NOT DISCOVERY

THE ONLY MEDICAL PLATFORM YOU CAN TRUST

SUMMARY OF CONTENTS

Software Design and System Architecture

Software Design

We were tasked with the development of a mobile application and website for viewing and managing patient data. The platform (in this context platform refers to the mobile or web application) has two users, doctors, and patients respectively. The platform is designed to help doctors see the medical history of their patients while patients can book an appointment with the doctor of their choice for any medical issues they may be experiencing. When a patient books an appointment with a particular doctor, the doctor will be able to accept or reject this appointment. If the doctor rejects an appointment the patient will be notified immediately, and he/ she can either reschedule the appointment or find another doctor on the platform. If the doctor accepts the appointment, the patient will be notified and once the appointment has taken place, the doctor can generate an appointment form. This appointment form will include the patients name, disease/ medical history, medication administered, date of the appointment, consultation notes and treatment costs, etc. These appointment forms get stored in the database along with patients' personal information. The patient will be able to see any prescribed medication or important notes from the appointment can book for a check-up if necessary.

System Architecture

Doctors will be able to log into the app from their smartphones or log into the website from their laptop / desktop and enter relevant information about their patients. If the doctor were to enter the incorrect user credentials, he/ she will be denied access to the system. A doctor who is not registered on the platform, will be able to register by entering their respective name, age, field of specialization (i.e., optometrist, dentist, surgeon, etc.), qualifications, years of experience, email address and password. Once logged in a doctor will be able to see their last appointment and any upcoming appointments on the home page of the platform. Doctors also have the ability to continually update the progress of a patient on the system by entering the latest medical data of their patients. This information is then saved on the system (i.e., in the database), and will be stored for the perusal of doctors for their future cases. For example, if a patient comes for a follow-up routine or check-up, doctors can immediately check up on their medical history and provide the necessary medical treatments.

Not Discovery is also designed to help patients find doctors to assist them with any medical issues they may be experiencing. Patients will be able to login with their respective email address and password. If the patient were to enter the incorrect user credentials, he/ she will be denied access to the system. A patient who is not registered, can register on the app by entering their respective name, age, identification number, place of residence (some address field), email address, field for pre-existing medical conditions and password. Once in the system patients will be able to view their previous appointments with a doctor, book for a new appointment and keep track of their recovery process if they are fighting a serious disease / illness.

Some of our feature include:

- Doctor login / registration
- Patient login / registration
- All user information is stored securely in the database
- Password hashing for extra security
- A welcome page for doctors where they can see notes from their last appointment and any upcoming appointments
- A welcome page for patients where they can see upcoming appointment they have booked with a doctor
- Doctors have the ability to generate an appointment form on the platform
- Patients have the ability to booking an appointment with a doctor of their choice for a particular medical issue they may be experiencing
- Doctors have the ability to show they availability over a certain period of time and specify if they would like to consult with patients for one hour or half an hour basis
- Displaying a list of upcoming appointments on the home page for a doctor and patient
- Implementation of doctor's appointment form to the appointments that a patient makes
- An "Appointment History" where doctors and patients can view a list of recent appointments
- When a booking has been made, a message is sent to the doctor and the patient in the form of an email
- Doctors and patients have the ability to cancel an appointment
- Doctors and patients are notified when an appointment has been missed
- Implementation of a "forget password" feature
- Users can reset their password if necessary
- Settings page for the user's convenience
- Additions to the setting page include viewing personal information, privacy policy, reset password and a logout function
- Help page in case user needs extra assistance or online support
- Improvements to user interface and overall design of both the app and the website

For more please see our GitHub:

https://github.com/1853416/SD-Semester2

For more details and to track our progress, please see:

