Unit 6

Hands-on with UML

(Seminar)

Seminar 3 – Working with UML

In this week's seminar, students were tasked to further develop UML modelling skills by generating class, sequence and activity diagrams based on a given scenario.

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> *Before a patient can see a doctor, or nurse, they will be required to make an appointment. The appointment will be made by the receptionist. However, before making the appointment, the receptionist needs to ask the patient which doctor they would like to see, and whether the appointment is standard consultation or an emergency appointment. The receptionist will use this information to check the appointment schedule, find an available appointment and make the booking. During the appointment itself, the doctor may issue the patient with a prescription. It is possible for a patient to request a repeat prescription be raised. Receptionists are able to cancel appointments as well as create them. A doctor at the clinic may have a maximum of 500 patients registered to them at any one time.*
>
> *You should create:*
>
> - *A class diagram for the system.*
> - *A sequence diagram for booking an appointment.*
> - *An activity diagram for a receptionist booking an appointment.*

Modelling Method

First I started by identifying the objects in the scenario:

> *Before a* ***patient*** *can see a* ***doctor****, or* ***nurse****, they will be required to make an* ***appointment****. The appointment will be made by the* ***receptionist****. However, before making the appointment, the receptionist needs to ask the patient which doctor they would like to see, and whether the appointment is standard consultation or an emergency appointment. The*

> *receptionist will use this information to check the **appointment schedule**, find an available appointment and make the **booking**. During the appointment itself, the doctor may issue the patient with a **prescription**. It is possible for a patient to request a repeat prescription be raised. Receptionists are able to cancel appointments as well as create them. A doctor at the clinic may have a maximum of 500 patients registered to them at any one time.*

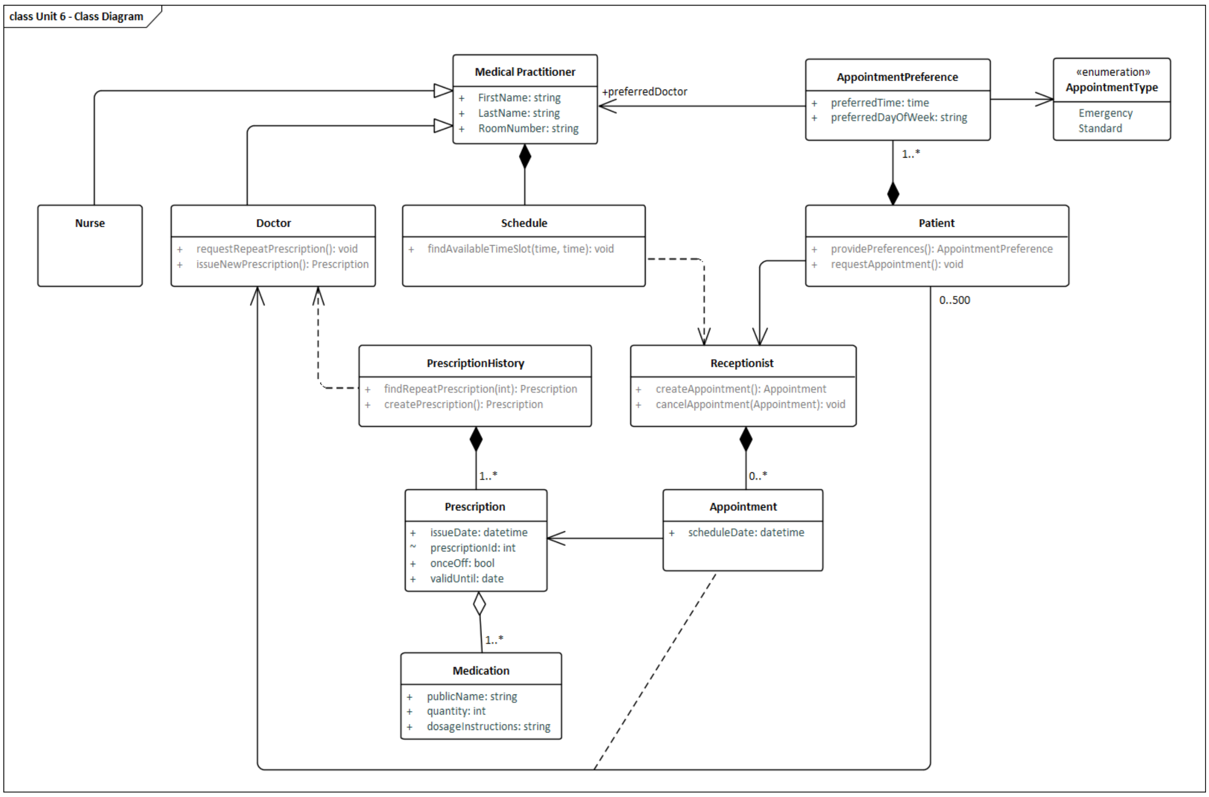
Next, I looked a the relationships between the objects:

