AFLL Assignment

Implimentation of regualar expression using Python

9/27/2021
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Section : 3C

*REGULAR EXPRESSION: aa(a+b)*bb*

CODE :

```python
#Language - Python 3.8
def qo(string):
    if len(string)==0:
        return 0
    elif(string[0]=='a'):
        return q1(string[1:])
    else:
        return D(string[1:])
def q1(string):
    if len(string)==0:
        return 0
    elif(string[0]=='a'):
        return q2(string[1:])
    else:
        return D(string[1:])
def q2(string):
    if len(string)==0:
        return 0
    elif(string[0]=='a'):
        return q2(string[1:])
    elif (string[0]=='b'):
        return q3(string[1:])
    else:
        return D(string[1:])
def q3(string):
    if len(string)==0:
        return 0
    elif(string[0]=='a'):
        return q2(string[1:])
    elif (string[0]=='b'):
        return q4(string[1:])
    else:
        return D(string[1:])
def q4(string):
    if len(string)==0:
        return 1
    elif(string[0]=='a'):
        return q2(string[1:])
    elif (string[0]=='b'):
        return q4(string[1:])
    else:
        return D(string[1:])
def D(string):
    return 0

print("The Regular Expression of the DFA is aa(a+b)*bb")
print("Enter the string: ")
string = input()
if(qo(string)==1):
    print("String Accepted")
else:
    print("String Rejected")
```

OUTPUT SCREENSHOT:

```
C:\Users\ADMIN>python DFA.py
The Regular Expression of the DFA is aa(a+b)*bb
Enter the string:
aabbbbababababbbababababb
String Accepted

C:\Users\ADMIN>python DFA.py
The Regular Expression of the DFA is aa(a+b)*bb
Enter the string:
bbababababbabababaabb
String Rejected

C:\Users\ADMIN>python DFA.py
The Regular Expression of the DFA is aa(a+b)*bb
Enter the string:
aaaaaabbabababbababab
String Rejected

C:\Users\ADMIN>python DFA.py
The Regular Expression of the DFA is aa(a+b)*bb
Enter the string:
aaabbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbaaaaaaaaaaaaabb
String Accepted

C:\Users\ADMIN>python DFA.py
The Regular Expression of the DFA is aa(a+b)*bb
Enter the string:
aaaaabbbbbbsbbbba
String Rejected
```

AUTOMATA: