Presentation will be evaluated by students in two forms: Presentation evaluation and
teammate evaluation. Teams will not evaluate their own presentation. However, each
student is required to evaluate his/her teammate's collaboration and contribution.

Total presentation time is 35 minutes per team. Each group will have 20-25 minutes to
present and 5-10 minutes for Q&A.

In terms of content, you will have to make hard decisions about what to include in your
presentation or not.

Each presentation should include but not limited to the followings:

o Describe the problem and your suggested/implemented solution.
o Explain your approach to solve the problem step by step (Include diagrams and workflows,..)
o Demonstrate your team implementation and give example(s) to make it clear.
o What have you learned from this project and how can you apply it to other real world problems?
o Any possible difficulties or challenges you encountered and how they were resolved?

All team members must participate.

Patient scheduling System

Members: Michael Than, Hendrick Nguyen, Nathaniel Chandler, Paul Sarmiento, Andrew Gonzales

Problem and General Solution

Problem

- Patients' scheduling subsystem of a hospital or a medical office

Solution

- Create a subsystem where new and returning patients can be processed
- New patients need to have a profile created
  - Verify new patients payment method/insurance
- Returning patients should have all their information in the system already
- Schedule appointment for patient

Who Would Have Access To This System?

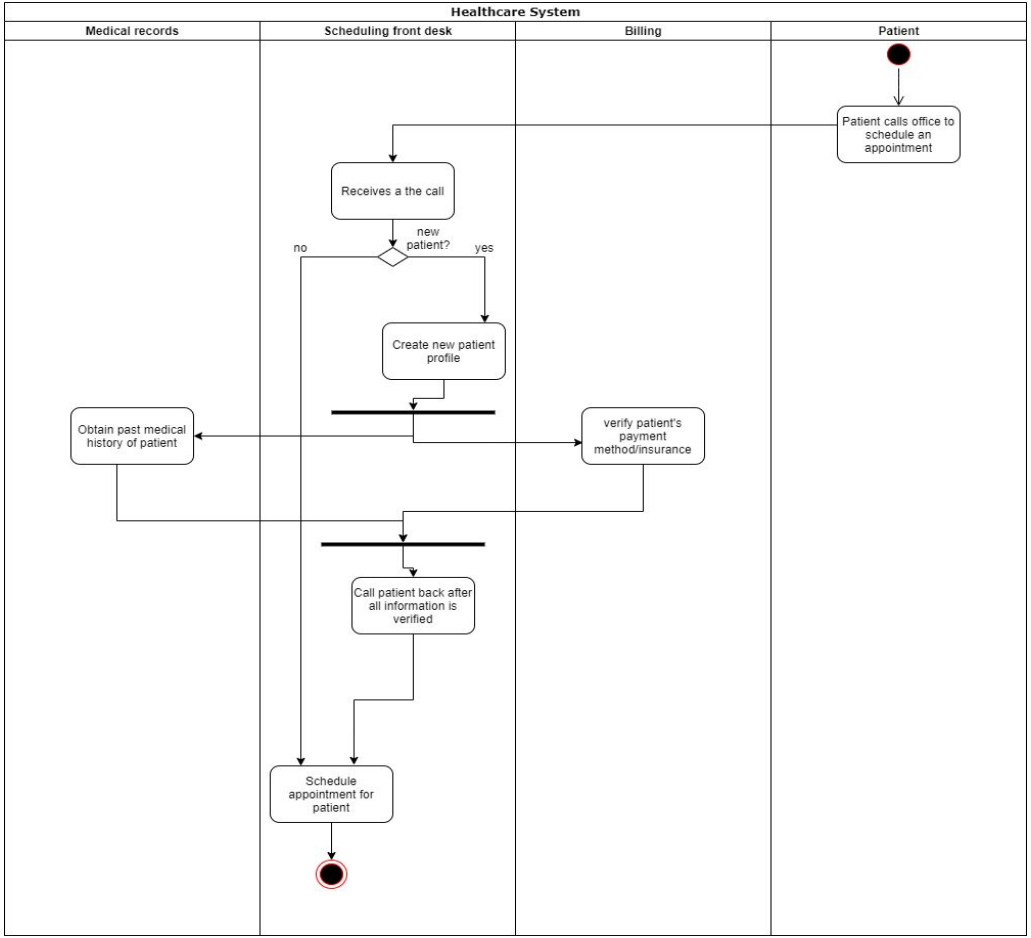
- Only medical employees of the hospital or the medical office would have access to this system
- Employees must provide a login and password to gain access
- Employees will be able to see what days and time slots are available and which ones have already been scheduled
- Employees would include, doctors, nurses, medical assistants, medical clerks, physician assistants, etc...

