

Skeleton file

```
#include <iostream>
#include <string>
#include <list>
using namespace std;

// namespace std {
// template <typename T> class list {
//     /**
//      * Appends the given element value to the end of the container.
//      */
//     void push_back(T&& value);
//
//     /**
//      * Returns a reference to the last element in the container.
//      */
//     T& back();
// };
// } // namespace std

int now() { return 0; }
class Client;
class Agent;
class Property;
class Appointment;
class DB {
    list<Appointment> db;
    list<Agent> agents;
    list<Property> properties;
    list<Client> clients;

public:
    Appointment& makeAppointment(Agent& a, Property& p, Client& v, int time);
    bool clientIsAvailable(Client& p, int time);
    bool agentIsAvailable(Agent& p, int time);
    bool propertyIsAvailable(Property& p, int time);

    Property& getProperty(int latitude, int longitude);
    Agent& getAgent(int phoneNumber, string name);
    Client& getClient(int phoneNumber);
};

////////// Do not change anything above this line! //////////

// Your code goes here

////////// Do not change anything below this line! //////////

int main(int /*argc*/, char* /*argv*/[]) {
    DB db;
    auto p1 = db.getProperty(0, 0);
    auto a1 = db.getAgent(12345, "Jules");
    auto c1 = db.getClient(54321);
    auto app = db.makeAppointment(a1, p1, c1, now() + 8);
    auto newAppointment = app.cancel();
    std::cout << newAppointment.time << std::endl;
    return 0;
}
```