https://tree.taiga.io/project/kineta-mobile-patient-tracker/timeline
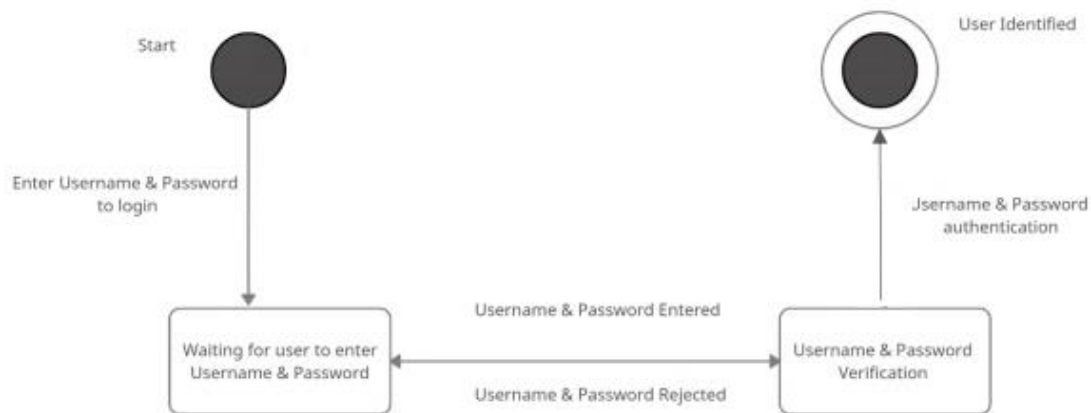
Logic View

State Diagram

Figure – A state diagram for user login

This diagram is applicable to both patients and doctors. This diagram shows the login process a registered user will go through before being given access to Not Discovery. The user will be required to enter their username (email address) and password. These login credentials will then be verified by our system, if either of the details are incorrect the user will be denied access to the system. However, if the user has entered the correct username and password, he /she will be given access to the system and will be redirected to the respective home page depending on whether they are registered as a doctor or a patient.
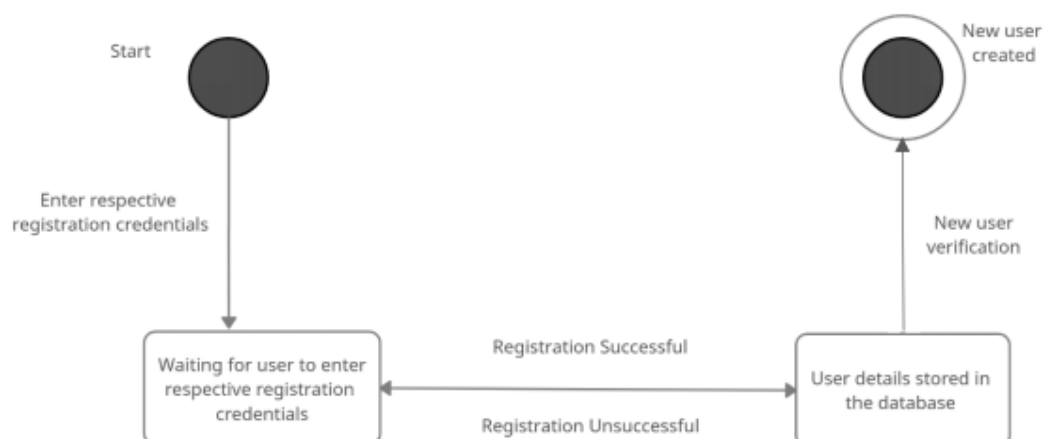

Figure – A state diagram for user registration

This diagram is applicable to both patients and doctors. The figure above shows a state diagram for a new user registering with our system. This process is necessary and must be completed correctly before a user can use on our system. Patient registration should include, patients full name, age, identification number, place of residence (some address field), email address, field for pre-existing medical conditions and password. Doctor registration should include doctors full name, age, field of specialization (i.e., optometrist, dentist, surgeon, etc.), qualifications, years of experience, email address and password. If the registration is successful, then the user will be saved on the database, and they will be allowed to start using the system. However, if the registration process is unsuccessful due to duplicate usernames, incorrect passwords, or incorrect credentials the user will have to double check the registration form or try to register again.

Class Diagram

Upcoming Appointments

Date: Date

doctorsName: String

patientName: String

timeSlot: String

Patient

firstName: String
lastName: String
email: String
ID: String
phone: String
pre-existing medical conditions: String
password: String

register (patient): Boolean
login (patient): Boolean
searchDoctorWhenBooking: ArrayList
checkAvailabilityWhenBooking: String
bookAppointment: Boolean

has

visits

has

Doctor

firstName: String
lastName: String
email: String
ID: String
phone: String
fields: String
qualifications: String
years: int (refers to years of experience)
password: String

register (doctor): Boolean
login (doctor): Boolean
addBookingSlots: Boolean
updateBookings: Boolean
enterPatientData: String