Who Would Have Access To This System?

- Receptionists have a role with more access.
  - They do still have their own password and login into the system and do have the ability to view the schedule as well.
- Receptionists have access to scheduling patients
  - They can schedule patients into the system either through the phone or at the front desk
- Receptionists also have the ability to create new patients
  - They can create a whole new patient profile for patients who are making a first time appointment

Activity Diagram

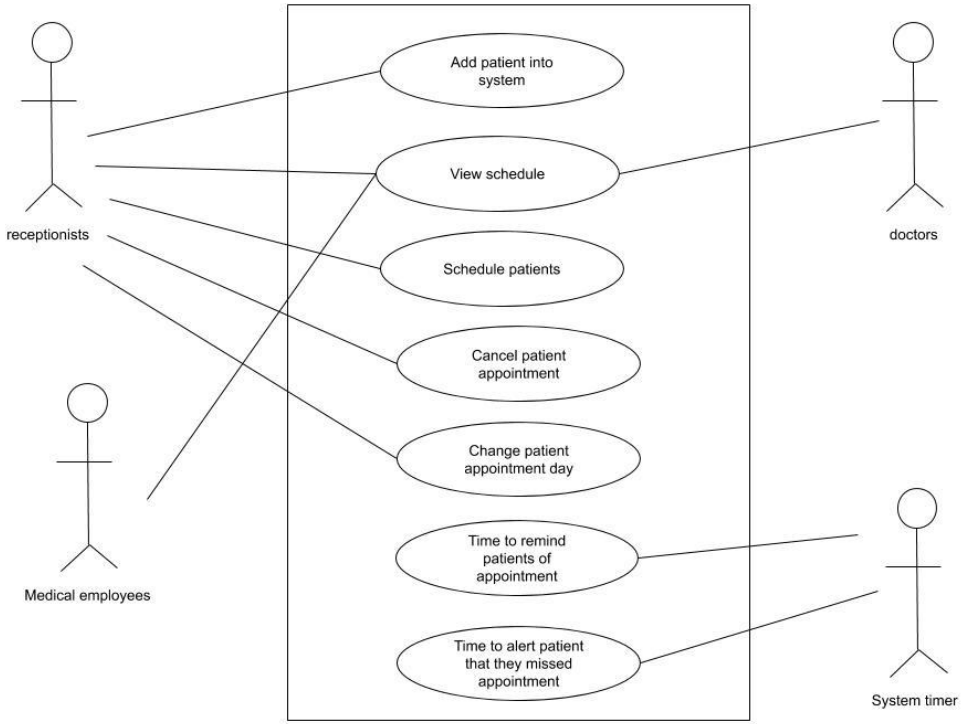
- Only new patients need to provide required information before they can schedule an appointment
  - New patients give the receptionists their full information and wait a few days for their insurance to be approved.
  - During those few days, the billing department will contact the insurance of the patient to verify that this appointment can be paid for by their insurance
  - Medical history will be obtained by the medical records department if there any.
- Returning patients can simply schedule an appointment right away since the employees already have all the information they need



