2.Write a C program to simulate a Deterministic Finite Automata (DFA) for the given language representing strings that start with 0 and end with 1

Program:

#include<stdio.h>

#include<conio.h>

#include<string.h>

void validate();

int s\_table[3][2]={{1,5},{1,2},{1,2}};

char str[10];

int main(){

printf("\n\tTHIS DFA WILL HANDLE THE STRINGS WHICH START WITH 0 AND END WITH 1");

printf("\nEnter any string: ");

scanf("%s",str);

validate();

}

void validate(){

int l,x,i,k,c\_state=0,f\_state=2;

l=strlen(str);

if(str[0]=='0')

printf("0");

for(i=0;i<l;i++){

if(str[i]=='0')

x=0;

if(str[i]=='1')

x=1;

c\_state=s\_table[c\_state][x];

printf("--->%d",c\_state);

if(c\_state==5)

break;

}

if(c\_state==f\_state)

printf("\nVALID STRING");

else

printf("\nINVALID STRING");

}

OUTPUT:

