# CHECKING WHETHER A STRING BELONGS TO A GRAMMAR

**AIM :**

To write a C program to check whether a string belongs to the grammar

S -> 0 S 0 | A

A -> 1 A | ε

**PROGRAM :**

#include<stdio.h> #include<string.h>

void main()

{

char s[100];

int i,flag,flag1,a,b; int l,count1,count2; 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 Not Valid\n");

if(flag==1)

{

i=0;count1=0;

while(s[i]=='0') // Count the no of 0s in the front

{

count1++; i++;

}

while(s[i]=='1')

{

i++; // Skip all 1s

}

flag1=1; count2=0;

while(i<l)

{

if(s[i]=='0')// Count the no of 0s at the end

{

count2++;

}

else

{

flag1=0;

}

i++; } if(flag1==1)

{

if(count1==count2)

{

printf("The string satisfies the condition 0n1m0n\n"); printf ("String Accepted\n");

}

else

{

printf("The string does not satisfy the condition

0n1m0n\n");

printf("String Not Accepted\n");

}

}

else

{

printf("The string does not satisfy the condition 0n1m0n\n"); printf("String Not Accepted\n");

}

}

}

**OUTPUT :**