Appointment History

patientName: String

doctorName: String

date: Date

time: String

script: String

additionalNotes: String

status: String

view

view

booked
appointment

manages

Book Appointment

patientName: String

pateintID: String

doctorName: String

doctorID: String

doctorOccupation: String

time: String

date: Date

save

Appointment Form

patientName: String

doctorName: String

date: Date

time: String

script: String

additionalNotes: String

status: String
(e.g. missed, cancelled,
 attended)

generate

Doctor Availability

doctorsName: String

time: string

date: Date

startTime: String

endTime: String

halfHourSlot: Boolean

hourlySlot: Boolean
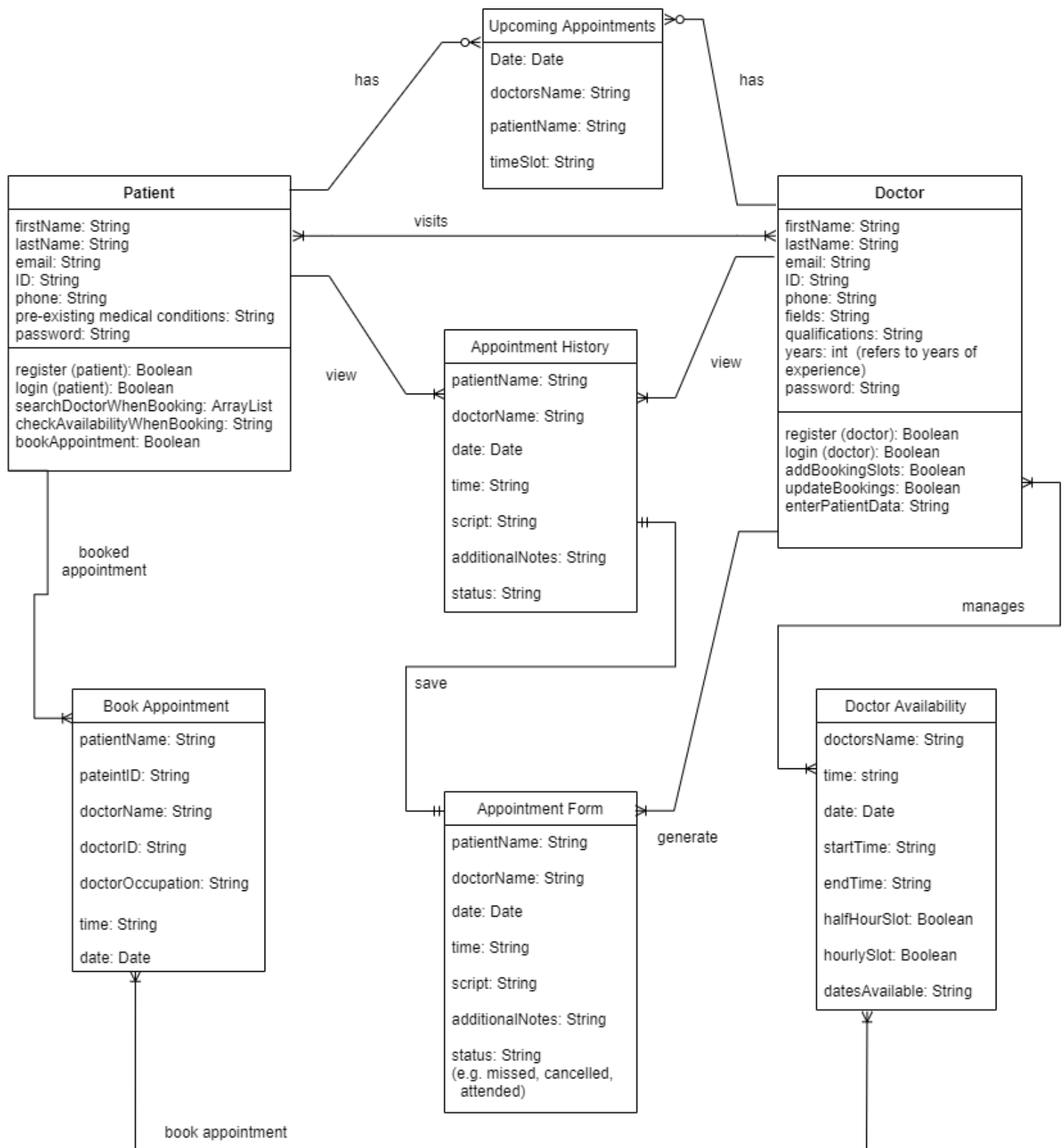
datesAvailable: String

book appointment

Figure – A class diagram for Not Discovery

 The diagram above shows a class diagram for the Not Discovery System. In this diagram we can see the backend structure (i.e., the database) and we can see how the different tables are linked together. For example, we can see how a patient can be linked to a doctor and vice versa. We can also see how doctors can update their available time slots and how all this information is then made available for patients to see. Patients can book an appointment with a doctor and this appointment data is provided by the doctor's availability. Doctors can also create appointment forms once they have seen a patient, and this can be used to keep track of a patient's medical progress.

