S.No: 40	Exp. Name: ***Postfix to Infix Conversion***	Date:2023-07-02

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]);
                    }
```


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```
                    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

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