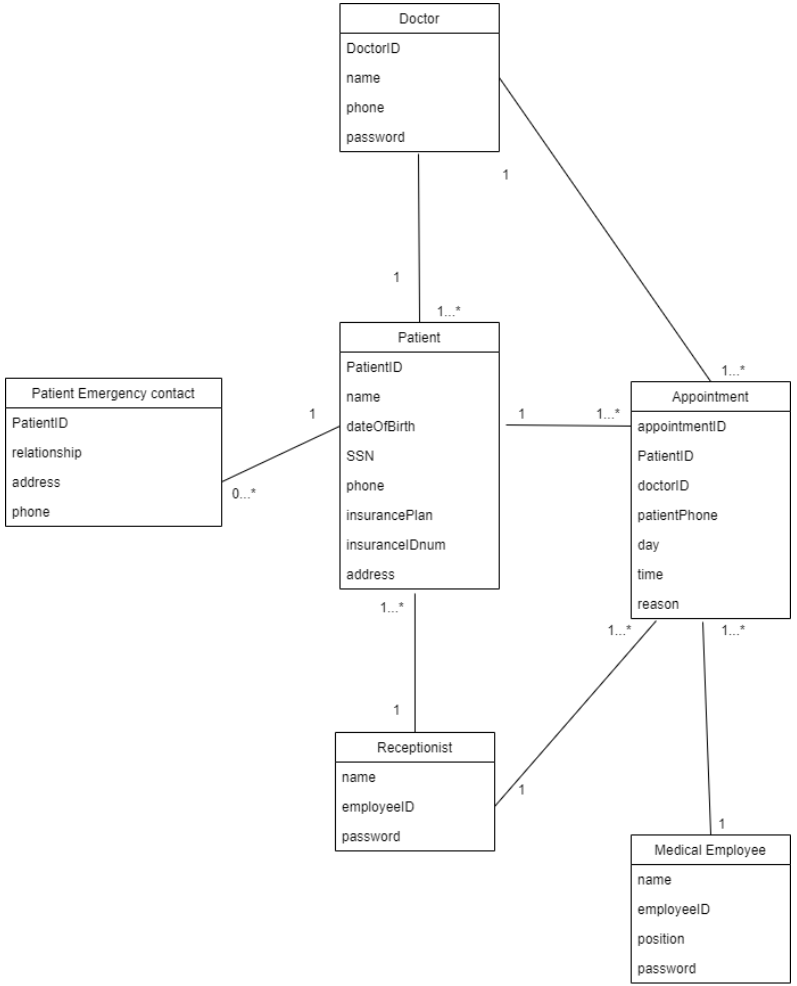
Use Case Diagram

User/Actor	Event	Type	Resulting Use Case
Receptionist	Add patient into system	external	Display patient profile
Doctors	View schedule	external	Display schedule
Medical Employees	View schedule	external	Display schedule
Receptionist	Cancel patient appointment	external	Display reason why patient canceled and what day they canceled their appointment
Receptionist	Change patient appointment date	external	Display day of patients new appointment
System Timer	Time to remind patients of appointment	temporal	Display patient names and phone numbers to call to remind of appointment the next day
System Timer	Time to alert patients that they missed appointment	temporal	Display patients names and phones of patients to call and alert patients that they missed appointment/reschedule patient

