1. UML Diagram

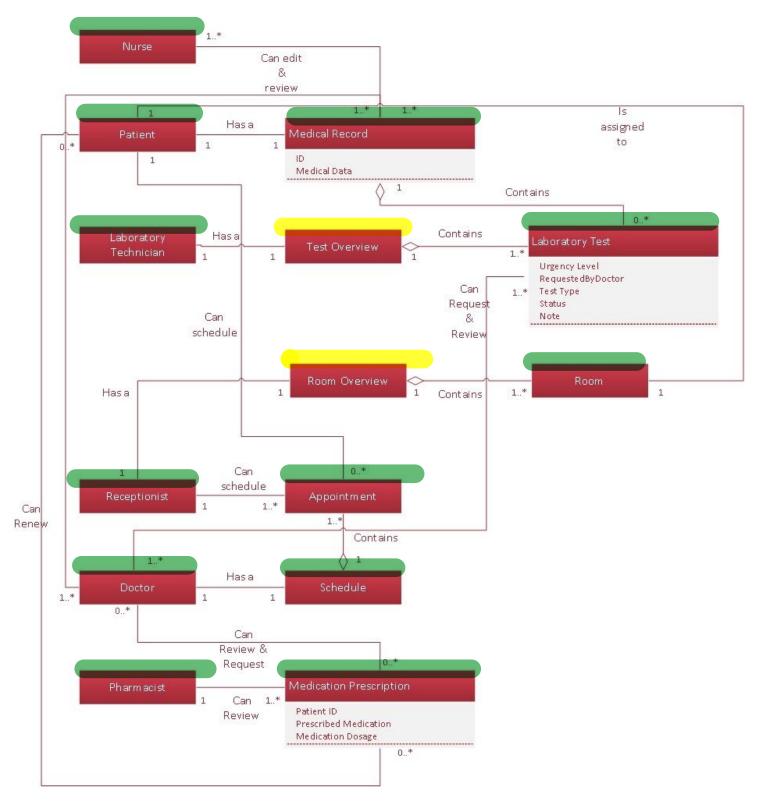


Figure 1. UML Diagram depicting relevant entities in the domain of the hospital management system.

4. Appendix

User Stories

Patient

- 1. As a patient, I want to be able to access my medical record from my mobile device, so that I can review measurement and test results.
- 2. As a patient, I want to be able to share data which is collected through my wearable device(s) with healthcare professionals.
- **3.** As a patient, I want to be able to control who has access to my medical data, so that I can restrict access to my data if necessary.
- **4.** As a patient, I want to be able to review the status of laboratory tests, so that I have an indication of when the results will be available.
- **5.** As a patient, I want to be able to schedule appointments, so that I can remotely schedule appointments using my customer account.
- **6.** As a patient, I want to be able to renew my medication prescriptions

Doctor

- **7.** As a doctor, I want to be able to share patient data with both internal as well external laboratories.
- **8.** As a doctor, I want results of measurements to be imported into patients' medical records automatically, so that I don't have to enter these manually.
- **9.** As a doctor, I want to be able to access patients' medical records, so that I can view all their relevant medical data.
- **10.** As a doctor, I want to be able to add data to patients' medical records.
- **11.** As a doctor, I want to be able to have an agenda, so that I can see who and where my next patient appointment is.
- **12.** As a doctor, I want to be able to request laboratory tests, so I can review the results of these tests.
- **13.** As a doctor, I want to be able to send out prescriptions to pharmacies.
- **14.** As a doctor, I want to be able to review what medications the pharmacies have in stock.
- **15.** As a doctor, I want to be able to review the intake prescriptions of medications, so I can advise my patients on their medication intake.
- **16.** As a doctor, I want to have an **overview** of external pharmacies including their names, address and contact numbers.

- **17.** As a doctor, I want nurses to only have partial control over patient's' medical records, so that they do not accidentally remove important data.
- **18.** As a doctor, I want to be able to review the status of laboratory tests, so that I have an indication of when the results will be available.
- **19.** As a doctor, I want to be able to attach notes to laboratory tests, so that I can supply laboratory personnel with additional information if needed.
- **20.** As a doctor, I want to be able to log in to the system quickly, so that I don't have to waste any time during patient appointments

<u>Nurse</u>

- **21.** As a nurse, I want to be able to edit patient's' medical record, so that I can enter measurement results.
- **22.** As a nurse, I want to review patient's' relevant medical information, so that I can prepare their room accordingly.

Receptionist

- **23.** As a receptionist, I want to be able to identify patients through a unique number
- **24.** As a receptionist, I want to have access to doctors' schedule, so that I can schedule their appointments.
- **25.** As a receptionist, I want to be able to match patients to doctors, so that I can schedule appointments for them.
- **26.** As a receptionist, I want to have an overview of available rooms, so that I can assign patients to them.

Laboratory Technician

- **27.** As a laboratory technician, I want to be have an overview of all tests that need to be performed.
- **28.** As a laboratory technician, I want to be able to review the type and level of urgency for each test to be performed, as well as the doctor who has requested the test.
- **29.** As a laboratory technician, I want to be able to receive notifications regarding requests for tests to be done, so that I can perform tests when needed.
- **30.** As a laboratory technician, I want to be able to enter test results, so that doctors are able to review them.
- **31.** As a laboratory technician, I want to be able to attach notes to laboratory tests, so that I can supply doctors with additional information if needed.

Pharmacist

32. As a pharmacist, I want to be able to review a patient's' ID number, medication dosage and prescribed medication.

System Administrator

- **33.** As a system administrator, I want to be able to adjust users' access rights.
- **34.** As a system administrator, I want users to log in using two-step authentication, so that system security is guaranteed.