#include <iostream>

#include <fstream>

#include <vector>

#include <string>

#include <ctime>

class LichTiemPhong {

private:

std::string MaChuNuoi;

std::string ThongTinThuCung;

std::string NgayTiem;

std::string LoaiVacXin;

std::string GhiChu;

public:

LichTiemPhong() {}

LichTiemPhong(std::string maChuNuoi, std::string thongTinThuCung, std::string ngayTiem, std::string loaiVacXin, std::string ghiChu)

: MaChuNuoi(maChuNuoi), ThongTinThuCung(thongTinThuCung), NgayTiem(ngayTiem), LoaiVacXin(loaiVacXin), GhiChu(ghiChu) {}

void hienThiThongTin() const {

std::cout << "Ma Chu Nuoi: " << MaChuNuoi

<< "\nThong Tin Thu Cung: " << ThongTinThuCung

<< "\nNgay Tiem: " << NgayTiem

<< "\nLoai Vac Xin: " << LoaiVacXin

<< "\nGhi Chu: " << GhiChu

<< "\n-------------------------\n";

}

std::string getMaChuNuoi() const { return MaChuNuoi; }

std::string getNgayTiem() const { return NgayTiem; }

void capNhatThongTin();

void ghiVaoFile(std::ofstream &file) const;

};

void LichTiemPhong::ghiVaoFile(std::ofstream &file) const {

file << MaChuNuoi << "\n" << ThongTinThuCung << "\n" << NgayTiem << "\n"

<< LoaiVacXin << "\n" << GhiChu << "\n";

}

void docDuLieuTuFile(std::vector<LichTiemPhong> &danhSachLichTiem, const std::string &tenFile) {

std::ifstream file(tenFile.c\_str());

if (file.is\_open()) {

std::string MaChuNuoi, ThongTinThuCung, NgayTiem, LoaiVacXin, GhiChu;

while (std::getline(file, MaChuNuoi) && std::getline(file, ThongTinThuCung) &&

std::getline(file, NgayTiem) && std::getline(file, LoaiVacXin) &&

std::getline(file, GhiChu)) {

danhSachLichTiem.push\_back(LichTiemPhong(MaChuNuoi, ThongTinThuCung, NgayTiem, LoaiVacXin, GhiChu));

}

file.close();

}

}

void themLichTiem(std::vector<LichTiemPhong> &danhSachLichTiem) {

std::string maChuNuoi, thongTinThuCung, ngayTiem, loaiVacXin, ghiChu;

std::cout << "Nhap ma chu nuoi: ";

std::cin >> maChuNuoi;

std::cin.ignore();

std::cout << "Nhap thong tin thu cung: ";

std::getline(std::cin, thongTinThuCung);

std::cout << "Nhap ngay tiem (yyyy-mm-dd): ";

std::getline(std::cin, ngayTiem);

std::cout << "Nhap loai vac xin: ";

std::getline(std::cin, loaiVacXin);

std::cout << "Nhap ghi chu: ";

std::getline(std::cin, ghiChu);

danhSachLichTiem.push\_back(LichTiemPhong(maChuNuoi, thongTinThuCung, ngayTiem, loaiVacXin, ghiChu));

}

void hienThiDanhSach(const std::vector<LichTiemPhong> &danhSachLichTiem) {

std::cout << "\n--- Danh sach lich tiem ---\n";

for (size\_t i = 0; i < danhSachLichTiem.size(); i++) {

danhSachLichTiem[i].hienThiThongTin();

}

}

void timKiemLichTiem(const std::vector<LichTiemPhong> &danhSachLichTiem) {

std::string maChuNuoi;

std::cout << "Nhap ma chu nuoi can tim: ";

std::cin >> maChuNuoi;

std::cin.ignore();

for (size\_t i = 0; i < danhSachLichTiem.size(); i++) {

if (danhSachLichTiem[i].getMaChuNuoi() == maChuNuoi) {

danhSachLichTiem[i].hienThiThongTin();

}

}

}

void nhacNhoLichTiem(const std::vector<LichTiemPhong> &danhSachLichTiem) {

std::string ngayHienTai;

std::cout << "Nhap ngay hien tai (yyyy-mm-dd): ";

std::cin >> ngayHienTai;

std::cout << "\n--- Lich tiem sap den ---\n";

bool found = false;

for (size\_t i = 0; i < danhSachLichTiem.size(); i++) {

if (danhSachLichTiem[i].getNgayTiem() >= ngayHienTai) {

danhSachLichTiem[i].hienThiThongTin();

found = true;

}

}

if (!found) {

std::cout << "Khong co lich tiem nao sap den!\n";

}

}

int main() {

std::vector<LichTiemPhong> danhSachLichTiem;

std::string tenFile = "lich\_tiem.txt";

docDuLieuTuFile(danhSachLichTiem, tenFile);

int luaChon;

do {

std::cout << "\n------ QUAN LY LICH TIEM PHONG ------\n";

std::cout << "1. Them lich tiem moi\n";

std::cout << "2. Hien thi danh sach lich tiem\n";

std::cout << "3. Tim kiem lich tiem theo ma chu nuoi\n";

std::cout << "4. Nhac nho lich tiem sap den\n";

std::cout << "5. Thoat\n";

std::cout << "Chon chuc nang: ";

std::cin >> luaChon;

std::cin.ignore();

switch (luaChon) {

case 1:

themLichTiem(danhSachLichTiem);

break;

case 2:

hienThiDanhSach(danhSachLichTiem);

break;

case 3:

timKiemLichTiem(danhSachLichTiem);

break;

case 4:

nhacNhoLichTiem(danhSachLichTiem);

break;

case 5:

std::cout << "Thoat chuong trinh.\n";

break;

default:

std::cout << "Lua chon khong hop le, vui long nhap lai!\n";

}

} while (luaChon != 5);

return 0;

}