Development View
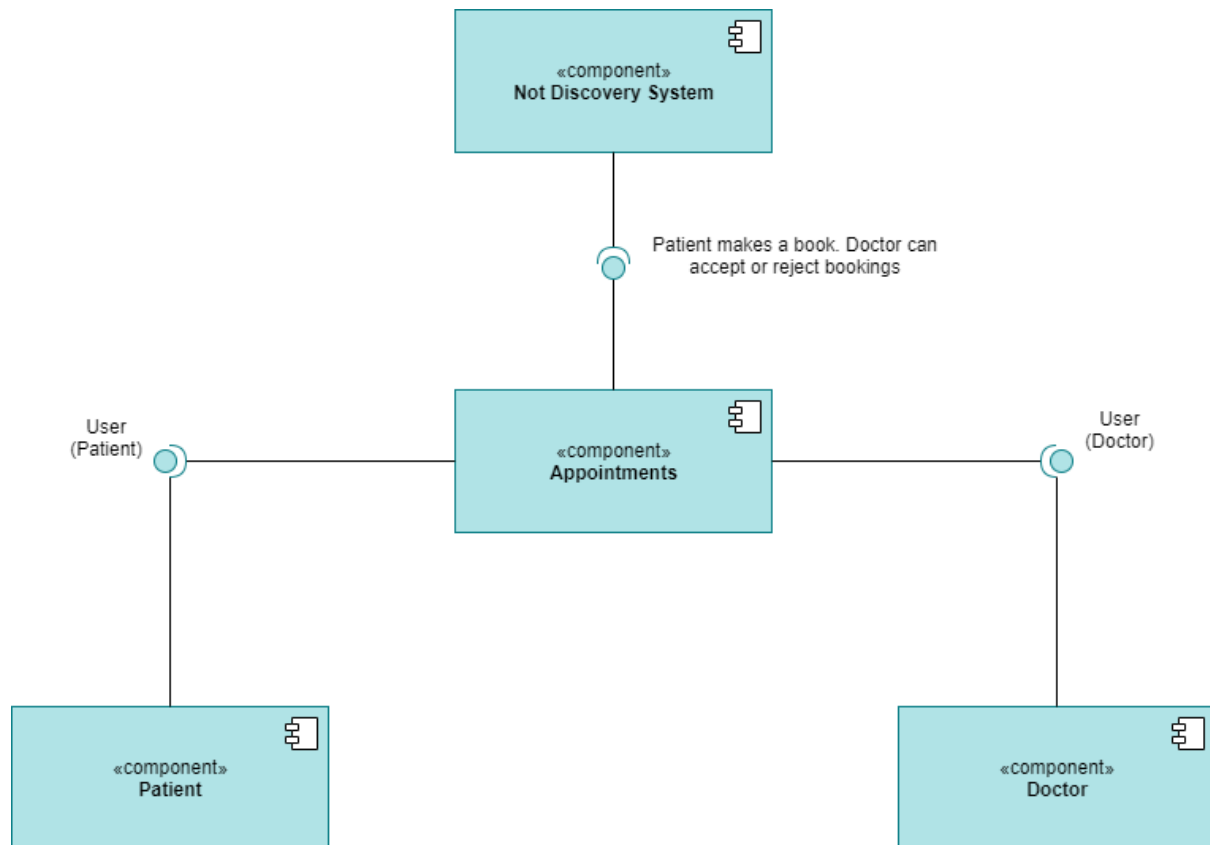
Component Diagram

Figure – A component diagram for Not Discovery

The figure above shows a component diagram for the Not Discovery system, and it particularly focuses on the appointment bookings aspect of the website. The appointments require an interface, provided by the Not Discovery component. The patient component requires an interface, provided by the appointment component. Similarly, the doctor component requires, and interface provided by the appointment's component. Here we can see that when a patient makes an appointment with a particular