#include <iostream>  
#include <stdio.h>  
  
using namespace std;  
const int len = 25;  
class person {  
    char name[len];  
    int age;  
  
public:  
    void readperson(void);  
    void displayperson(void)  
    using std::cout;zzz  
    {  
        cout << "Name : ";  
        cout.write(name, len);  
        cout << "\t Age:" << age << "\n";  
    }  
};  
  
void person::readperson(void)  
{  
    for (int i = 0; i < len; i++)  
        name[i] = ' ';  
    cout << "Enter name of the person:";  
    gets(name);  
    cout << "Enter age:";  
    cin >> age;  
}  
  
class studet : public person {  
    int rollno;  
    float average;  
  
public:  
    void readstudent(void)  
    {  
        readperson();  
        cout << "Enter roll no. : ";  
        cin >> rollno;  
        cout << "Enter average marks : ";  
        cin >> average;  
    }  
  
    void disp\_rollno(void)  
    {  
        cout << "Roll no : " << rollno << "\n";  
    }  
    float getaverage(void)  
    {  
        return average;  
    }  
};  
class gradstudent : public student {  
    char subject[len];  
    char working;  
  
public:  
    void readit(void);  
    void displaysubject(void)  
    {  
        cout << "Subject : ";  
        cout.write(subject, len);  
    }  
    char workstatus(void)  
    {  
        return working;  
    }  
};  
void gradstudent::readit(void)  
{  
    readstudent();  
    for (int i = 0; i < len; i++)  
        subject[i] = ' ';  
    cout << "Enter main subject : ";  
    gets(subject);  
    cout << "Working?(y/n) : ";  
    cin >> working;  
}  
void main()  
{  
    clrscr();  
    const int size = 5;  
    gradstudent grad[size];  
    int year, num\_working = 0, non\_working = 0, div1 = 0, total = 0;  
    float topscore = 0, score, number, wperc, nwperc;  
    cout << "Enter year :";  
    cin >> year;  
  
    char ch = ' ';  
    int i;  
    for (i = 0; i < 10; i++) {  
        cout << "Enter details for graduate " << (i + 1) << " (maximum 10)\n";  
        grad[i].readit();  
        total++;  
        if (grad[i].workstatus() == 'y' || (grad[i].workstatus() == 'Y'))  
            num\_working++;  
        else  
            non\_working++;  
        score = grad[i].getaverage();  
        if (score > topscore) {  
            topscore = score;  
            number = i;  
        }  
        if (score >= 60.0)  
            div1++;  
        cout << "Press y to see report and n to continue";  
        cin >> ch;  
        if (ch == 'y' || ch == 'Y')  
            break;  
    }  
    i = number;  
    cout << "\n"  
         << "\t\t\t\tReport of the year " << year << "\n";  
    cout << "\t\t\t\t-----------------------\n";  
    cout << "Working graduates : " << num\_working << "\n";  
    cout << "Non working graduates : " << non\_working << "\n";  
    cout << "Details of topper \n";  
    grad[i].displayperson();  
    grad[i].displaysubject();  
    nwperc = ((float)non\_working / (float)total) \* 100;  
    wperc = ((float)div1 / (float)total) \* 100;  
    cout << "Average marks : " << grad[i].getaverage() << "\n";  
    cout << nwperc << "% of the graduates this year are non working and " << wperc << "% are first divisioners\n";  
    getch();  
}