

```
#include <stdio.h>
```

```
#define MAX 100
```

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

```
    else
```

```
    {
```

```
        item = stack[top];
```

```
        top--;
```

```
        return item;
```

```
    }
```

```
}
```

```
int stackempty()
```

```
{
```

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

```
        return 1;
```

```
else  
    return 0;  
}
```

```
char stacktop()  
{  
    if (top == -1)  
        printf("\n Stack is empty!");  
    else  
        return stack[top];  
}
```

```
int priority(char ch)  
{  
    switch(ch)  
    {  
        case '+':  
        case '-': return (1);  
        case '*':  
        case '/': return (2);  
        default : return (0);  
    }  
}
```

```
int main(int argc, char **argv)  
{  
    char infix[100];  
    int i, item;  
    printf("Enter the infix expression: ");  
    scanf("%s", &infix);  
    printf("Expression: %s", infix);  
    printf("\n In 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;  
}
```