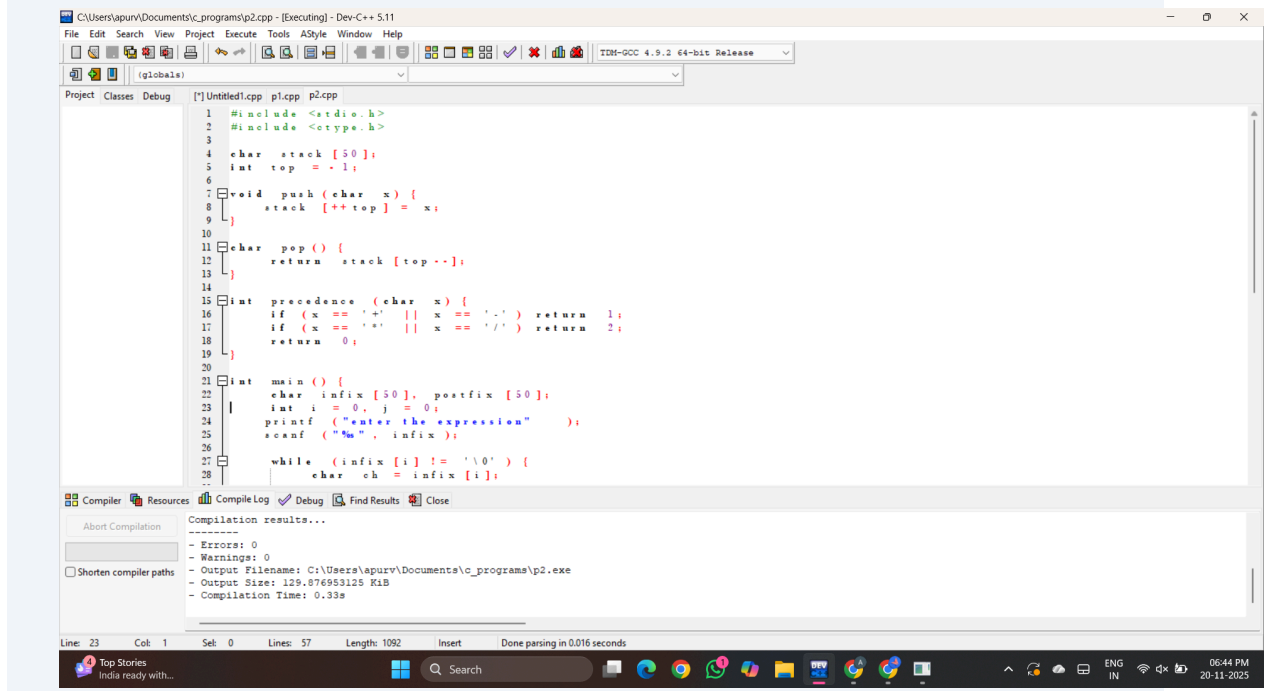


2.

WAP to convert a given valid parenthesized infix arithmetic expression to postfix expression. The expression consists of single character operands and the binary operators + (plus),

- (minus), * (multiply) and / (divide)



The screenshot shows a C++ IDE with a project named 'p2.cpp'. The code implements a stack-based algorithm for converting infix expressions to postfix. It includes a stack, a precedence function, and a main function that reads an infix expression and prints the postfix result.

```
1 #include <stdio.h>
2 #include <ctype.h>
3
4 char stack[50];
5 int top = -1;
6
7 void push(char x) {
8     stack[++top] = x;
9 }
10
11 char pop() {
12     return stack[top--];
13 }
14
15 int precedence(char x) {
16     if (x == '+' || x == '-') return 1;
17     if (x == '*' || x == '/') return 2;
18     return 0;
19 }
20
21 int main() {
22     char infix[50], postfix[50];
23     int i = 0, j = 0;
24     printf("Enter the expression: ");
25     scanf("%s", infix);
26
27     while (infix[i] != '\0') {
28         char ch = infix[i];
```

Compilation results...

- Errors: 0
- Warnings: 0
- Output Filename: C:\Users\apurv\Documents\c_programs\p2.exe
- Output Size: 129,876,953,125 KiB
- Compilation Time: 0.33s

Line: 23 Col: 1 Sel: 0 Lines: 57 Length: 1092 Insert Done parsing in 0.016 seconds

C:\Users\apurv\Documents\c_programs\p2.cpp - [Executing] - Dev-C++ 5.11

File Edit Search View Project Execute Tools AStyle Window Help

Project Classes Debug

Project: Untitled1.cpp p1.cpp p2.cpp

```
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```

```
if (isalnum (ch)) {
    postfix [j++] = ch;
} else if (ch == '(') {
    push (ch);
} else if (ch == ')') {
    while (stack [top] != '(')
        postfix [j++] = pop ();
    pop ();
} else {
    while (top != -1 && precedence (stack [top]) >= precedence (ch))
        postfix [j++] = pop ();
    push (ch);
} i++;

while (top != -1)
    postfix [j++] = pop ();

postfix [j] = '\0';
printf ("%s", postfix);

return 0;
```

Compiler Resources Compile Log Debug Find Results Close

About Compilation

Shorten compiler paths

Compilation results...

- Errors: 0
- Warnings: 0
- Output Filename: C:\Users\apurv\Documents\c_programs\p2.exe
- Output Size: 129,876,953,125 KiB
- Compilation Time: 0.33s

Line: 23 Col: 1 Sek: 0 Lines: 57 Length: 1092 Insert Done parsing in 0.016 seconds

C:\Users\apurv\Documents\c_programs\p2.exe

enter the expressionA+B-C/D*E

AB+CD/E+

Process exited after 57.64 seconds with return value 0

Press any key to continue . . .