

Aim:

Write a C program to convert a Postfix expression to Infix expression.

Source Code:

postfixToInfix.c

```
#include<stdio.h>
#include<conio.h>
#include<string.h>
#include<stdlib.h>
# define MAX 20
char str[MAX],stack[MAX];
int top=-1;
void push(char c)
{
    stack[++top]=c;
}
char pop()
{
    return stack[top--];
}
char *strrev(char *str)
{
    char c,*front,*back;
    if(!str ||!*str)
        return str;
    for(front=str,back=str+strlen(str)-1;front<back;front++,back--)
    {
        c=*front;*front=*back;*back=c;
    }
    return str;
}
void postfix()
{
    int n,i,j=0;
    char a,b,op,x[20];
    printf("Enter a Postfix expression:");
    fflush(stdin);
    scanf("%s",str);
    strrev(str);
    n=strlen(str);
    for(i=0;i<MAX;i++)
    {
        stack[i]='\0';
    }
    printf("Infix expression:");
    for(i=0;i<n;i++)
    {
        if(str[i]=='+' || str[i]=='-' || str[i]=='*' || str[i]=='/')
        {
            push(str[i]);
        }
    }
}
```

```

        else
        {
            x[j]=str[i];j++;
            x[j]=pop();j++;
        }
    }
    x[j]=str[top--];
    strrev(x);
    printf("%s\n",x);
}
void main()
{
    postfix();
}

```

Execution Results - All test cases have succeeded!

Test Case - 1
User Output
Enter a Postfix expression: AB+
Infix expression:A+B

Test Case - 2
User Output
Enter a Postfix expression: ABC*+D+
Infix expression:A+B*C+D