

Infix to postfix with Exception Handling:

```
#include <stdio.h>

#include<string.h>

#include<math.h>

int F(char symbol)
{
    switch(symbol)
    {
        case'+':
        case'-':return 2;
        case'*':
        case'/':return 4;
        case'^':
        case'$':return 5;
        case'(':return 0;
        case'#':return -1;
        default:return 8;
    }
}

int G(char symbol)
{
    switch(symbol)
    {
        case'+':
        case'-':return 1;
        case'*':
        case'/':return 3;
        case'^':
        case'$':return 6;
        case'(':return 9;
        case')':return 0;
```

```

default: return 7;
}
}
void infix_postfix(char infix[],char postfix[])
{
int top,i,j;
char s[30],symbol;
top=-1;
s[++top]='#';
j=0;

for(i=0;i<strlen(infix);i++)
{
symbol =infix[i];
while(F(s[top])>G(symbol))
{
postfix[j]=s[top--];
j++;

}
if(F(s[top])!= G(symbol))
s[++top]=symbol;

else
top--;
}
while(s[top]!='#')
{
postfix[i]='\0';

}
}

```

```

}
int main()
{
    char ch;

    int count1=0,count2=0,k;

    char infix[20];
    char postfix[20];

    printf("Enter the valid infix parenthesized expression\n");
    scanf("%s",infix);
    int j=strlen(infix);
    for(int k=0;k<j;k++)
    {
        if(infix[k]=='(')
            count1++;

        if (infix[k]==')')
            count2++;
    }

    if(count1==count2){
        infix_postfix(infix,postfix);
        printf("The postfix expression is \n");
        printf("%s\n",postfix);}
    else
        printf("Invalid Expression");

    //int j=strlen(infix)
    return 0;
}

```

Output for valid expression:

```
"C:\Users\hp\Documents\web development\infix_postfix.exe"
Enter the valid infix parenthesized expression
((a+b)*(b-c))/(e-f))
The postfix expression is
ab+bc-*ef-/
Process returned 0 (0x0)   execution time : 41.161 s
Press any key to continue.
```

Output for invalid expression:

```
"C:\Users\hp\Documents\web development\infix_postfix.exe"
Enter the valid infix parenthesized expression
(a+b
Invalid Expression
Process returned 0 (0x0)   execution time : 11.824 s
Press any key to continue.
```