Assignment -3

Python Programming

Assignment Date	12 September 2022
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Maximum Marks	2 Marks

Question-1:

Consider a list (list = []). You can perform the following commands:

1. insert i.e Insert Integer at position
2. print Print the List
3. remove e:Delete the first occurrence of integer
4. append e:Insert integer at the end of the list
5. sort :Sort the list
6. pop : Pop the last Element from the list
7. reverse : Reverse the list

Solution:

1,2 : Insert and Print the list

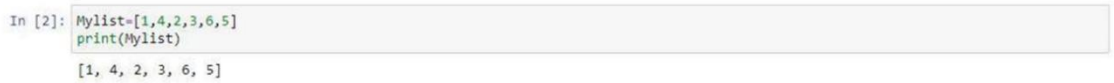
Code:

```
Mylist=[1,4,2,3,6,5]
print(Mylist)
```

Output:

[1,4,2,3,6,5]

Screenshot:



3. remove e:Delete the first occurrence of integer

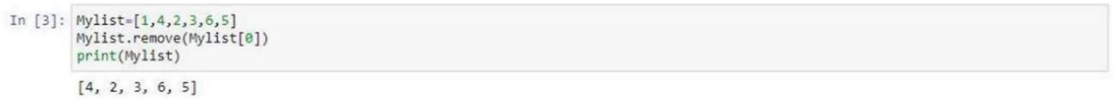
Code:

```
Mylist=[1,4,2,3,6,5]
Mylist.remove(Mylist[0])
print(Mylist)
```

Output:

[4,2,3,6,5]

Screenshot:



4. append e:Insert integer at the end of the list

Code:

```
Mylist=[1,4,2,3,6,5]
Mylist.append(7)
print(Mylist)
```

Output:

[1,4,2,3,6,5,7]

Screenshot:

```
In [4]: Mylist=[1,4,2,3,6,5]
        Mylist.append(7)
        print(Mylist)

        [1, 4, 2, 3, 6, 5, 7]
```

5. Sort

Code:

```
Mylist=[1,4,2,3,6,5]
Mylist.sort()
print(Mylist)
```

Output:

[1,2,3,4,5,6]

Screenshot:

```
In [5]: Mylist=[1,4,2,3,6,5]
        Mylist.sort()
        print(Mylist)

        [1, 2, 3, 4, 5, 6]
```

6. pop : Pop the last Element from the list

Code:

```
Mylist=[1,4,2,3,6,5]
Mylist.pop(5)
print(Mylist)
```

Output:

[1,4,2,3,6]

Screenshot:

```
In [6]: Mylist=[1,4,2,3,6,5]
        Mylist.pop(5)
        print(Mylist)

        [1, 4, 2, 3, 6]
```

7. reverse : Reverse the list

Code:

```
Mylist=[1,4,2,3,6,5]
Mylist.reverse()
print(Mylist)
```

Output:

[5,6,3,2,4,1]

Screenshot:

```
In [7]: Mylist=[1,4,2,3,6,5]
        Mylist.reverse()
        print(Mylist)

        [5, 6, 3, 2, 4, 1]
```

Question-2:

Write a calculator program in Python?

Solution:

Calulator program in 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")
```

Output:

Select operation.
1.Add
2.Subtract
3.Multiply
4.Divide
Enter choice(1/2/3/4): 3
Enter first number: 15
Enter second number: 14
15.0 * 14.0 = 210.0
Let's do next calculation? (yes/no): no

Screenshot:

```
In [9]: def add(x, y):
            return x + y
        # This function subtracts two numbers
        def subtract(x, y):
            return x - y
        # This function multiplies two numbers
        def multiply(x, y):
            return x * y
        # This function divides two numbers
        def divide(x, y):
            return x / y
        print("Select operation.")
        print("1.Add")
        print("2.Subtract")
        print("3.Multiply")
        print("4.Divide")
        while True:
            # 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'):
                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))
        # check if user wants another calculation
        # break the while loop if answer is no
                next_calculation = input("Let's do next calculation? (yes/no): ")
                if next_calculation == "no":
                    break
                else:
                    print("invalid input")

Select operation.
1.Add
2.Subtract
3.Multiply
4.Divide
Enter choice(1/2/3/4): 1
Enter first number: 22
Enter second number: 22
22.0 + 22.0 = 44.0
Let's do next calculation? (yes/no): no
```

Question-3:

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

Solution:

Concatenation:

Code:

```
str1="Hello"

str2="World"

str=str1+str2

print(str)
```

Output:

"Hello World"

Screenshot:

```
In [12]: str1="Hello"
         str2="World"
         str=str1+str2
         print(str)

HelloWorld
```

Slice:

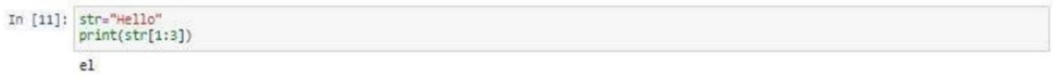
Code:

```
str="Hello"
print(str[1:3])
```

Output:

"el"

Screenshot:



Reverse:

Code:

```
str="Hello World"[::-1]
print(str)
```

Output:

"dlroW olleH"

Screenshot:

Question-4:

Why is python a popular programming language?

Solution:

Python language is incredibly easy to use and learn for new beginners and newcomers. The python language is one of the most accessible programming languages available because it has simplified syntax and not complicated, which gives more emphasis on natural language. Due to its ease of learning and usage, python codes can be easily written and executed much faster than other programming languages.

Question-5:

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

Solution:

The other frame works that can be used with python are listed below

1.Django.
2.Web2Py.
3.Flask.
4.Bottle.
5.CherryPy.

Question-6:

What is the full form of WSGI?

Solution:

The full form of WSGI is WEB SERVER GATEWAY INTERFACE.

The Web Server Gateway Interface (WSGI, 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.