COMMON PROGRAM

Thursday, 1 March 2012

CONSTRUCTION OF PREDICTIVE PARSER TABLE USING C

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PROGRAM:

```
#include<stdio.h>
#include<conio.h>
#include<string.h>
void main()
{
char fin[10][20],st[10][20],ft[20][20],fol[20][20];
int a=0,e,i,t,b,c,n,k,l=0,j,s,m,p;
clrscr();
printf("enter the no. of coordinates\n");
scanf("%d",&n);
printf("enter the productions in a grammar\n");
for(i=0;i<n;i++)
scanf("%s",st[i]);
for(i=0;i<n;i++)
fol[i][0]='\0';
for(s=0;s<n;s++)
{
for(i=0;i<n;i++)
{
j=3;
l=0;
a=0;
l1:if(!((st[i][j]>64)&&(st[i][j]<91)))
{
for(m=0;m<l;m++)
{
if(ft[i][m]==st[i][j])
goto s1;
}
ft[i][l]=st[i][j];
l=l+1;
s1:j=j+1;
}
else
{
if(s>0)
{
while(st[i][j]!=st[a][0])
{
a++;
}
b=0;
while(ft[a][b]!='\0')
{
for(m=0;m<l;m++)
{
if(ft[i][m]==ft[a][b])
goto s2;
}
ft[i][l]=ft[a][b];
l=l+1;
s2:b=b+1;
}
}
```

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About Me

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```
}
while(st[i][j]!='\0')
{
if(st[i][j]=='|')
{
j=j+1;
goto l1;
}
j=j+1;
}
ft[i][l]='\0';
}
}
printf("first pos\n");
for(i=0;i<n;i++)
printf("FIRS[%c]=%s\n",st[i][0],ft[i]);
fol[0][0]='$';
for(i=0;i<n;i++)
{
k=0;
j=3;
if(i==0)
l=1;
else
l=0;
k1:while((st[i][0]!=st[k][j])&&(k<n))
{
if(st[k][j]=='\0')
{
k++;
j=2;
}
j++;
}
j=j+1;
if(st[i][0]==st[k][j-1])
{
if((st[k][j]!='|')&&(st[k][j]!='\0'))
{
a=0;
if(!((st[k][j]>64)&&(st[k][j]<91)))
{
for(m=0;m<l;m++)
{
if(fol[i][m]==st[k][j])
goto q3;
}
fol[i][l]=st[k][j];
l++;
q3:
}
else
{
while(st[k][j]!=st[a][0])
{
a++;
}
p=0;
while(ft[a][p]!='\0')
{
if(ft[a][p]!='@')
{
for(m=0;m<l;m++)
{
if(fol[i][m]==ft[a][p])
goto q2;
}
fol[i][l]=ft[a][p];
l=l+1;
}
else
```

```
e=1;
q2:p++;
}
if(e==1)
{
e=0;
goto a1;
}
}
}
else
{
a1:c=0;
a=0;
while(st[k][0]!=st[a][0])
{
a++;
}
while((fol[a][c]!='\0')&&(st[a][0]!=st[i][0]))
{
for(m=0;m<l;m++)
{
if(fol[i][m]==fol[a][c])
goto q1;
}
fol[i][l]=fol[a][c];
l++;
q1:c++;
}
}
goto k1;
}
fol[i][l]='\0';
}
printf("follow pos\n");
for(i=0;i<n;i++)
printf("FOLLOW[%c]=%s\n",st[i][0],fol[i]);
printf("\n");
s=0;
for(i=0;i<n;i++)
{
j=3;
while(st[i][j]!='\0')
{
if((st[i][j-1]=='|')||(j==3))
{
for(p=0;p<=2;p++)
{
fin[s][p]=st[i][p];
}
t=j;
for(p=3;((st[i][j]!='|')&&(st[i][j]!='\0'));p++)
{
fin[s][p]=st[i][j];
j++;
}
fin[s][p]='\0';
if(st[i][k]=='@')
{
b=0;
a=0;
while(st[a][0]!=st[i][0])
{
a++;
}
while(fol[a][b]!='\0')
{
printf("M[%c,%c]=%s\n",st[i][0],fol[a][b],fin[s]);
b++;
}
}
```

