

Q: Convert infix to postfix expression.

Input: -

```
#include<stdio.h>

#include<math.h>
char infix[20],postfix[20],stack[20],symbol,temp;
int top=-1,pos=0,index=0,length;
void push(char symbol){
    top++;
    stack[top]=symbol;
}
char pop(){
    char temp=stack[top--];
    return temp;
}
int pred(char symbol){
    int p;
    switch(symbol){
        case('^'):
            p=2;
            break;
        case('*'):
        case('/'):
            p=1;
            break;
        case('+'):
        case('-'):
            p=0;
            break;
        case('('):
            p=-1;
            break;
        case('#'):
            p=-2;
            break;
    }
    return p;
}
```

```

}
void infix_postfix()
{
length=strlen(infix);
push('#');
while(index<length){
symbol=infix[index];
switch(symbol){
case('('):
push(symbol);
break;
case(')'):
temp=pop();
while(temp!='('){
postfix[pos++]=temp;
temp=pop();
}
break;
case('+'):
case('-'):
case('*'):
case('/'):
case('^'):
while(pred(stack[top])>pred(symbol)){
temp=pop();
postfix[pos++]=temp;
}
push(symbol);
break;
default:
postfix[pos++]=symbol;
break;
}
index++;
}
while(top>0){
temp=pop();
postfix[pos++]=temp;
}
}

int main(){
printf("enter the infix expression\n");
scanf("%s",infix);

```

```
infix_postfix();  
printf("the infix expression is: %s\n",infix);  
printf("the postfix expression is: %s\n",postfix);  
return 0;  
}
```

Output: -

```
enter the infix expression  
< (a+b)*c(e^f)  
< the infix expression is: (a+b)*c(e^f)  
the postfix expression is: ab+cef^*
```

...Program finished with exit code 0
Press ENTER to exit console. █

```
enter the infix expression  
< (a*b/c)*(e^f)-(j+k)  
< the infix expression is: (a*b/c)*(e^f)-(j+k)  
the postfix expression is: abc/*ef^*jk+-
```

...Program finished with exit code 0
Press ENTER to exit console. █