Demo 2

NGA NGUYEN

CLASS DIAGRAM

KEY CONCEPTS & ABSTRACTION PERSPECTIVES

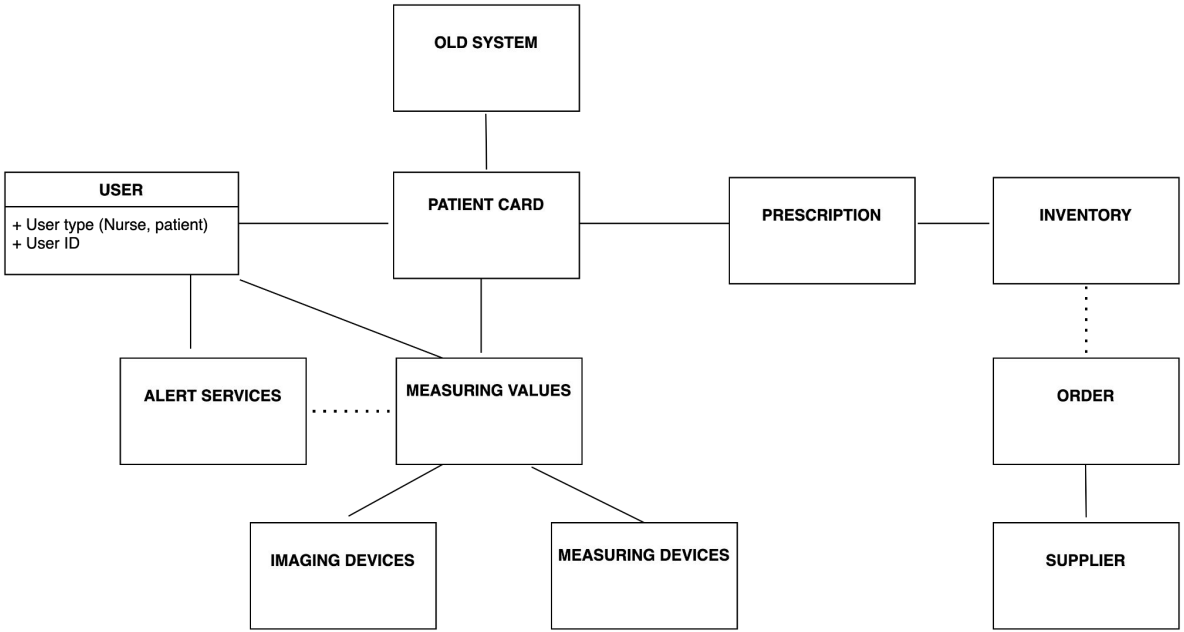
1. Patient: individuals receiving medical care also an user of Medifine app.
2. Nurse: medical staff responsible for patient care, also an user of Medifine app
3. Patient Card: a digital record of patient information
4. Measuring Device: devices used to measure patient's vital signs
5. Prescription: medicines prescribed to patients for treatment
6. Inventory: internal medicine's storage of hospital
7. Medicine Order: order automatically created by application server
8. Supplier: a dispensary where supplies medications.
9. Measuring Values: patient's observations, measured values from devices.
10. Imaging Device: equipments used for medical imaging.
11. Alert Services: automatically created by application server based on measured values
12. Old System contained patient's old data.

CLASS DIAGRAM (2)

