Assignment -1
Python Programming

Assignment Date	19 September 2022
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Maximum Marks	2 Marks

Question-1:

Consider a list (list = []). You can perform the following commands:
insert i e: Insert integer at position .
print: Print the list.
remove e: Delete the first occurrence of integer .
append e: Insert integer at the end of the list.
sort: Sort the list.
pop: Pop the last element from the list.
reverse: Reverse the list.
Initialize your list and read in the value of followed by lines of commands where each command will be of the types listed above. Iterate through each command in order and perform the corresponding operation on your list.

Solution:

```python
if __name__ == '__main__':
    N = int(input())
    L=[];
    for i in range(0,N):
        Cmd=input().split();
        if cmd[0] == "insert":
            L.insert(int(cmd[1]),int(cmd[2]))
        elif cmd[0] == "append":
            L.append(int(cmd[1]))
        elif cmd[0] == "pop":
            L.pop();
        elif cmd[0] == "print":
            print(L)
        elif cmd[0] == "remove":
            L.remove(int(cmd[1]))
        elif cmd[0] == "sort":
            L.sort();
        else:
            L.reverse();
```

```python
if __name__ == '__main__':
    N = int(input())
    L=[];
    for i in range(0,N):
        cmd=input().split();
        if cmd[0] == "insert":
            L.insert(int(cmd[1]),int(cmd[2]))
        elif cmd[0] == "append":
            L.append(int(cmd[1]))
        elif cmd[0] == "pop":
            L.pop();
        elif cmd[0] == "print":
            print(L)
        elif cmd[0] == "remove":
            L.remove(int(cmd[1]))
        elif cmd[0] == "sort":
            L.sort();
        else:
            L.reverse();
```

```
Python 3.9.10 (tags/v3.9.10:f2f3f53, Jan 17 2022, 15:14:21) [MSC v.1929 64 bit (
AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===================== RESTART: E:\New folder\list1.py =====================
30
insert 0 9
insert 1 32
insert 2 11
insert 3 7
insert 4 19
insert 5 3
print
[9, 32, 11, 7, 19, 3]
remove 32
print
[9, 11, 7, 19, 3]
append 44
print
[9, 11, 7, 19, 3, 44]
sort
print
[3, 7, 9, 11, 19, 44]
pop
print
[3, 7, 9, 11, 19]
reverse
print
[19, 11, 9, 7, 3]
```

Question-2:

Write a Calculator program in Python?

