# STL Exercise

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National healthcare system wants to provide doctors with an application to manage their patients and their prescriptions.

Each medicine has a compatibility range defined. Each time a patient is prescribed with a new medicine, the application checks its compatibility with the medicines that patient already takes, which means that it checks of their compatibility ranges have some overlap (e.g., (1,3) has overlap with (2,4)).

Thus, the patient class keeps a history of taken medicines in a multimap that map dates to medicines and also provides a method declared as:

`void patient::add(medicine m)`

to do the following:

1. add new medicines, and remove all the old medicines which are not compatible with the new one, from the history of the patient.

2. add the new medicine to the prescriptions of the patient.

3. remove all the prescriptions whose proposed period of use is over.

4. removes all the expired prescriptions.

The class patient also has a method

`std::list<medicine> active_prescriptions(void)`

that returns all the prescriptions of a patient.

Class medicine has two boolean methods:

`bool medicine::medicine_expiry()`

that checks the compatibility of this and m;

`bool medicine::medicine_expiry()`

to control the termination date of the Prescription.