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//OOP Lab 02 Database

#include<iostream>
#include<string.h>
#include<iomanip>

//manipulator

using namespace std;

class database
{
private:
string name, dob, blood, address, drive, branch, year, mobile, roll,
division;

public:

//static variable
static int student_no;

//static function
static void count_student(){
    cout<<"\nNumber of student filled data: "<<student_no;
}

// friend class
friend class display;

// in-line function
void fin(){cout<<"\nInline Function!";}

//default constructor
database(){
    name = "Name";
    dob = "dd/mm/yyyy";
    blood = "blood";
    address = "City";
    drive = "Licinse";
    branch = "Branch";
    year = "year";
    mobile = "Mobile";
    roll = "Roll";
    division = "Div";
    ++student_no;
}

//constructor
database(database *student){
    this->name = name;
    this->dob = dob;
    this->blood = blood;
    this->address = address;
    this->drive = drive;

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        this->branch = branch;
        this->year = year;
        this->mobile = mobile;
        this->roll = roll;
        this->division = division;
        ++student_no;
    }

//void get-input function
void getInput() {
    cout<<"\n\nEnter your name: ";
    cin>>name;
    cout<<"Enter your year of study: ";
    cin>>year;
    cout<<"Enter your branch: ";
    cin>>branch;
    cout<<"Enter your class division: ";
    cin>>division;
    cout<<"Enter your roll number: ";
    cin>>roll;
    cout<<"Enter Date of Birth: ";
    cin>>dob;
    cout<<"Enter blood group: ";
    cin>>blood;
    cout<<"Enter you mobile number: ";
    cin>>mobile;
    cout<<"Enter address: ";
    cin>>address;
    cout<<"Enter driving license number: ";
    cin>>drive;
}

//friend function

//destructor
~database() {
    cout<<"\n"<<this->name<<"\tStudent data was deleted!";
}

};

class display{
public:
    void show(database &data ) {
        cout<<"\n"<<setw(20)<<data.name<<setw(20)<<data.dob<<setw(10)<<data.blood<<se
        tw(10)<<data.address<<setw(12)<<data.drive<<setw(10)<<data.branch<<setw(5)<<d
        ata.year<<setw(12)<<data.mobile<<setw(5)<<data.roll<<setw(10)<<data.division;
    }
};

//initialized static variable
int database::student_no;

int main()
{
    int n,i;
    database data1,*ptr[5];
    cout<<"\nDefault values: ";
    display d;

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d.show(data1);

data1.getInput();//parametrized constructor
cout<<"\nUse of parametrized constructor:\n";
display d1;
d1.show(data1);

database data2 = data1; //copy object
cout<<"\n\nUse of copy constructor:\n";
display d2;
d2.show(data2);

cout<<"\n\nHow many students you want to add?: ";
cin>>n;
for(i=0;i<n;i++)
{
    ptr[i] = new database();
    ptr[i]->getInput();
}

cout<<"\n"<<setw(20)<<"Name"<<setw(12)<<"DOB"<<setw(10)<<"Blood"<<setw(10)<<"
Address"<<setw(12)<<"License"<<setw(10)<<"Branch"<<setw(5)<<"Year"<<setw(12)<
<"Mobile"<<setw(5)<<"Roll"<<setw(10)<<"Division";

for(i=0;i<n;i++)
display(*ptr[i]);
database::count_student();

for(i=0;i<n;i++)
{
    delete(ptr[i]);
}
//cout<<"\n\nNumber of data entry is/are: "<<database::student_no;
cout<<"\nData deleted!";
return 0;
}

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