

5b:

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```
def stateQ0(inputstr):  
    print("Q0->",end="")  
    if(len(inputstr)<=0):  
        print("String rejected")  
    elif(inputstr[0]=='1'):  
        stateQ1(inputstr[1:])  
    elif(inputstr[0]=='0'):  
        stateQ0(inputstr[1:])
```

#inside state Q1

```
def stateQ1(inputstr):  
    print("Q1->",end="")  
    if(len(inputstr)<=0):  
        print("String rejected")  
    elif(inputstr[0]=='0'):  
        stateQ2(inputstr[1:])  
    elif(inputstr[0]=='1'):  
        stateQ1(inputstr[1:])
```

#inside state Q2

```
def stateQ2(inputstr):  
    print("Q2->",end="")  
    if(len(inputstr)<=0):  
        print("String rejected")  
    elif(inputstr[0]=='1' and len(inputstr)>=1):  
        stateQ3(inputstr[1:])  
    elif(inputstr[0]=='0'):  
        stateQ0(inputstr[1:])
```

#Inside state Q3

```
def stateQ3(inputstr):  
    print("Q3->",end="")  
    if(len(inputstr)==0):  
        print("String accepted")  
    elif(inputstr[0]=='0'):  
        stateQ2(inputstr[1:])  
    elif(inputstr[0]=='1'):  
        stateQ1(inputstr[1:])
```

```

#Inside state Q3
def stateQ3(inputstr):
    print("Q3->",end="")
    if(len(inputstr)==0):
        print("String accepted")
    elif(inputstr[0]=='0'):
        stateQ2(inputstr[1:])
    elif(inputstr[0]=='1'):
        stateQ1(inputstr[1:])

inputstr=input("Enter a string of 1 and 0:")
lenstr=len(inputstr)
print(lenstr)
if lenstr<3:
    print("Enter a string of atleast 3 numbers")
else:
    print("Transition of State:")
    #call state Q0
    stateQ0(inputstr)

```

```

Enter a string of 1 and 0:101
3
Transition of State:
Q0->Q1->Q2->Q3->String accepted
> 101111111
101111111
>
===== RESTART: E:/divesh rai/rrr.py =====
Enter a string of 1 and 0:101111111
9
Transition of State:
Q0->Q1->Q2->Q3->Q1->Q1->Q1->Q1->Q1->String rejected

```