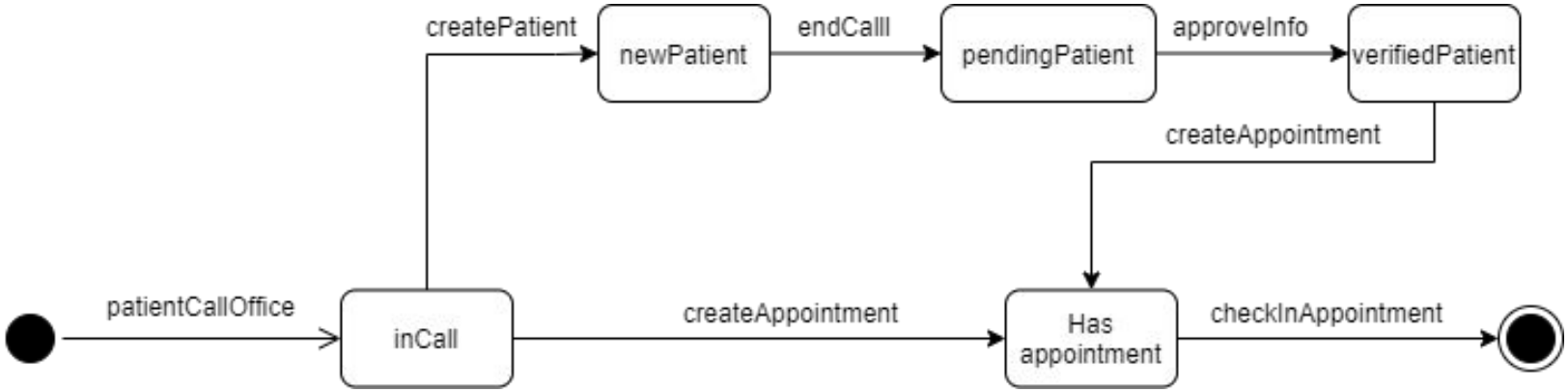
Use case diagram



Domain Class Diagram



State Machine Diagram



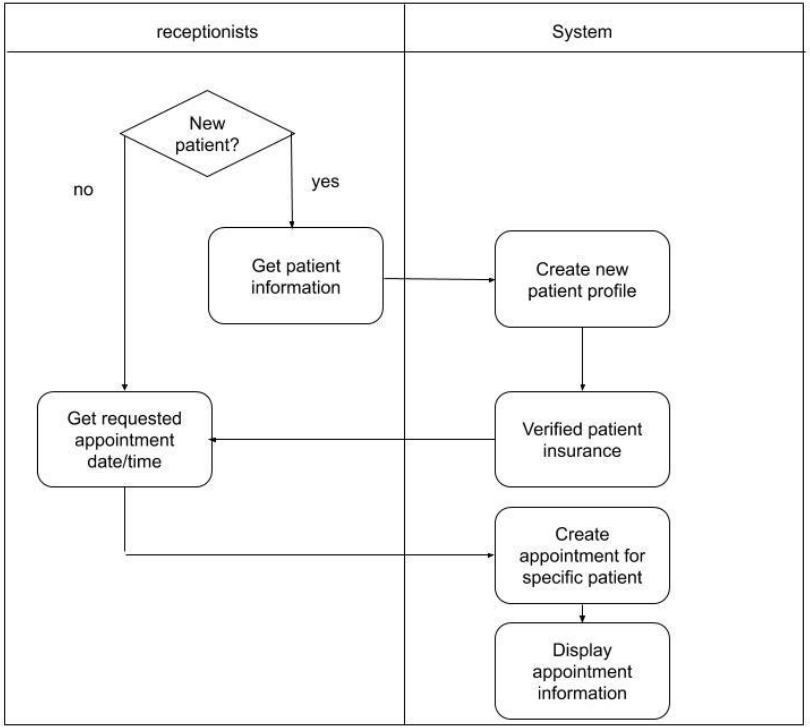
Fully Developed Use Case Description

Use case name	Create an appointment
Scenario	Create an appointment for a patient
Triggering Event	A patient requests for an appointment by phone call or at the front desk
Brief description	A patient requests an appointment from the receptionists. If the patients is an existing patient, then the receptionists take the patient name and name of the doctor they will have an appointment with, as well as the date/time for the appointment. If the patient is a new patient then the receptionist creates a new patient profile then schedules the appointment.
Actors	Receptionist and patient
Related Use cases	Display schedule
Stakeholders	Patients, receptionists, doctors
Preconditions	An appointment for the patient coming into the office or calling in has not made an appointment yet.

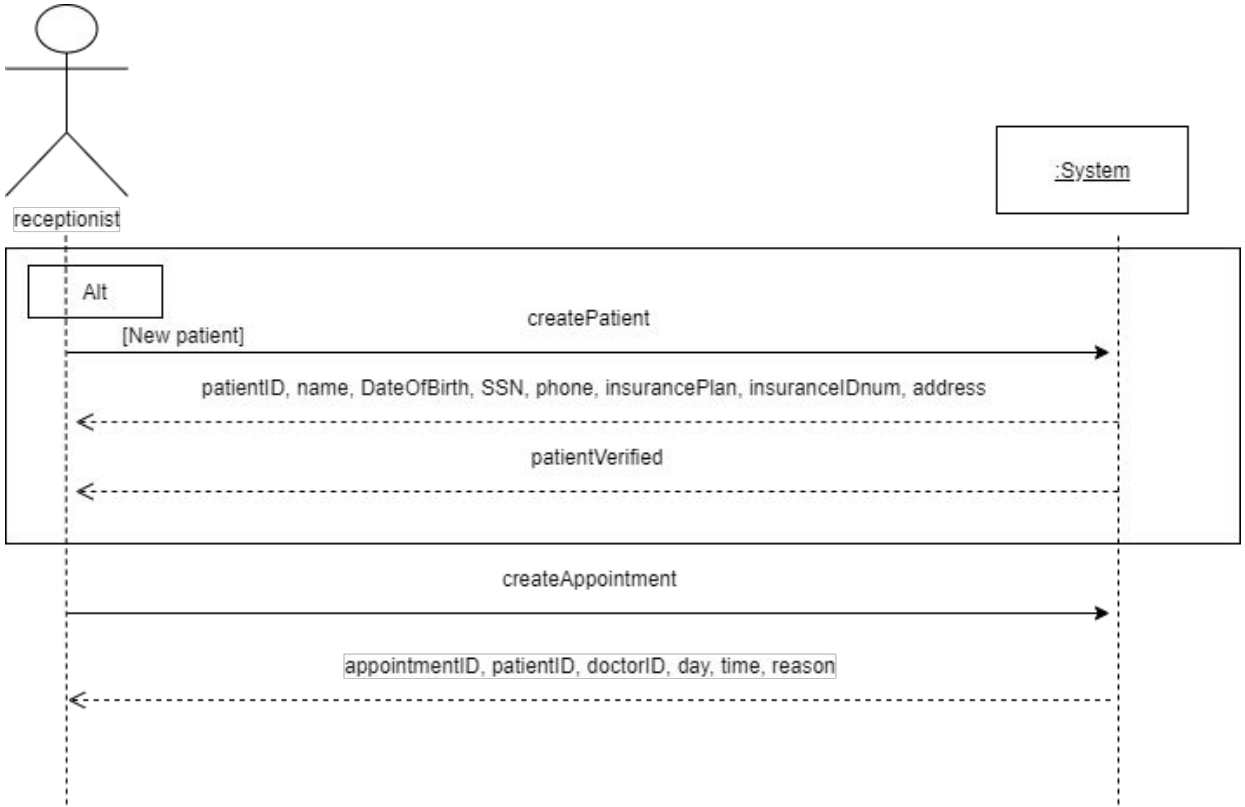
Fully Developed Use Case Description (cont)