```
else if(!((st[i][t]>64)&&(st[i][t]<91)))
printf("M[%c,%c]=%s\n",st[i][0],st[i][t],fin[s]);
else
{
b=0;
a=0;
while(st[a][0]!=st[i][3])
{
a++;
}
while(ft[a][b]!='\0')
{
printf("M[%c,%c]=%s\n",st[i][0],ft[a][b],fin[s]);
b++;
}
}
s++;
}
if(st[i][j]=='|')
j++;
}
}
getch();
}
```

OutPut:

```
Enter the no. of co-ordinates
2
Enter the productions in a grammar
S->CC
C->eC | d
First pos
FIRS[S] = ed
FIRS[C] = ed

Follow pos
FOLLOW[S] =$
FOLLOW[C] =ed$

M [S , e] =S->CC
M [S , d] =S->CC
M [C , e] =C->eC
M [C , d] =C->d
```

Posted by KAMALATSHAN N at 09:14

19 comments:

shivendra. P 25 March 2012 at 12:01

Thank you so much sir for the program it is really really very helpful as iwas unable to complete it on my own ...it was really really very helpful...i have a few doubts i would be really grateful if you can clear them by the earliest.than you once again sir

Reply

Replies

KAMALATSHAN N 27 March 2012 at 09:51

Thanks for your feedback send me your bug coding i will clear it.....

Reply

Sakthi Vel 7 August 2013 at 22:54

thank you so much brother....

Reply

Replies

KAMALATSHAN N 9 August 2013 at 08:41

Thanks for your comment...

Reply

Vyanktesh Kanungo 22 February 2014 at 07:29

sir thanks for the program! but there are few errors..need some help

Reply

Replies

KAMALATSHAN N 24 February 2014 at 23:23

PUT YOUR ERROR DETAILS AND I WILL DEBUGG.....

Reply

Mansi Kataria 11 May 2014 at 01:18

This program was a great help...thankyou...

Reply

devendra kumar 20 October 2014 at 09:58

what is the input for NULL production like X->NULL

Reply

Mahesh 8 January 2015 at 05:22

follow answer seems not correct

Reply

Replies

KAMALATSHAN N 16 January 2015 at 02:07

GIVE ME THE ERROR

Reply

mandava sudheep 25 February 2015 at 21:13

give me the stack implementation along with table

Reply

raman deep singh Walia 19 April 2015 at 06:51

Thnx Sir,it is great,and i underantand the working of First set and Follow set.but please clearify what is the last set in your output section?
i mean what you write after the follow section.is it the select operation or M table or the parsing table.

Reply

raman deep singh Walia 19 April 2015 at 06:52

Or one more question sir ,what to take for the null production.please answer my both questions sir..Thankyou Sir

Reply

Amrin 22 April 2015 at 01:09

Hello sir, i have tried your code with below input but program calculates first and then system hangs what to do?

generate Predictive Parsing Table for the given grammar.
S -> ABE | a | f
A -> p | t | w
B -> Aq

thanks in advance....

Reply

Unknown 21 September 2015 at 23:42

please explain the program execution and why s is used in program,

Reply

मुरदा आदमी 8 February 2016 at 09:07

If error occors in line 105 i.e q3: then add z=0;. It looks like " q3: z=0; ". Above "q3: z=0; " write "int z;" and run.

Hope it helps.

Reply

ASHWINI WANNALIKAR 8 March 2016 at 00:44

what is after q3: label?? In line number 102.
please reply.

Reply

PUSHPAK BHUSARI 12 March 2016 at 00:33

goood one

Reply

Unknown 21 April 2016 at 10:51

how to enter E->e where e denote empty production?

Reply

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