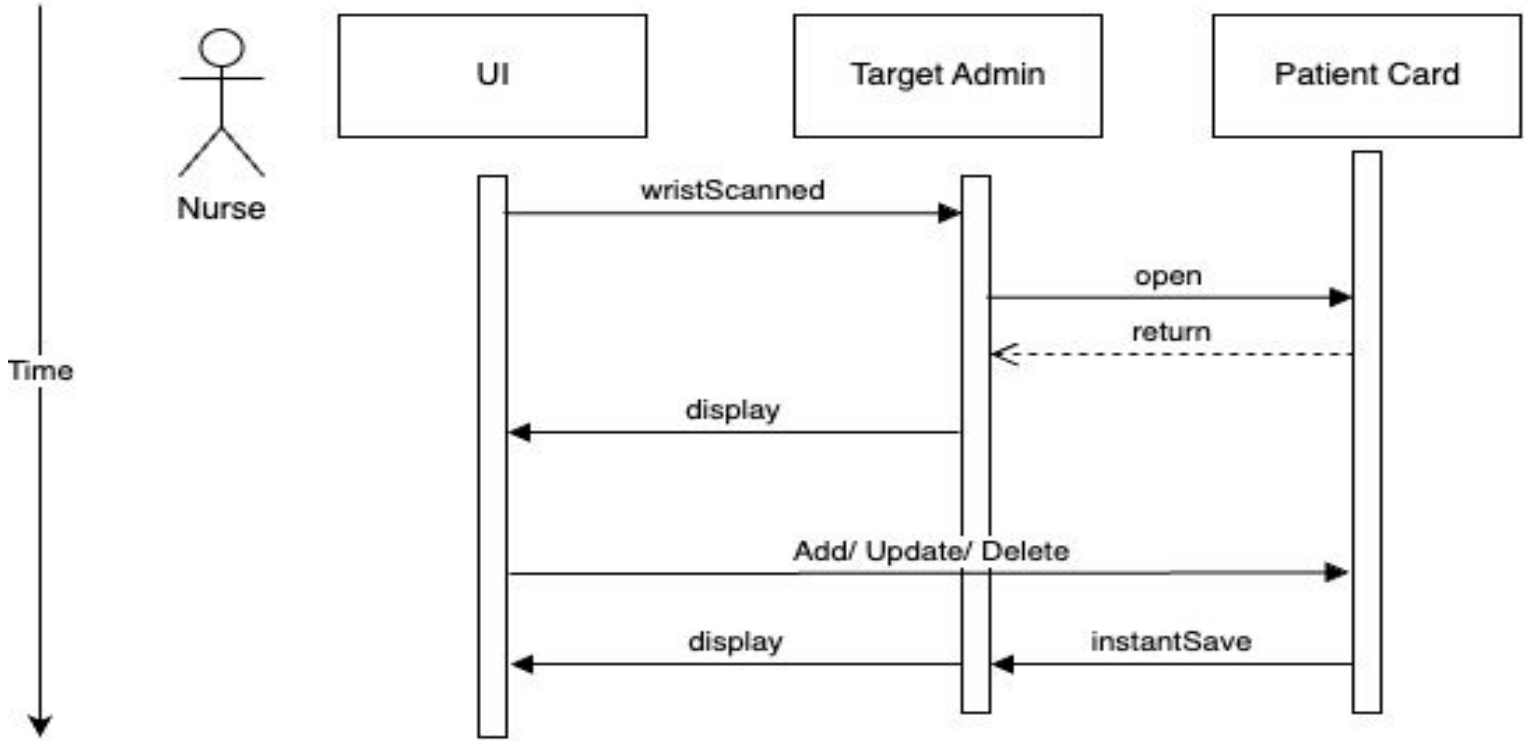
RELATIONSHIPS & RESPONSIBILITIES

1. Nurse User creates and updates Patient Cards.
2. Old System transfer patient's old data to Patient Cards.
3. Nurse User monitor Prescriptions.
4. Application Server creates Medicine Order automatically based on Inventory availability.
5. Measuring Devices create Measuring Values.
6. Application server creates alert in Alert Services automatically based on Measuring Values.
7. Patient User can update Measuring Values.
8. Client-side Devices display images from Measuring Values created by Imaging Devices.

CLASS DIAGRAM (3)



