Week-2 C program to convert infix to postfix expression

#include<stdio.h>

#include<string.h>

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

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

void infixtopostfix();

void push(char symbol);

char pop();

int pred(char symbol);

int main()

{

printf("Enter the infix expression:");

scanf("%s",infix);

infixtopostfix();

printf("\ninfix expression:\n%s",infix);

printf("\nPostfix expression:\n%s",postfix);

}

void infixtopostfix()

{

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 '|':

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 '|':

case '\*':

case '/':p=2;

break;

case '+':

case '-':p=1;

break;

case '(':p=0;

break;

case '#':p=-1;

break;

}

return(p);

}



