

World of Angel

C,c++, Java programs. Feel free to post your questions.

Friday, August 27, 2010

C PROGRAM - OPERATOR PRECEDENCE PARSER

/*OPERATOR PRECEDENCE PARSER*/

```
#include<stdio.h>
#include<conio.h>
void main()
{
char stack[20],ip[20],opt[10][10][1],ter[10];
int i,j,k,n,top=0,col,row;
clrscr();
for(i=0;i<10;i++){stack[i]=NULL; ip[i]=NULL;
for(j=0;j<10;j++){opt[i][j][1]=NULL;}}
printf("Enter the no.of terminals:");
scanf("%d",&n);
printf("\nEnter the terminals:");
scanf("%s",ter);
printf("\nEnter the table values:\n");
for(i=0;i<n;i++)
{
for(j=0;j<n;j++)
{
printf("Enter the value for %c %c:",ter[i],ter[j]);
scanf("%s",opt[i][j]);
}
}
printf("\nOPERATOR PRECEDENCE TABLE:\n");
for(i=0;i<n;i++){printf("\t%c",ter[i]);}
printf("\n");
for(i=0;i<n;i++){printf("\n%c",ter[i]);
for(j=0;j<n;j++){printf("\t%c",opt[i][j][0]);}}
stack[top]='$';
printf("\nEnter the input string:");
scanf("%s",ip);
i=0;
printf("\nSTACK\t\t\tINPUT STRING\t\t\tACTION\n");
printf("\n%s\t\t\t%s\t\t\t",stack,ip);
while(i<=strlen(ip))
{
for(k=0;k<n;k++)
{
if(stack[top]==ter[k])
col=k;
if(ip[i]==ter[k])
row=k;
}
if((stack[top]=='$')&&(ip[i]=='$')){
printf("String is accepted");
break;}
else if((opt[col][row][0]!='<' || (opt[col][row][0]!='='))
{ stack[++top]=opt[col][row][0];
stack[++top]=ip[i];
printf("Shift %c",ip[i]);
i++;
```

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```
}
else{
    if(opt[col][row][0]=='>')
    {
        while(stack[top]!='<'){--top;}
        top=top-1;
        printf("Reduce");
    }
    else
    {
        printf("\nString is not accepted");
        break;
    }
}
printf("\n");
for(k=0;k<=top;k++)
{
    printf("%c",stack[k]);
}
printf("\t\t\t");
for(k=i;k<strlen(ip);k++){
    printf("%c",ip[k]);
}
printf("\t\t\t");
}
getch();
}
```

Posted by Aaron Angel at 8:43 PM

4 comments:



Nirmal Tariq January 17, 2014 at 8:36 AM

can you please tell what to place in table where no value is supposed to be present? i mean for no precedence between two terminals what should i place when it asks for the value?

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Neha N July 20, 2015 at 5:57 AM

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anuradha October 31, 2015 at 9:21 AM

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anuradha October 31, 2015 at 9:29 AM

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