LAB WEEK 3 PROGRAM
MOHAMMED ABDUL HAMID(1BM19CS202)

```c
#include<stdio.h>
#include<ctype.h>
#define SIZE 50
char stack[SIZE];
int top=-1;
push(char elem){
    stack[++top]=elem;
}

char pop(){
    return(stack[top--]);
}

int pr(char symbol){
    if(symbol =='^'){
        return(3);
    }
    else if (symbol=='*'|| symbol=='/'){
        return(2);
    }
    else if(symbol=='+'|| symbol=='-'){
        return(1);
    }
    else{
        return(0);
    }
}

void main()
{
    char infix[50],postfix[50],ch,elem;
    int i=0,k=0;
    printf("Enter the INFIX expression\n");
    scanf("%s",infix);
    push('#');
     while((ch=infix[i++]) != '\0')
     {
        if(ch=='(') push(ch);
        else
          if(isalnum(ch)) postfix[k++]=ch;
          else
          if (ch==')')
          {

             while(stack[top] != '(')
              postfix[k++]=pop();
              elem=pop();
          }
          else
          {
             while(pr(stack[top])>=pr(ch))
             postfix[k++]=pop();
             push(ch);
```
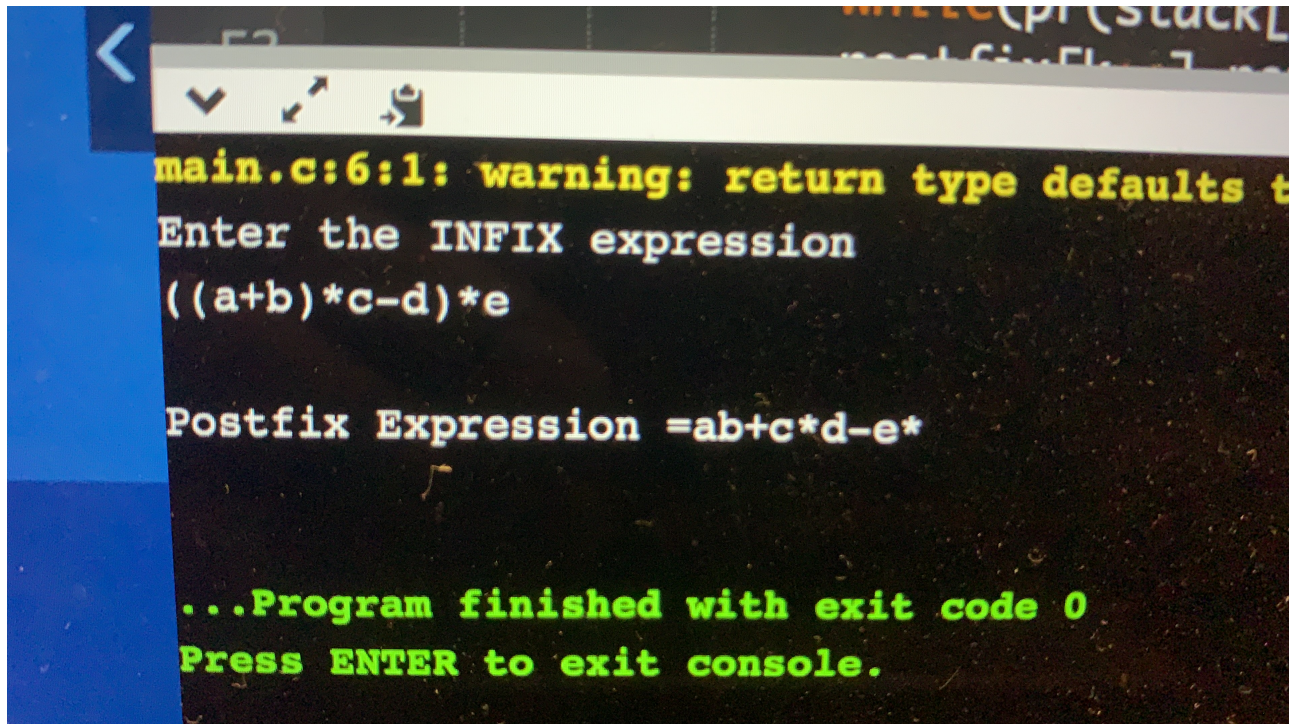
```
        }
    }
    while (stack[top]!='#')
    postfix[k++]=pop();
    postfix[k]='\0';
    printf("\nPostfix Expression =%s\n",postfix);
}
```