ", str2)

# Slice string
# Input string
str1 = input("Enter string: ")
```

```
# Input start and end index
start = int(input("Enter start index: "))
end = int(input("Enter end index: "))
# Slice string
str2 = str1[start:end]
# Print sliced string
print("Sliced string: ", str2)
```

OUTPUT


~/Downloads → python temp.py
Enter first string: IBM
Enter second string: CEG
Concatenated string: IBMCEG
Enter string: hello
Reversed string: olleh
Enter string: anna university
Enter start index: 2
Enter end index: 3
Sliced string: n
~/Downloads →

4. Why is Python a popular programming language?
    a. Python is easy to learn
    b. Python has an active, supportive community
    c. Python is flexible
    d. Python offers versatile web-development solutions
    e. Python is well suited to data science and analytics
    f. Python is efficient, fast, and reliable
    g. Python is widely used with IoT Technology
    h. Python empowers custom automation
    i. Python is the academic language

5. What are the other Frameworks that can be used with python?
    - AIOHTTP
    - Bottle
    - CherryPy
    - CubicWeb
    - Dash
    - Django
    - Falcon
    - Giotto

6. Full form of WSGI?
    - The Web Server Gateway Interface. It is pronounced whiskey or WIZ-ghee, is a simple calling convention for web servers to forward requests to web applications or frameworks written in the Python programming language.