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SSNCE195001039

IBM PYTHON ASSIGNMENT 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:**
4. **Delete the first occurrence of integer.**
5. **append e: Insert integer at the end of the list.**
6. **sort: Sort the list.**
7. **pop: Pop the last element from the list.**
8. **reverse: Reverse the list.**

Initialize your list and read in the value 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.

Source code:

```
if __name__ == '__main__':
    N = int(input())
    lists = []
    for i in range(N):
        a = list(map(str,input().split( )))
        lists.append(a)
    arr = []
    for x in lists:
        if x[0] == "insert":
            i = int(x[1])
            e = int(x[2])
            arr.insert(i,e)
        elif x[0] == "print":
            print(arr)
```

```
        elif x[0] == "remove":
            e = int(x[1])
            arr.remove(e)
        elif x[0] == "append":
            e = int(x[1])
            arr.append(e)
        elif x[0] == "sort":
            arr.sort()
        elif x[0] == "pop":
            arr.pop()
        elif x[0] == "reverse":
            arr.reverse()
```

Output:

```
16
insert 0 11
print
append 9
print
remove 11
print
insert 1 8
print
pop
print
append 5
print
sort
print
reverse
print
[11]
[11, 9]
[9]
[9, 8]
[9]
[9, 5]
[5, 9]
[9, 5]
```

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

Concatenate:

```
if __name__ == '__main__':
    s1 =  (input("Enter string1: "))
    s2 =  (input("Enter string2: "))
    s = s1 + s2;
    print("Concatenated String: ", end="")
    print(s)
```

```
Enter string1: jaga
Enter string2: dish
Concatenated String: jagadish
```

Reverse:

```
if __name__ == '__main__':
    s =  (input("Enter string: "))
    print("Original String: ", end="")
    print(s)
    str = ""
    for i in s:
        str = i + str
    print("Reversed String: ", end="")
    print(str)
```

```
Enter string: linux
Original String: linux
Reversed String: xunil
```

Slice:

```
if __name__ == '__main__':
    s =  (input("Enter string: "))
    n = len(s)
    print("Select the ranges from 0 to", n)
    l = int(input("Enter start index: "))
    r = int(input("Enter end index: "))
    print(s[l:r])
```

```
Enter string: jagadish cool
Select the ranges from 0 to 13
Enter start index: 1
Enter end index: 5
agad
```

Write a Calculator program in Python?

Source Code:

```
if __name__ == '__main__':
    print("Select operation.")
    print("1.Add")
    print("2.Subtract")
    print("3.Multiply")
    print("4.Divide")
    while 1:
        # take input from the user
        choice = input("Enter choice: ")
        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, "=", (num1 + num2))
            elif choice == '2':
                print(num1, "-", num2, "=", (num1 - num2))
```

```
            elif choice == '3':
                print(num1, "*", num2, "=", (num1 * num2))
            elif choice == '4':
                print(num1, "/", num2, "=", (num1/num2))

            flg = int(input("Continue? (0/1): "))
            if flg == 0:
                break

        else:
            print("Invalid Input")
```

Output:

```
Select operation.
1.Add
2.Subtract
3.Multiply
4.Divide
Enter choice: 1
Enter first number: 875
Enter second number: 432
875.0 + 432.0 = 1307.0
Continue? (0/1): 1
Enter choice: 2
Enter first number: 431
Enter second number: 342
431.0 - 342.0 = 89.0
Continue? (0/1): 1
Enter choice: 3
Enter first number: 76
Enter second number: 34
76.0 * 34.0 = 2584.0
Continue? (0/1): 1
Enter choice: 4
Enter first number: 980
Enter second number: 11
980.0 / 11.0 = 89.0909090909091
Continue? (0/1): 0
```

Why is Python a popular programming language?

1. Python is a scripted, object oriented and interpreted language.
2. It can be used for web development, app development, and data visualization.
3. It is also used in fields of Machine Learning and Artificial Intelligence.

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

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

Full form of WSGI?

The Web Server Gateway Interface