

ASSIGNMENT

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

insert i e: Insert integer `e` at position `i`.

print: Print the list.

remove e: Delete the first occurrence of integer `e`.

append e: Insert integer `e` 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 `N` followed by `N` 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.

```
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()
```

 list1.py - E:\New folder\list1.py (3.9.10)

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```
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()
```

```
*IDLE Shell 3.10.7*
File Edit Shell Debug Options Window Help
Python 3.10.7 (tags/v3.10.7:6cc6b13, Sep 5 2022, 14:08:36) [MSC v.1933 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: E:\New folder\list1.py =====
30
insert 0 11
insert 1 8
insert 2 3
insert 3 17
insert 4 24
print
[11, 8, 3, 17, 24]
remove 17
print
[11, 8, 3, 24]
append 44
print
[11, 8, 3, 24, 44]
sort
print
[3, 8, 11, 24, 44]
pop
print
[3, 8, 11, 24]
reverse
print
[24, 11, 8, 3]
|
```

Write a Calculator 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")
```

 *Calculator.py - E:\New folder\Calculator.py (3.9.10)*

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```
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")
```

```
IDLE Shell 3.10.7
File Edit Shell Debug Options Window Help
Python 3.10.7 (tags/v3.10.7:6cc6b13, Sep 5 2022, 14:08:36) [MSC v.1933 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: E:/New folder/Calculator.py =====
Select operation.
1.Add
2.Subtract
3.Multiply
4.Divide
Enter choice(1/2/3/4): 1
Enter first number: 89
Enter second number: 10
89.0 + 10.0 = 99.0
Let's do next calculation? (yes/no): yes
Enter choice(1/2/3/4): 2
Enter first number: 4
Enter second number: 2
4.0 - 2.0 = 2.0
Let's do next calculation? (yes/no): yes
Enter choice(1/2/3/4): 3
Enter first number: 33
Enter second number: 23
33.0 * 23.0 = 759.0
Let's do next calculation? (yes/no): yes
Enter choice(1/2/3/4): 4
Enter first number: 22
Enter second number: 2
22.0 / 2.0 = 11.0
Let's do next calculation? (yes/no): no
>>> |
```

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

```
var1 = "Hello "
var2 = "World"
var3 = var1 + var2
print(var3)
txt = "Hello World"[::-1]
print(txt)
txt1 = "Hello, World!"
print(txt1[6:11])
```

```
string.py - E:\New folder\string.py (3.9.10)
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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[6:12])
```

```
IDLE Shell 3.9.10
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:
World
>>> |
```

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.

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

- Django
- Pyramid
- Circuits
- Flask
- Cherryypy

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.