

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

AIM : To write a C program to simulate a Deterministic Finite Automata.

Program:

```
#include<stdio.h>

#include<string.h>

int main()

{

char s[100];

int i,flag,flag1;

int l;

printf("enter a string to check:");

scanf("%s",s);

l=strlen(s);

flag=1;

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

{

if(s[i]!='0' && s[i]!='1')

{

flag=0;

}

}

if(flag==1)

printf("string is Valid\n");

else

printf("string is Not Valid\n");

if(flag==1)

{

flag1=0;

for(i=0;i<l-2;i++)

{
```

```
if(s[i]=='1')
{
if(s[i+1]=='0' && s[i+2]=='1')
{
flag1=1;
printf("Substring 101 exists. String accepted\n");
break;
}
}
}
if(flag1==0)
printf("Substring 101 does not exist. String not accepted\n");
}
}
```

RESULT: Output is successfully obtained.