11.9.24

Ex No:6 Construction of DFA

**Program:**

#include <stdio.h>

int main() {

int numStates;

char option;

do

{

printf("Enter the number of states: ");

scanf("%d", &numStates);

int dfa[numStates][2];

for (int i = 0; i < numStates; i++)

{

printf("Enter the state for {q%d,0}-> ", i);

scanf("%d", &dfa[i][0]);

printf("Enter the state for {q%d,1}-> ", i);

scanf("%d", &dfa[i][1]);

}

char input[100];

printf("Enter a substring: ");

scanf("%s", input);

int currentState = 0;

for (int i = 0; input[i] != '\0'; i++)

{

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

{

currentState = dfa[currentState][0];

}

else if (input[i] == '1')

{

currentState = dfa[currentState][1];

}

else

{

printf("Invalid input Only(0 and 1) is allowed\n");

return 0;

}

}

if (currentState == numStates - 1)

{

printf("String accepted by DFA\n");

}

else

{

printf("String not accepted by DFA\n");

}

printf("Do You want continue?(y/n):");

while(getchar()!='\n');

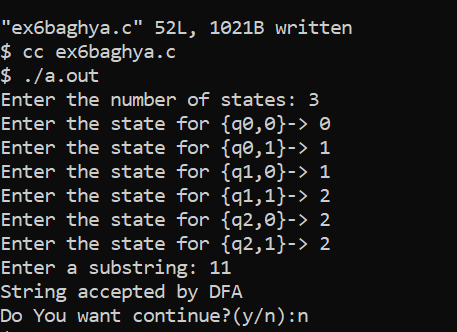
scanf("%c",&option);

} while(option=='y');

return 0;

}

**Output:**

****