Postconditions		An appointment is created and the patient is expected to show up on time for the appointment with the doctor they are assigned or requested.
Flow of activities	**Actor:** 1. Ask the patient if they are new or existing patient 2. If they are new patient then take the patient info 3. Get the date and time requested by the patient 4. Repeated appointment information back to the patient for verification	**System:** 2. Add patient info to system 3. Create new appointment for the specific patient 4. Display appointment information

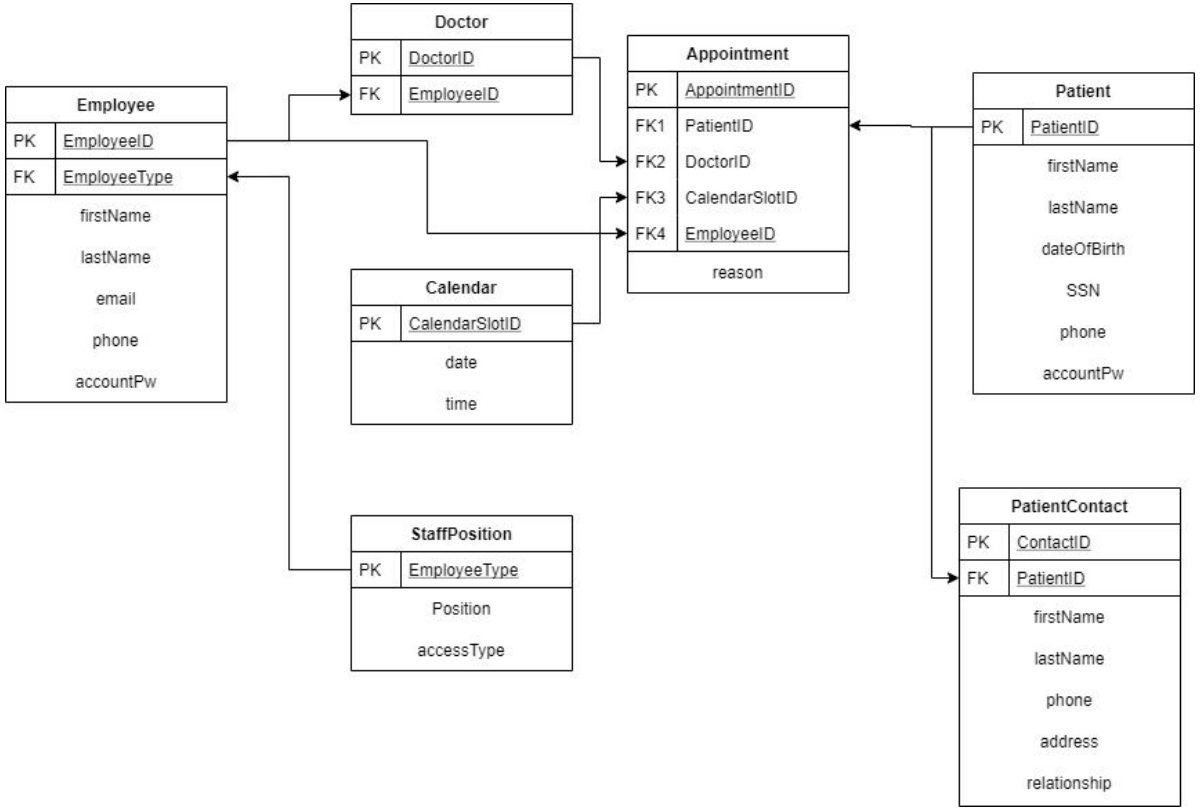
UML Activity Diagram



System Sequence Diagram



Database Schema



Technology:

- JDBC, ucanaccess
- Microsoft Access Database
- Eclipse
- JavaFX

Implementation of the System

- Login & Credentials
- Create/View appointments
- Create/Add patient
- Add medical staff to system

Difficulties

- Communication
- Meeting constraints due to coronavirus
- Learning new technologies
- Figuring out workshares

Implementation