> *Before a **patient can see a doctor, or nurse**, they will be **required to make an appointment**. The appointment will be **made by the receptionist**. However, before making the appointment, the receptionist needs to **ask the patient** which doctor they would like to see, and whether the appointment is standard consultation or an emergency appointment. The receptionist will use this information to **check the appointment schedule**, **find an available appointment** and **make the booking**. During the appointment itself, the doctor may **issue the patient with a prescription**. It is possible for a patient to **request a repeat prescription** be raised. Receptionists are able to **cancel appointments** as well as **create them**. A doctor at the clinic may have a maximum of 500 patients registered to them at any one time.*

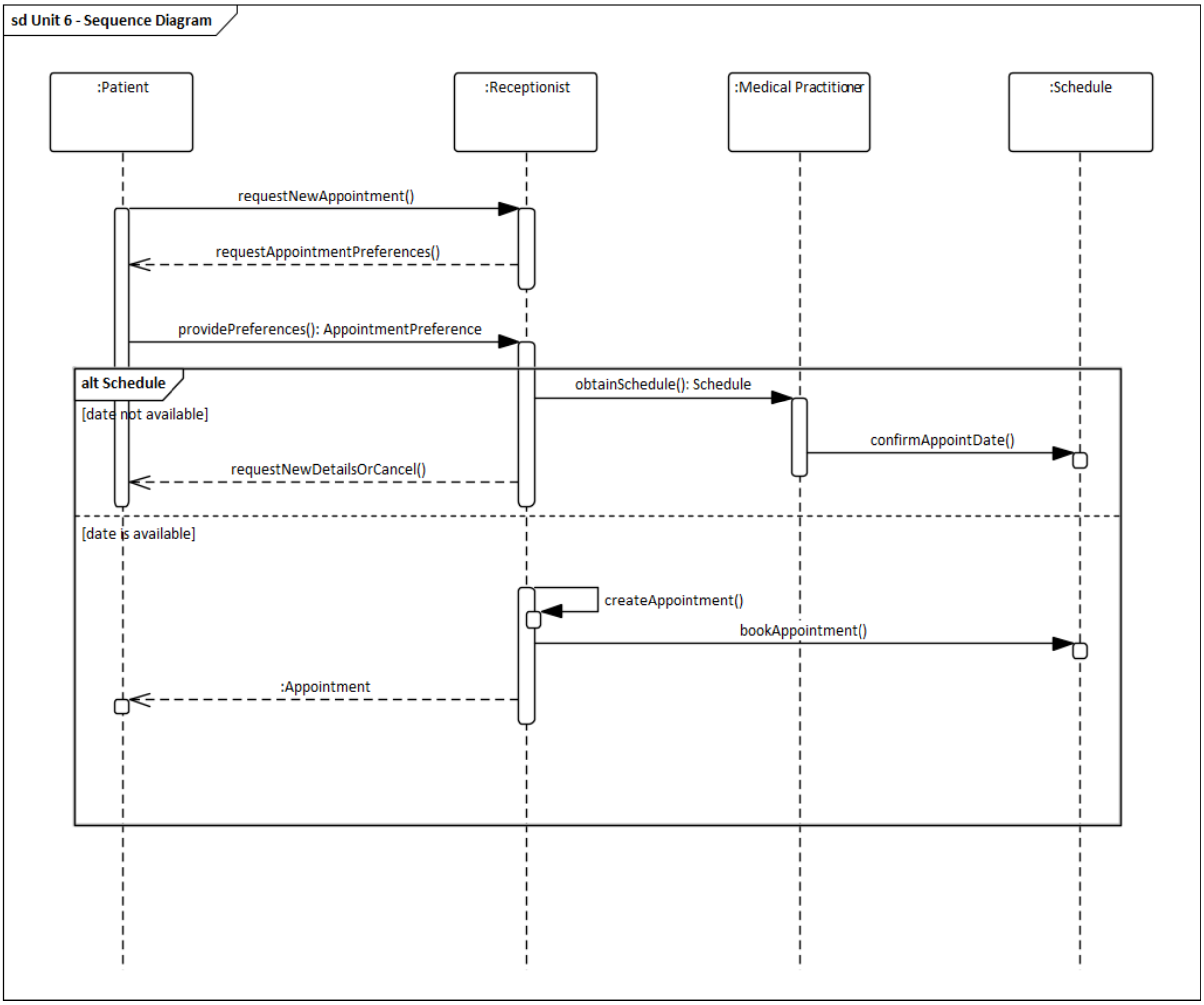
Written in a list format (and slightly paraphrased):

