

#POSTFIX CALCULATION PROGRAM [postfix.py]

```

stk=[]
pre={'(':0, '+':1, '-':1, '*':2, '/':2, ')':20, '=':-1}

def postfix(s):
    post=[]
    strpost=""
    stk.append('(')
    for i in s:
        if i=='(':
            stk.append(i)
        elif i=='+' or i=='-' or i=='*' or i=='/' or i==')':
            if pre[stk[-1]]>=pre[i]:
                while pre[stk[-1]]>=pre[i]:
                    post.append(stk.pop())
                stk.append(i)
            elif i==')':
                while(stk[-1]!='('):
                    post.append(stk.pop())
                stk.pop()
            else:
                stk.append(i)
        else:
            post.append(i)
    while(len(stk)!=1):
        post.append(stk.pop())
    for i in post:
        strpost+=i
    return strpost

```

===== #INTERMEDIATE CODE PROGRAM (intermediate.py)

```

import postfix as postfix

exp=input("Enter the Expression:")
post=postfix.postfix(exp)
code=[]
stk=[]
t=0
for i in post:
    if i.islower():
        stk.append(i)
    elif i=='+' or i=='-' or i=='*' or i=='/':
        b=stk.pop()
        a=stk.pop()
        code.append('t'+str(t)+'='+a+i+b)
        stk.append('t'+str(t))
        t+=1

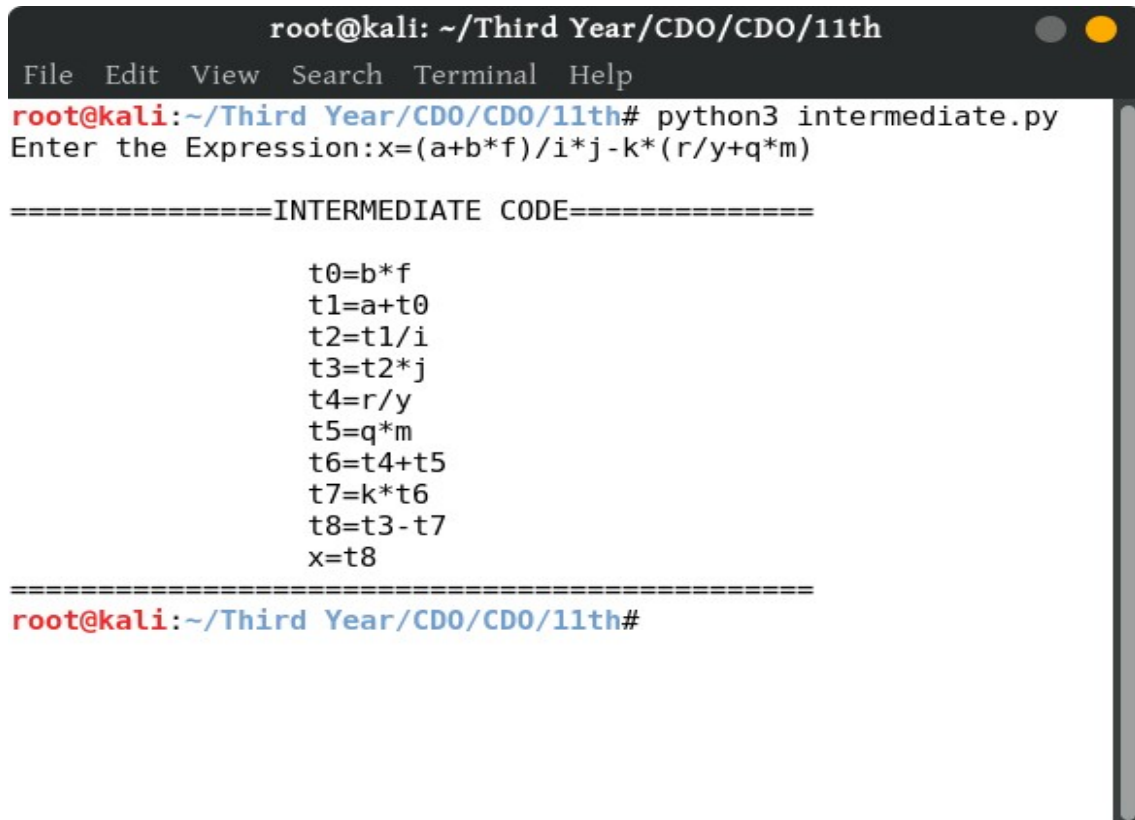
```

```
b=stk.pop()
a=stk.pop()

code.append(a+"="+b)
print("\n=====INTERMEDIATE CODE=====\\n")
for i in code:
    print("\\t\\t',i)
print("=====")
```

=====

OUTPUT:



```
root@kali: ~/Third Year/CDO/CDO/11th
File Edit View Search Terminal Help
root@kali:~/Third Year/CDO/CDO/11th# python3 intermediate.py
Enter the Expression:x=(a+b*f)/i*j-k*(r/y+q*m)

=====INTERMEDIATE CODE=====

                t0=b*f
                t1=a+t0
                t2=t1/i
                t3=t2*j
                t4=r/y
                t5=q*m
                t6=t4+t5
                t7=k*t6
                t8=t3-t7
                x=t8

=====
root@kali:~/Third Year/CDO/CDO/11th#
```