



Bangladesh Open University

School of Science and Technology

Bsc in Computer Science and Engineering

Lab report no. : lab-01.
Report on : Stack
Course title : Data Structure Lab
Course code : CSE21P6

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Study Center : Dhaka University of Engineering and Technology, Gazipur.

implement a stack using array

```
print ("-----+++++ Implement Stack in With User Input +++++-----\n")
```

```
def implement_stack(data):
```

```
stack = []
```

```
for x in data:
```

```
stack.append(x)
```

```
if stack:
```

try:

```
def push_pop():
```

```
print ("-"*10)
```

```
print ("1) Press One For pop")
```

```
print ("2) Press Two For Push")
```

```
print ("3) Press Three For See Current Element in Stack")
```

```
print ("4) Press Four for See Len of Stack ")
```

```
print ("-"*10)
```

```
choose = input("Chosse==>")
```

```
if choose == 1:
```

```
print("-"*10)
```

```
data = input("input index For pop From Stack==>")
```

try:# use for if stack is failed

```
stack.pop(data)
```

```
print ("[++] After Drop Your index {} Now Stack ==>
```

```
}".format(data,stack))
```

except:

```
print ("[+] Stack Seem To empty")
```

```

    push_pop()
elif choose==2:
    print("-"*10)
    data = input("input Any thing in Stack(use Comma)===> ")
    for x in data:
        stack.append(x)
    print ("[++] After insert Your {} Stack ===>{}".format(data,stack))
    push_pop()
elif choose==3:
    print("-"*10)
    print ("[+] Now Current stack is ===>{}".format(stack))
    push_pop()
elif choose==4:
    print("-"*10)
    print ("[+] Your Stack Length is ===>{}".format(len(stack)))
    push_pop()
else:
    print("-"*10)
    print("[???] input Valide Choose")
    push_pop()
except Exception as msg:#if something is really Unacceptable erro Deleted
    print("[!] Some Thing Went Wrong Because ===>{}".format(msg))
push_pop()

```


Evaluate POSTFIX Expression using stack

```
print ("=====++++POSTFIX Operation=====____++_\n")
```

```
class Postfix:
```

```
    def __init__(self):
```

```
        self.top = -1
```

```
        self.array = []
```

```
    def isEmpty(self):
```

```
        return True if self.top == -1 else False
```

```
    def peek(self):
```

```
        return self.array[-1]
```

```
    def pop(self):
```

```
        if not self.isEmpty():
```

```
            self.top -= 1
```

```
            return self.array.pop()
```

```
        else:
```

```
            return 1
```

```
    def push(self, op):
```

```
        self.top += 1
```

```
        self.array.append(op)
```

```
    def evaluatePostfix(self, exp):
```

```
        for i in exp:
```

```
            if i.isdigit():
```

```
                self.push(i)
```

else:

val1 = self.pop()

val2 = self.pop()

self.push(str(eval(val2 + i + val1)))

return int(self.pop())

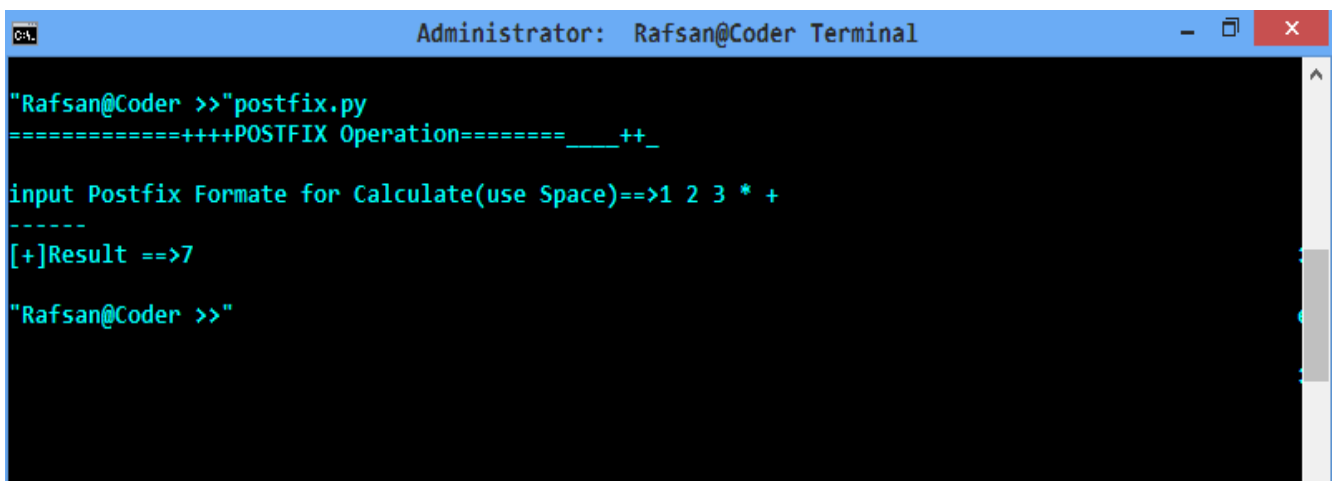
if __name__ == "__main__":

data = raw_input("input Postfix Formate for Calculate(use Space)==>").split(' ')

result = Postfix()

print ("-----\n[+]Result ==>{}".format(result.evaluatePostfix(data)))

OUT PUT



```
Administrator: Rafsan@Coder Terminal

Rafsan@Coder >>"postfix.py
++++POSTFIX Operation++++____+_
input Postfix Formate for Calculate(use Space)==>1 2 3 * +
-----
[+]Result ==>7
Rafsan@Coder >>"
```