1. Patient can see a doctor, or nurse
2. Patient requests an appointment.
3. Receptionist makes an appointment.
4. Receptionist asks patient for preference.
5. Receptionist checks the appointment schedule for an available appointment.
6. Receptionist books an appointment.
7. A doctor creates a prescription.
8. A patient can request a repeat prescription.
9. Receptionist can cancel an appointment.

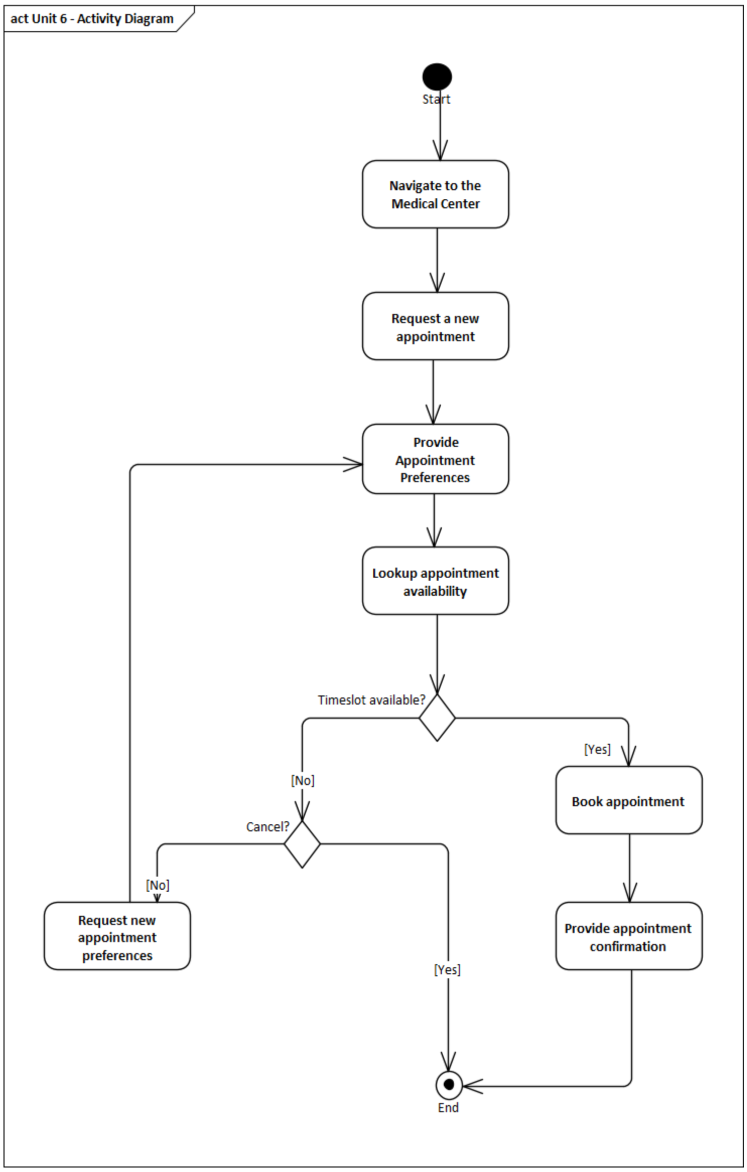
From that information, I set about creating the following class diagram:



From the class interactions, I then built the following sequence diagram:



The sequence diagram was then given more details in the form of an activity diagram:


act Unit 6 - Activity Diagram
Start
Navigate to the Medical Center
Request a new appointment
Provide Appointment Preferences
Lookup appointment availability
Timeslot available?
[Yes]
[No]
Book appointment
Cancel?
[No]
Request new appointment preferences
Provide appointment confirmation
[Yes]
End