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9.C program for LL(1) PARSING

```
#include<stdio.h>

#include<string.h>

char s[20],stack[20];

int main()

{

char m[5][6][3]={"tb"," "," ","tb"," "," "," ","+tb"," "," ","n","n","fc"," "," ","fc"," "," "," ","n","*fc"," a
","n","n","i"," "," ","(e)"," "," "};

int size[5][6]={2,0,0,2,0,0,0,3,0,0,1,1,2,0,0,2,0,0,0,1,3,0,1,1,1,0,0,3,0,0};

int i,j,k,n,str1,str2;

printf("\n Enter the input string: ");

scanf("%s",s);

strcat(s,"$");

n=strlen(s);

stack[0]='$';

        stack[1]='e';


i=1;

j=0;

printf("\nStack Input\n");

printf(" \n");

while((stack[i]!='$')&&(s[j]!='$'))

{

if(stack[i]==s[j])

{

i--;

j++;

}
```

```
switch(stack[i])
{
case 'e':
str1=0; break; case 'b':
str1=1; break; case 't':
str1=2; break; case 'c':
str1=3; break; case 'f':
str1=4; break;

}
switch(s[j])
{ case 'i':
str2=0; break; case '+':
str2=1; break;
case '*': str2=2; break;
case '(': str2=3; break;
case ')': str2=4; break;
case '$': str2=5; break;

}
if(m[str1][str2][0]=='\0')

{
printf("\nERROR");
exit(0);

}
else if(m[str1][str2][0]=='n') i--;
else if(m[str1][str2][0]=='i') stack[i]='i';
else
{
```

```
for(k=size[str1][str2]-1;k>=0;k--)
{
stack[i]=m[str1][str2][k]; i++;

}
i--;

}
for(k=0;k<=i;k++)
printf(" %c",stack[k]);
printf(" "); for(k=j;k<=n;k++);
printf("%c",s[k]);
printf(" \n ");

}
printf("\n SUCCESS");
}
```