#include<stdio.h>

#include<conio.h>

#define n 50

char stack[n];

int top=-1,j=0;

char postfix[50];

void push(char);

char pop();

int priority(char);

void main()

{

int i;

char element,ch;

printf("Expression :");

char infix[50]="((x+y)\*(z/k)-j)";

printf("\nSymbol\tStack content\tpostfix expression");

for(i=0;infix[i]!=NULL;i++)

{

ch=infix[i];

if(ch>='a' && ch<='z')

{

postfix[j]=ch;

j++;

}

else if(ch=='(')

{

push(ch);

}

else if(ch==')')

{

while((element=pop())!='(')

{

postfix[j]=element;

j++;

}

}

else

{

while(priority(ch)<=priority(stack[top]))

{

if(stack[top]=='(')

break;

element=pop();

postfix[j]=element;

j++;

}

push(ch);

}

postfix[j]=NULL;

printf("\n%c\t%s\t\t%s",ch,stack,postfix);

getch();

}

while((element=pop())!='(')

{

postfix[j]=element;

j++;

}

getch();

}

void push(char ch)

{

if(top>=n-1)

{

printf("overflow");

}

else

{

top=top+1;

stack[top]=ch;

}

}

char pop()

{

char item;

if(top==-1)

{

printf("stack is underflow");

exit(0);

}

else

{

top=top-1;

item=stack[top+1];

stack[top+1]=NULL;

}

return item;

}

int priority(char ch)

{

char operand[6]={'+','-','\*','/','(','\0'};

int prio[5]={1,1,2,2,3};

int i,a;

for(i=0;i<5;i++)

{

if(ch==operand[i])

{

a=prio[i];

break;

}

}

return a;

}

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output:

Enter infix expression

Expression :

Symbol Stack content postfix expression

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( ((

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+ ((+ x

y ((+ xy

) ( xy+

\* (\* xy+

( (\*( xy+

z (\*( xy+z

/ (\*(/ xy+z

k (\*(/ xy+zk

) (\* xy+zk/

- (- xy+zk/\*

j (- xy+zk/\*j

) xy+zk/\*j-

stack is underflow