SEQUENCE DIAGRAM

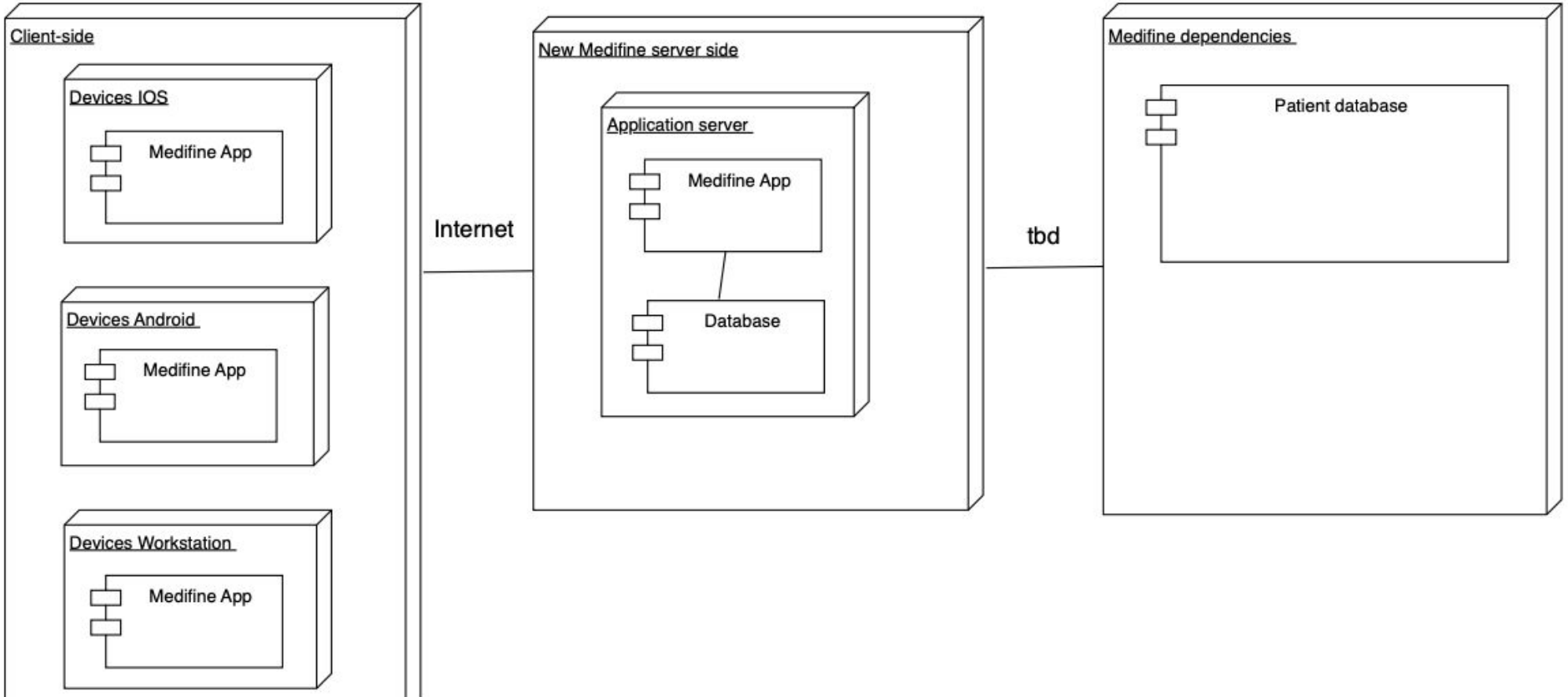


SEQUENCE DIAGRAM (2)

Identify the classes involved:

- Boundary class is User Interface where nurses interact to input and update patient information.
- Control class is the target administration, which controls flows of event & manages interaction between nurse, patient and patient Card
- The treatment class (entity class) is Patient Card which is updated during the interaction

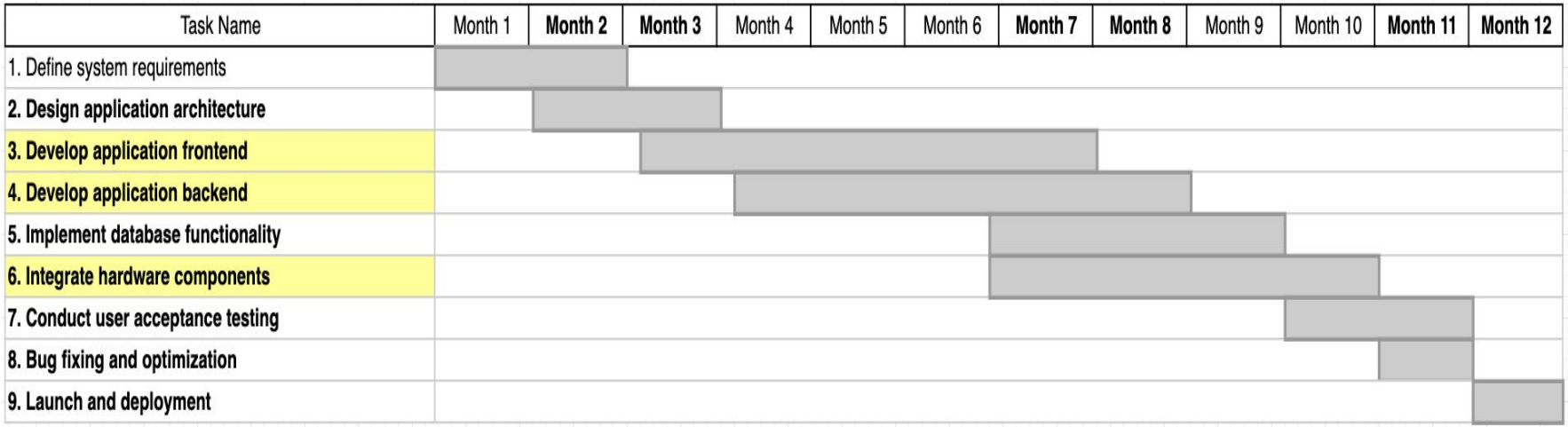
DEPLOYMENT DIAGRAM



DEPLOYMENT DIAGRAM (2)

- The Medifine system is divided into 2 different parts, which are Client-side (nurse’s workstation and patient’s smartphone/ tablet) and server-side (application and database server)
- Interfaces and dependencies:
  + The Nurse Workstation and Patient smartphone/Tablet interact with the Application Server to access and update patient records.
  + The Application Server communicates with the Database Server to retrieve and store patient data.
  + Information such as patient records, measurements, medications, and imaging data pass between the client-side devices and the server-side components.

GANTT CHART


Task Name
Month 1
Month 2
Month 3
Month 4
Month 5
Month 6
Month 7
Month 8
Month 9
Month 10
Month 11
Month 12
1. Define system requirements
2. Design application architecture
3. Develop application frontend
4. Develop application backend
5. Implement database functionality
6. Integrate hardware components
7. Conduct user acceptance testing
8. Bug fixing and optimization
9. Launch and deployment

GANTT CHART (2)

- Critical tasks are: Number 2 to Number 9
- Tasks that need room for leeway are
  + Develop application front end
  + Develop application backend
  + Integration of hardware components
- Milestones:
  + Month 2: when System requirements are defined, which helps ensure clarity in project objectives
  + Month 3 when Application architecture is designed, which helps guide all development efforts
  + Month 7 when application frontend developed, which helps provide an UI for interaction
  + Month 8 when application backend developed, which enables data processing & management
  + Month 11 after user acceptance testing conducted, which ensures system functionality & user satisfaction
  + Month 12 when system launched & deployed, means the application is ready for operational use.