

Infix to postfix

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```
#include <stdio.h>
#include <conio.h>
#define MAX 50
char stack[MAX];
int top = -1;
void push(char ch)
{
    if (top == MAX-1)
        printf("Stack is full\n");
    else
    {
        top++;
        stack[top] = ch;
    }
}
char pop()
{
    char item;
    if (top == -1)
        printf("Stack is empty\n");
    else
    {
        item = stack[top];
        top--;
        return item;
    }
}
```

```
int stackempty()
```

```
{
```

```
if (top == -1) return
```

```
return 1;
```

```
else return 0;
```

```
}
```

```
char stacktop()
```

```
{
```

```
if (top == -1)
```

```
printf("Stack is empty\n");
```

```
else
```

```
return stack[top];
```

```
int priority(char ch)
```

```
{
```

```
switch (ch)
```

```
{
```

```
case '+':
```

```
case '-': return(1);
```

```
case '*':
```

```
case '/': return(2);
```

```
case ' ':  
default : return(0);
```

```
}
```

```
}
```

```
int main (int argc, char**argv)
```

```
{
```

```
char infix[50];
```

```
int i, item;
```

```
printf("Enter the infix expression: \n");
```

```
scanf("%s", infix);
```

```
printf("Expression : %s\n", infix);
```

```
printf("Postfix: ");
```

```
i = 0;
```

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

```
{
```

```
    switch (infix[i])
```

```
    {
```

```
        case '(': push(infix[i]);
```

```
            break;
```

```
        case ')': while ((item = pop()) != '(')
```

```
            printf("%c", item);
```

```
            break;
```

```
        case '+':
```

```
        case '-':
```

```
        case '*':
```

```
        case '/':
```

```
            while (!stackempty() & & priority(infix[i])
```

```
                <= priority(stacktop()))
```

```
            {
```

```
                item = pop();
```

```
                printf("%c", item);
```

```
            }
```

```
            push(infix[i]);
```

```
            break;
```

```
        default: printf("%c", infix[i]);
```

```
            break;
```

```
    }
```

```
    i++;
```

```
}
```

```
while (!stackempty())  
{  
    char item;  
    item = pop();  
    printf ("%c", item);  
}  
printf ("\n");  
return 0;  
}
```