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#include<stdio.h>
#include<string.h>
#include<conio.h>
int F(char symbol)
{
    switch(symbol)
    {
        case '+': return 1;
        case '-': return 2;
        case '*': return 3;
        case '/': return 4;
        case '^': return 5;
        case '$': return 6;
        case '(': return 7;
        case ')': return 8;
        default: return 9;
    }
}

int G(char symbol)
{
    switch(symbol)
    {
        case '+': return 1;
        case '-': return 2;
        case '*': return 3;
        case '/': return 4;
        case '^': return 5;
        case '$': return 6;
        case '(': return 7;
        case ')': return 8;
        default: return 9;
    }
}

void infix_postfix(char infix[], char postfix[])
{
    int top, j, i;
    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--;
    }
}

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

void main()
{
    char infix[20], postfix[20];
    clrscr();
    printf("\nEnter a valid infix expression\n");
    flushall();
    gets(infix);
    infix_postfix(infix,postfix);
    printf("\nThe infix expression is:\n");
    printf ("%s",infix);
    printf("\nThe postfix expression is:\n");
    printf ("%s",postfix);
    getch();
}
```