AFLL ASSIGNMENT

UNIT 1

DATE: 24/09/2021

CODE SNIPPET:

```python
#problem statement: Construct DFA which interpreted as binary num
ber is divisible by 4

#State q0 will be representing all the numbers that are divisible
 by 4
def stateq0(n):

    if (len(n)==0):
        print("input is accepted")
    else:

        if(n[0]=='0'):
            stateq0(n[1:])


        elif (n[0]=='1'):
            stateq1(n[1:])

#State q1 will be representing all the numbers that are not divis
ible by 4 and give remainder 1 when divided by 4
def stateq1(n):

    if (len(n)==0):
```

```python
            print("input is not accepted")
    else:

        if(n[0]=='0'):
            stateq2(n[1:])

        elif (n[0]=='1'):
            stateq3(n[1:])

#State q2 will be representing all the numbers that are not divis
ible by 4 and give remainder 2 when divided by 4
def stateq2(n):

    if (len(n)==0):
        print("input is not accepted")
    else:


        if(n[0]=='0'):
            stateq0(n[1:])


        elif (n[0]=='1'):
            stateq1(n[1:])

#State q4 will be representing all the numbers that are not divis
ible by 4 and give remainder 3 when divided by 4
def stateq3(n):

    if (len(n)==0):
        print("input is not accepted")
    else:


        if(n[0]=='0'):
            stateq2(n[1:])
```
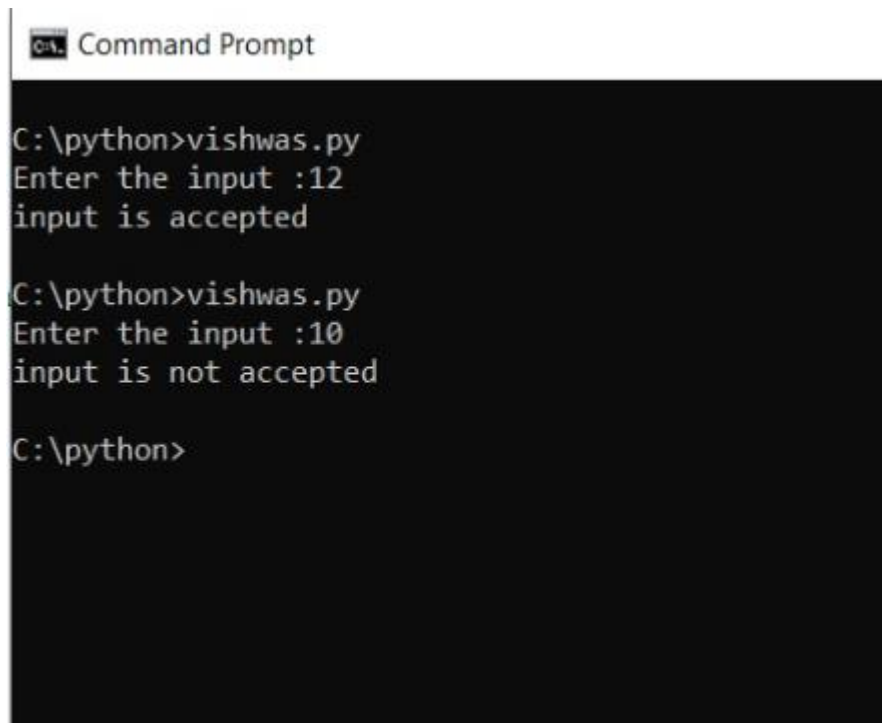
```python
        elif (n[0]=='1'):
            stateq3(n[1:])

#take number from user
n=int(input("Enter the input :"))
#converting number to binary
n = bin(n).replace("0b", "")

#to check the input
stateq0(n)
```

OUTPUT:


```
Command Prompt

C:\python>vishwas.py
Enter the input :12
input is accepted

C:\python>vishwas.py
Enter the input :10
input is not accepted

C:\python>
```