A Requirements Document for a Course Management System

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We present below a sample requirements document and a refinement strategy that refers to the informal requirements.

1 Requirements Document

A club has some fixed *members*, amongst them are *instructors* and *participants*. Note that a member can be both an instructor and a participant.

ASM 1 Instructors are members of the club.

ASM 2 Participants are members of the club.

There are pre-defined *courses* that can be offered by a club. Each course is associated with exactly one fixed instructor.

ASM 3 There are pre-defined courses.

ASM 4 Each course is assigned to one fixed instructor.

A course is either *opened* or *closed* and is managed by the system.

REQ 5 A course is either *opened* or *closed*.

REQ 6 The system allows to open a closed course.

REQ 7 The system allows to close an opened course.

The number of opened courses is limited.

REQ 8 The number of opened courses cannot exceed a given limit.

Only when a course is opened, participants can *register* for the course. An important constraint for registration is that an instructor cannot attend his own courses.

REQ 9 Participants can only register for an opened course.

REQ 10 Instructors cannot attend their own courses.

2 A Refinement Strategy

Typically, before attempting to model a system, it is important to sketch a plan of how the requirements are going to be addressed. These plans are called *refinement strategies*. For our running example, we adopt the following strategy.

Initial Model To model how courses are opened and closed by the system, limiting the number of opened courses (ASM 3, REQ 5, REQ 6, REQ 7, and REQ 8).

First Refinement To model the club members, including instructors and participants, along with registration for courses (ASM 1, ASM 2, ASM 4, REQ 9, and REQ 10).

Second Refinement To data refine the model from the first refinement.