WEEK2

INFIX TO POSTFIX EXPRESSION

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#include<stdio.h>

#include<string.h>

int index=0,pos=0,top=-1,length;

char symbol,temp,infix[20],postfix[20],stack[20];

void infix\_postfix();

void push(char symbol);

char pop();

int pred(char symbol);

void main(){

printf("enter infix expression");

scanf("%s", infix);

infix\_postfix();

printf("infix expression=%s",infix);

printf("postfix expression=%s",postfix);

getch();

}

void infix\_postfix()

{

length=strlen(infix);

push('#');

while(index<length)

{

symbol = infix[index];

switch(symbol)

{

case '(' : push(symbol);

break;

case ')': temp=pop();

while(temp!='(')

{

postfix[pos]=temp;

pos++;

temp=pop();

}

break;

case'+':

case'-':

case'\*':

case'/':

case'^':while(pred(stack[top])>=pred(symbol))

{

temp=pop();

postfix[pos++]=temp;

}

push(symbol);

break;

default: postfix[pos++]=symbol;

}

index++;

}

while(top>0)

{

temp=pop();

postfix[pos++]=temp;

}

}

void push(char symbol)

{

top=top+1;

stack[top]=symbol;

}

char pop()

{

char symb;

symb=stack[top];

top=top-1;

return(symb);

}

int pred(char symbol)

{

int p;

switch(symbol)

{

case'^': p=3;

break;

case'/': p=2;

break;

case'\*':

case'+':

case'-':p=1;

break;

case'(': p=0;

break;

case'#': p=-1;

break;

}

return(p);

}

