5.4. Implement Evaluation of postfix Expression

#include<iostream> #include<ctype.h> #include<string.h> #include<conio.h>

using namespace std; class node

{

public:

int data; node \*next;

};

class stack

{

node \*top; public:

stack()

{

top=NULL;

}

void push(int x)

{

node \*p = new node(); p->data = x;

p->next = NULL; if(top==NULL)

{

top = p;

}

else

{

node \*save = top; top = p;

p->next= save;

} }

int pop()

{

if(top==NULL)

{

cout<<"\n UNDERFLOW";

}

else

{

node \*ptr = top; top = top->next; return(ptr->data); delete ptr;

} }

};

int main()

{

char x[30]; int a,b; stack s;

cout<<"ENTER THE BALANCED EXPRESSION: ";

cin>>x;

for(int i= 0; i< strlen(x); i++)

{

if(x[i]=='\n'|| x[i]=='\t')

{

continue;

}

if(isdigit(x[i])) s.push(x[i]-'0'); else

{

a= s.pop();

b= s.pop();

switch(x[i])

{

case'+':

s.push(a+b); break;

case'-':

s.push(a-b); break; case'\*':

s.push(a\*b); break; case'/':

s.push(a/b); break;

} } }

cout<<"\n ANSWER IS: "<<s.pop() <<endl; return 0;

}