Week 3(Infix to Postfix)

#include <stdio.h>

#include<ctype.h>

#define SIZE 50

char stack[SIZE];

int top=-1;

void push(char elem)

{

stack[++top]=elem;

}

char pop(){

return (stack[top--]);

}

int pr(char symbol)

{

if(symbol=='^')

{

return (3);

}

else if (symbol=='\*'||symbol=='/')

{

return(2);

}

else if(symbol=='+'||symbol=='-')

{

return(1);

}

else

{

return(0);

}

}

void main()

{

char infix[50],postfix[50],ch,elem;

int i=0,k=0;

printf("enter infix expression\n");

scanf("%s",infix);

push('#');

while((ch=infix[i++])!='\0')

{

if(ch=='(')

push(ch);

else if (isalnum(ch))

postfix[k++]=ch;

else if (ch==')')

{

while(stack[top]!='(')

postfix[k++]=pop();

elem=pop();

}

else

{

while(pr(stack[top])>=pr(ch))

postfix[k++]=pop();

push(ch);

}

}

while(stack[top]!='#')

{

postfix[k++]=pop();

postfix[k]='\0';

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

}

}

OUTPUT:

