

LAB WEEK 3 PROGRAM

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

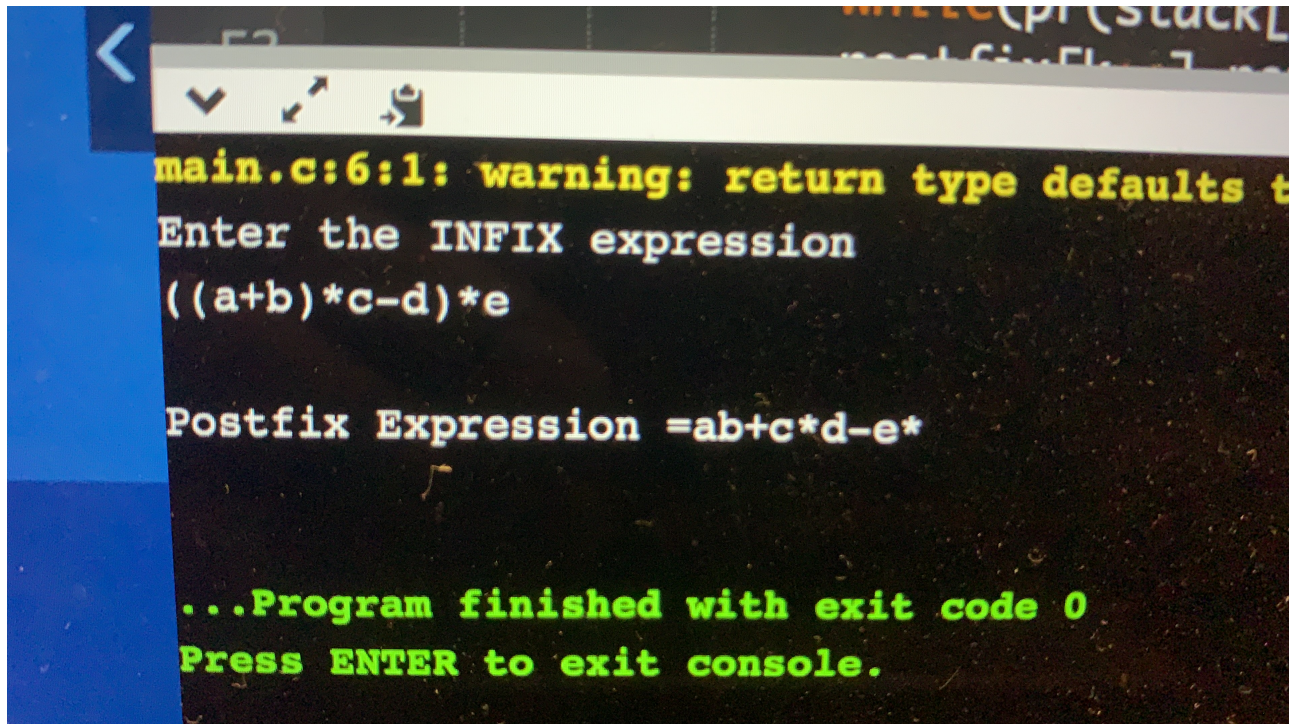
char pop(){
    return(stack[top--]);
}

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);  
}
```



```
< 52  
main.c:6:1: warning: return type defaults to int  
Enter the INFIX expression  
((a+b)*c-d)*e  
  
Postfix Expression =ab+c*d-e*  
  
...Program finished with exit code 0  
Press ENTER to exit console.
```