Solution:

```python
def add(x, y):
    return x + y
def subtract(x, y):
    return x - y
def multiply(x, y):
    return x * y
def divide(x, y):
    return x / y
print("Select operation.")
print("1.Add")
print("2.Subtract")
print("3.Multiply")
print("4.Divide")
while True:
    choice = input("Enter choice(1/2/3/4): ")
    if choice in ('1', '2', '3', '4'):
        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))
        next_calculation = input("Let's do next calculation? (yes/no): ")
        if next_calculation == "no":
```
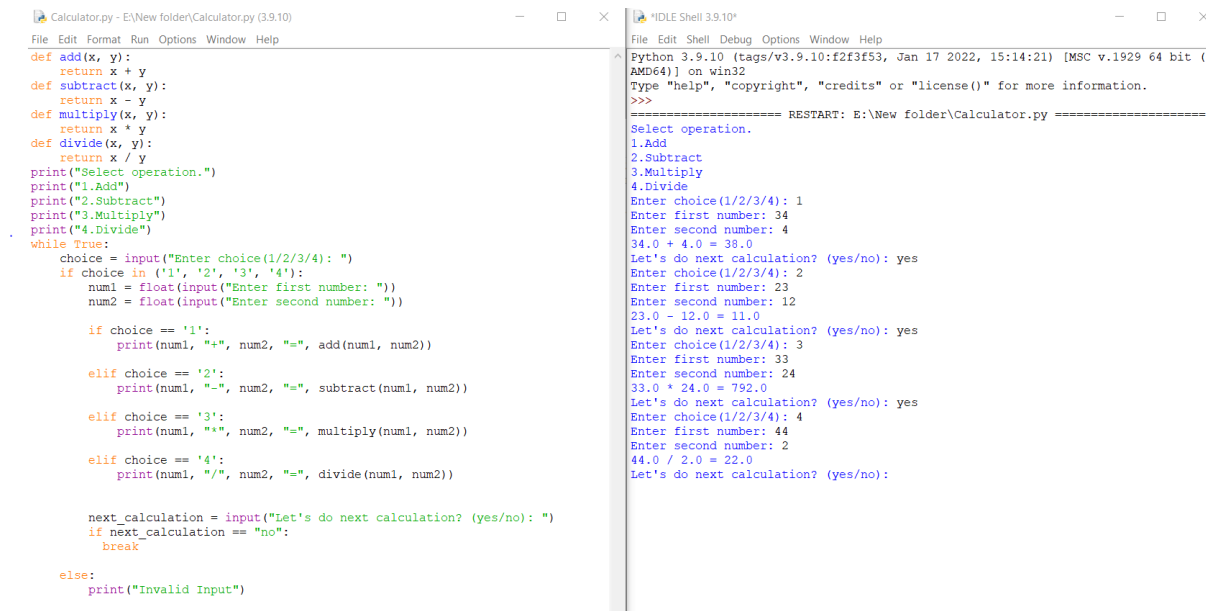
```
                        break
                    else:
                        print("Invalid Input")
```
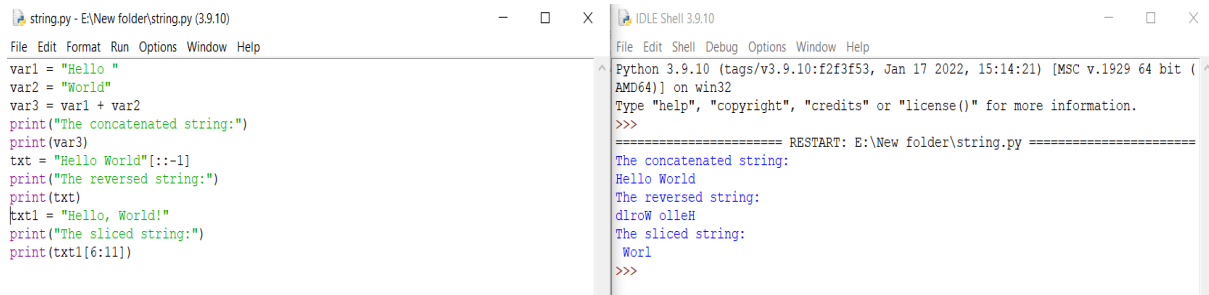

Question-3:

Write a program to concatenate, reverse and slice a string?

Solution:

```python
var1 = "Hello "
var2 = "World"
var3 = var1 + var2
print("The concatenated string:")
print(var3)
txt = "Hello World"[::-1]
print("The reversed string:")
print(txt)
txt1 = "Hello, World!"
print("The sliced string:")
print(txt1[6:11])
```

```
string.py - E:\New folder\string.py (3.9.10)                    —    □    X

File Edit Format Run Options Window Help
var1 = "Hello "
var2 = "World"
var3 = var1 + var2
print("The concatenated string:")
print(var3)
txt = "Hello World"[::-1]
print("The reversed string:")
print(txt)
txt1 = "Hello, World!"
print("The sliced string:")
print(txt1[6:11])
```

```
IDLE Shell 3.9.10                                               —    □    X

File Edit Shell Debug Options Window Help
Python 3.9.10 (tags/v3.9.10:f2f3f53, Jan 17 2022, 15:14:21) [MSC v.1929 64 bit (
AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===================== RESTART: E:\New folder\string.py =====================
The concatenated string:
Hello World
The reversed string:
dlroW olleH
The sliced string:
 Worl
>>>
```

Question-4:

Why is Python a popular programming language?

One of the main reasons it is popular as a programming language is that it's a great way to learn how to code. It reads almost like plain English and has many features that allow you to write complex tasks very simply.Python is a high-level programming language. Python is very easy to learn the language as compared to other languages like C, C#, Javascript, Java, etc. It is very easy to code in python language.

Question-5:

What are the other Frameworks that can be used with python?

Django
Pyramid
Circuits
Flask
Cherrypy
TurboGears
Web2py

Question-6:

Full form of WSGI?

WSGI refers to Web Server Gateway Interface. WSGI plays a vital role at the time when deploy Django or Flask application.