```c
#include<stdio.h>
#include<string.h>
#include<process.h>
int F(char symbol)
{
    switch(symbol)
    {
        case '+':
        case '-': return 2;
        case '*':
        case '/': return 4;
        case '^':
        case 'S': 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 'S': return 6;
        case '(': return 9;
        case ')': return 0;
        default: return 7;
    }
}
```

```c
void infix_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[j++]=s[top--];
  }
  postfix[j]='\0';
}
void main()
{
 char infix[20],postfix[20];
 printf("Enter the valid infix expression:\n");
 scanf("%s",infix);
 infix_postfix(infix,postfix);
 printf("The postfix expression is:\n");
 printf("%s\n",postfix);
}
```

```
Enter the valid infix expression:
((A+B)*C-D)*E
The postfix expression is:
AB+C*D-E*


Process returned 0 (0x0)    execution time : 12.988 s
Press any key to continue.
```