Practical 05:

```
def stateQ0(inputstr):
    print("Q0->",end="")
    if(len(inputstr)<=0):</pre>
        print("String rejected")
    elif(inputstr[0]=='1'):
        stateQ1(inputstr[1:])
    elif(inputstr[0] == '0'):
        stateQ0(inputstr[1:])
#inside state Q1
def stateQ1(inputstr):
    print("01->",end="")
    if(len(inputstr)<=0):</pre>
        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):</pre>
        print("String rejected")
    elif(inputstr[0]=='1'):
        stateQ3(inputstr[1:])
    elif(inputstr[0]=='0'):
        stateQ0(inputstr[1:])
#Inside state 03
def stateQ3(inputstr):
    print("Q3->",end="")
    if (len(inputstr) == 0):
        print("String accepted")
    elif(inputstr[0]=='0'):
        stateQT(inputstr[1:])
    elif(inputstr[0]=='1'):
        stateQT(inputstr[1:])
```

```
#Inside State OT
def stateQT(inputstr):
    print("OT->", end="")
    if(len(inputstr)==0):
        print("You are at trap state")
        print("String rejected")
    elif(inputstr[0] == '0' and len(inputstr) >= 1):
        print("QT->",end="")
        stateQT(inputstr[1:])
    elif(inputstr[0] == '1'):
        print("QT->", end="")
        stateQT(inputstr[1:])
inputstr=input("Enter a string of 1 and 0:")
lenstr=len(inputstr)
print(lenstr)
if lenstr<3:</pre>
    print("Enter a string of atleast 3 numbers")
    print("Transition of State:")
    #call state Q0
    stateQ0(inputstr)
```