Aim:

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

Source Code:

postfixToInfix.c

```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