

Program Infix To Postfix

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#include <iostream>
using namespace std;
int priority(char c);
char infix[20], stack[20];
int i=0, j=0;
int main()
{
    int p1;
    cout<<"Enter infix expression:";
    cin>>infix;
    cout<<"output expression is:";

    do
    {
        p1=priority(infix[i]);
        if(p1==6)
            cout<<infix[i];
        else
        {
            if(j==0)
            {
                stack[j]=infix[i];
                j++;
            }
            else
                if(p1==4)
            {
                stack[j]=infix[i];
                j++;
            }
            else
                if(p1==5)
                {
                    do
                    {
                        cout<<stack[j-1]<< " ";
                        j--;
                    }
                    while(stack[j-1]!='(');
                    j--;
                }
                else
                    if(p1>priority(stack[j-1])||stack[j-1]=='(')
                    {
                        stack[j]=infix[i];
                        j++;
                    }
                else
                    if(p1<=priority(stack[j-1]))
                    {
                        while(p1<=priority(stack[j-1])&&stack[j-1]!='(' && j!=0)
                        {
                            cout<<stack[j-1]<< " ";
                            j--;
                        }
                    }
                }
        }
    }
    while(infix[i]!='\0');
    cout<<endl;
}
```

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        stack[j]=infix[i];
        j++;
    }
    i++;
}
while(infix[i]!=NULL);
for(i=j-1;i>=0;i--)
    cout<<stack[i]<< " ";
    return 0;
}

int priority(char c)
{
    int p;
    if(c=='+' || c=='-')
        p=1;
    else
        if(c=='*' || c=='/')
            p=2;
        else
            if(c=='(')
                p=4;
            else
                if(c==')')
                    p=5;
                else
                    p=6;
            return(p);
}

```

Output:

Enter infix expression:(a+b)*c
 output expression is:ab+ c*

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