**Homework 3 - Task 1**

**Requirement 1: Functional Requirements**  
  
The room booking service shall provide an overview of all available rooms in the selected university building. The user shall enter a date and time of their interest. The overview shall mark the rooms that are occupied during the selected time.

Details needed: How should the overview be presented? How should the date and time input be handled? How should the occupied rooms be marked?

Enhanced version: The room booking service shall provide an overview of all available rooms in the selected university building. The user shall enter a date and time of their interest using a date picker and time selector. The overview shall mark the rooms that are occupied during the selected time by a colour (red). The overview should be presented in a tabular format (initial version) and a graphical layout for the final version.

**Requirement 2: Quality Requirement – Performance**  
Room bookings shall be updated in real-time, that is: if a user is looking at the overview and another user at the same time books a room, the overview shall be updated as fast as possible.

Details needed: What is meant by “as fast as possible”?

Enhanced version: Room bookings shall be updated in real-time, with a maximum delay of 1 second. If a user is looking at the overview and another user at the same time books a room, the overview shall be updated within a second.

**Requirement 3: Quality Requirement – Security**Room booking shall only be possible for logged-in users with respective privileges.

Details needed: What types of privileges? How are they managed?

Enhanced version: Room booking shall only be possible for logged-in users with respective privileges assigned by an administrator. The system shall check user credentials and verify privileges before allowing a booking to be made. Privileges include roles such as "student," "faculty," and "admin," each with different levels of access.

**Requirement 4: Project Requirement**An initial version of the room booking service shall be ready after 5 months, the first public version must be finished after 1 year.

Details needed: No as more details can be found in the next requirement.

**Requirement 5: Quality Requirement – Usability**For the initial version used for testing among a small testing group, a simple text-based approach is fine, but for the final product, a graphical representation is required so that users have an easier time using the system.

Details needed: Description of graphical representation could be made clearer.

Enhanced version: For the initial version used for testing among a small testing group, a simple text-based user interface is fine, but for the final product, a graphical user interface (GUI) is required featuring an interactive map of the building with clickable rooms, color-coded availability statuses, and pop-up details for each room. The GUI should be intuitive and accessible on both desktop and mobile devices.