

You are asked to write a simple expert system in Prolog for scheduling of classes. In your expert system, you will have rooms, courses and people.

- A room has an ID, capacity (how many people it can hold), and operations hours given in one-hour increments from 8am till 5pm. Occupancy information for a room includes the hour and the name of the course taking that hour. A room can also have special equipment such as a projector, a smart board and access for the handicapped.
- A course has an ID, an instructor, capacity, and one or more hours and the room information if they are assigned to a room. A course can have several students enrolled in it. A course can also have special needs such as a projector or a smart board. Of course, if there is a special needs student enrolled, it should be assigned to a room with proper access for the special needs.
- An instructor has an ID and several courses taught. The instructor may have preferences for rooms with a projector or smartboard.
- A student has an ID, and list of courses she/he attends. A student can also be handicapped.

Your expert system should be able to add a new student, course or a room to the system. It should respond to queries such as:

- Check whether there is any scheduling conflict.
- Check which room can be assigned to a given class.
- Check which room can be assigned to which classes.
- Check whether a student can be enrolled to a given class.
- Check which classes a student can be assigned.