#include <iostream>

#include <string>

#include <stack>

#include<fstream>

using namespace std;

int main ()

{

FILE \*fp;

char c;

fstream file;

string str\_txt;

int i,cnt=0,cnt1=0,cnt2=0,ss[100];

int j=0;

string str;

string ans[100];

stack<char>s;

char file\_path[100];

cout<<"Please enter the file path：";

cin>>file\_path;

string a[35]={"auto","break","case","char","const","continue","default","do","double","else","enum","extern","float","for","goto","if","int","long","register","return","short","signed","sizeof","static","struct","switch","typedef","union","unsigned","void","volatile","while"};

fp = fopen(file\_path,"r");

while((c = fgetc(fp))!=EOF){

if((c>='a'&&c<='z')||(c>='A'&&c<='Z')){

str+=c;

}

else{

if(str!=""){

for(i=0;i<35;i++){

if(str==a[i]){

cnt++;

if(i==25){

cnt1++;

if(s.empty()){

s.push('s');

}

}

if(i==2&&s.top()=='{'){

cnt2++;

}

}

}

str="";

}

else{

if((c=='{')&&(!s.empty())){

s.push(c);

}

if((c=='}')&&(!s.empty())){

s.pop();

s.pop();

ss[j++]=cnt2;

cnt2=0;

}

}

}

}

cout<<"total num: "<<cnt<<endl;

cout<<"switch num: "<<cnt1<<endl;

cout<<"case num: ";

for(i=0;i<j;i++){

cout<<ss[i]<<" ";

}

cout<<endl;

file.open (file\_path);

string temp;

while ( file.good() )

{

getline(file,temp);

str\_txt = str\_txt + temp + '\n';

}

int x[100] = {0};

int head = 0,ebp = 0;

int if\_else = 0,if\_elseif\_else = 0;

size\_t if\_position = str\_txt.find(a[15]);

if ( if\_position != str\_txt.npos )

{

x[ebp] = 1;

ebp ++;

for ( int i = if\_position+1; i < str\_txt.length(); i++ )

{

if ( str\_txt.compare(i,7,"else if") == 0)

{

x[ebp] = 2;

ebp ++;

i += 7;

}

else if ( str\_txt.compare(i,2,"if") == 0 )

{

x[ebp] = 1;

ebp ++;

i += 2;

}

else if ( str\_txt.compare(i,4,"else") == 0)

{

int j = ebp-1;

if ( x[j] != 1 && x[j] == 2 )

{

while ( x[j] != 1 )

{

j--;

}

int ebp\_1 = j;

for ( j; j<ebp; j++)

{

x[j] = 0;

}

ebp = ebp\_1;

if\_elseif\_else ++;

}

else if ( x[j] == 1 )

{

if\_else ++;

x[j] = 0;

ebp = j;

}

i += 4;

}

}

}

cout << "if-else num: " << if\_else << endl;

cout << "if-elseif-else num: " << if\_elseif\_else << endl;

}