**//Implementation of Shift Reduce Parser**

#include<stdio.h>

#include<conio.h>

#include<string.h>

struct prodn

{

char p1[10];

char p2[10];

};

void main()

{

char input[20],stack[50],temp[50],ch[2],\*t1,\*t2,\*t;

int i,j,s1,s2,s,count=0;

struct prodn p[10];

FILE \*fp=fopen("sr\_input.txt","r");

stack[0]='\0';

clrscr();

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

scanf("%s",&input);

while(!feof(fp))

{

fscanf(fp,"%s\n",temp);

t1=strtok(temp,"->");

t2=strtok(NULL,"->");

strcpy(p[count].p1,t1);

strcpy(p[count].p2,t2);

count++;

}

i=0;

while(1)

{

if(i<strlen(input))

{

ch[0]=input[i];

ch[1]='\0';

i++;

strcat(stack,ch);

printf("%s\n",stack);

}

for(j=0;j<count;j++)

{

t=strstr(stack,p[j].p2);

if(t!=NULL)

{

s1=strlen(stack);

s2=strlen(t);

s=s1-s2;

stack[s]='\0';

strcat(stack,p[j].p1);

printf("%s\n",stack);

j=-1;

}

}

if(strcmp(stack,"E")==0&&i==strlen(input))

{

printf("\n Accepted");

break;

}

if(i==strlen(input))

{

printf("\n Not Accepted");

break;

}

}

getch();

}

**Input File: sr\_input.txt**

E->E+E

E->E\*E

E->i

**Output 1:**

Enter the input string

i\*i+i

i

E

E\*

E\*i

E\*E

E

E+

E+i

E+E

E

Accepted

**Output 2:**

Enter the input string

i\*+i

i

E

E\*

E\*+

E\*+i

E\*+E

Not Accepted