Write a C program to implement either Top Down parsing technique or Bottom Up Parsing technique to check whether the given input string is satisfying the grammar or not.

Program:

#include<stdio.h>

#include<conio.h>

#include<string.h>

int main() {

char string[50];

int flag,count=0;

printf("The grammar is: S->aS, S->Sb, S->ab\n");

printf("Enter the string to be checked:\n");

gets(string);

if(string[0]=='a') {

flag=0;

for (count=1;string[count-1]!='\0';count++) {

if(string[count]=='b') {

flag=1;

continue;

} else if((flag==1)&&(string[count]=='a')) {

printf("The string does not belong to the specified grammar");

break;

} else if(string[count]=='a')

continue; else if((flag==1)&&(string[count]='\0')) {

printf("String not accepted…..!!!!");

break;

} else {

printf("String accepted");

}

}

}

}

Output:

The grammar is: S->aS, S->Sb, S->ab

Enter the string to be checked:

abb

String accepted