doctor, he/ she is notified and has the ability to accept or reject the patients request for a consultation. Once a patient has made an appointment, he/ she will be redirected to the home page where they can see upcoming appointments, similarly on the doctor's side.
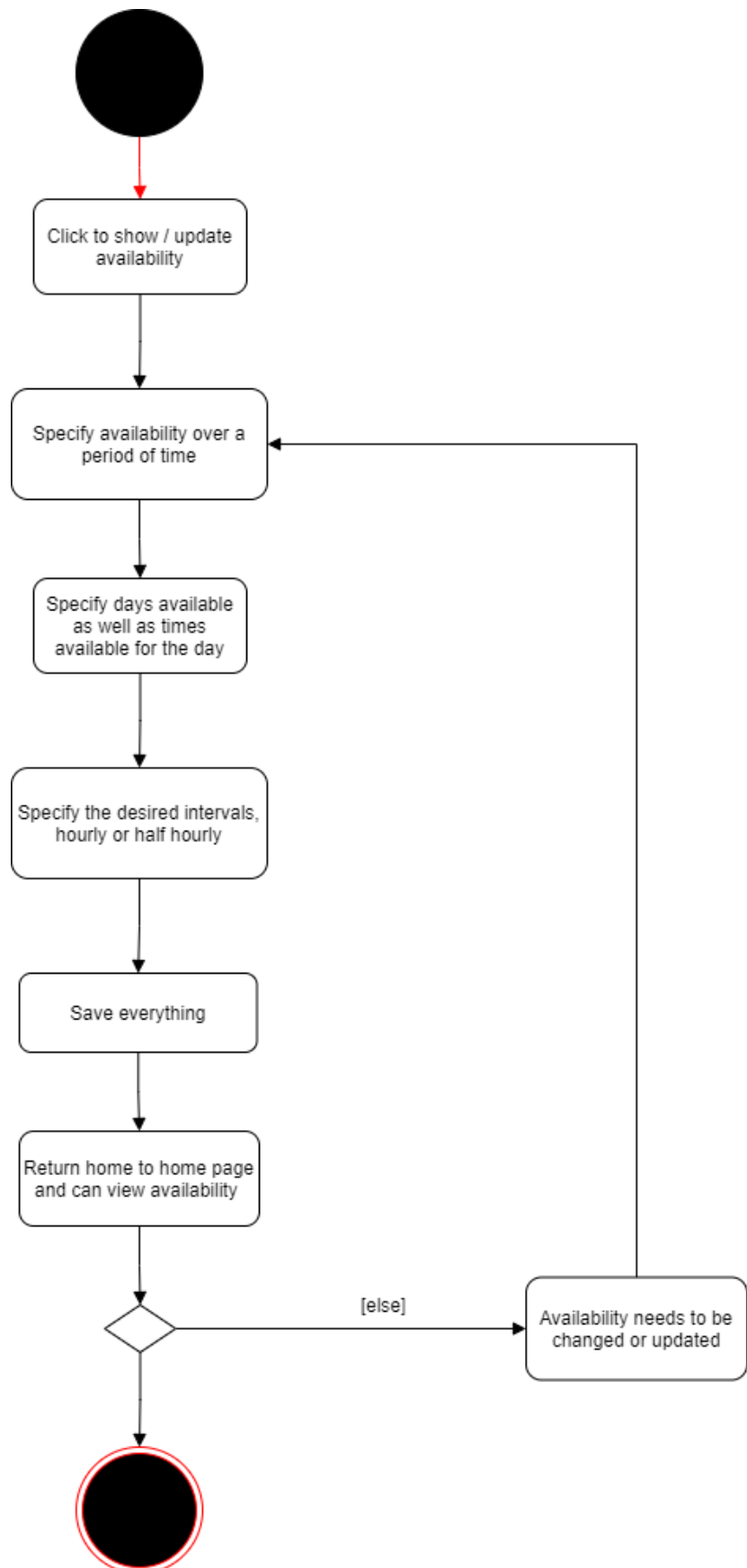
Process View

Activity Diagram

Click to show / update availability

Specify availability over a period of time

Specify days available as well as times available for the day

Specify the desired intervals, hourly or half hourly

Save everything

Return home to home page and can view availability

[else]

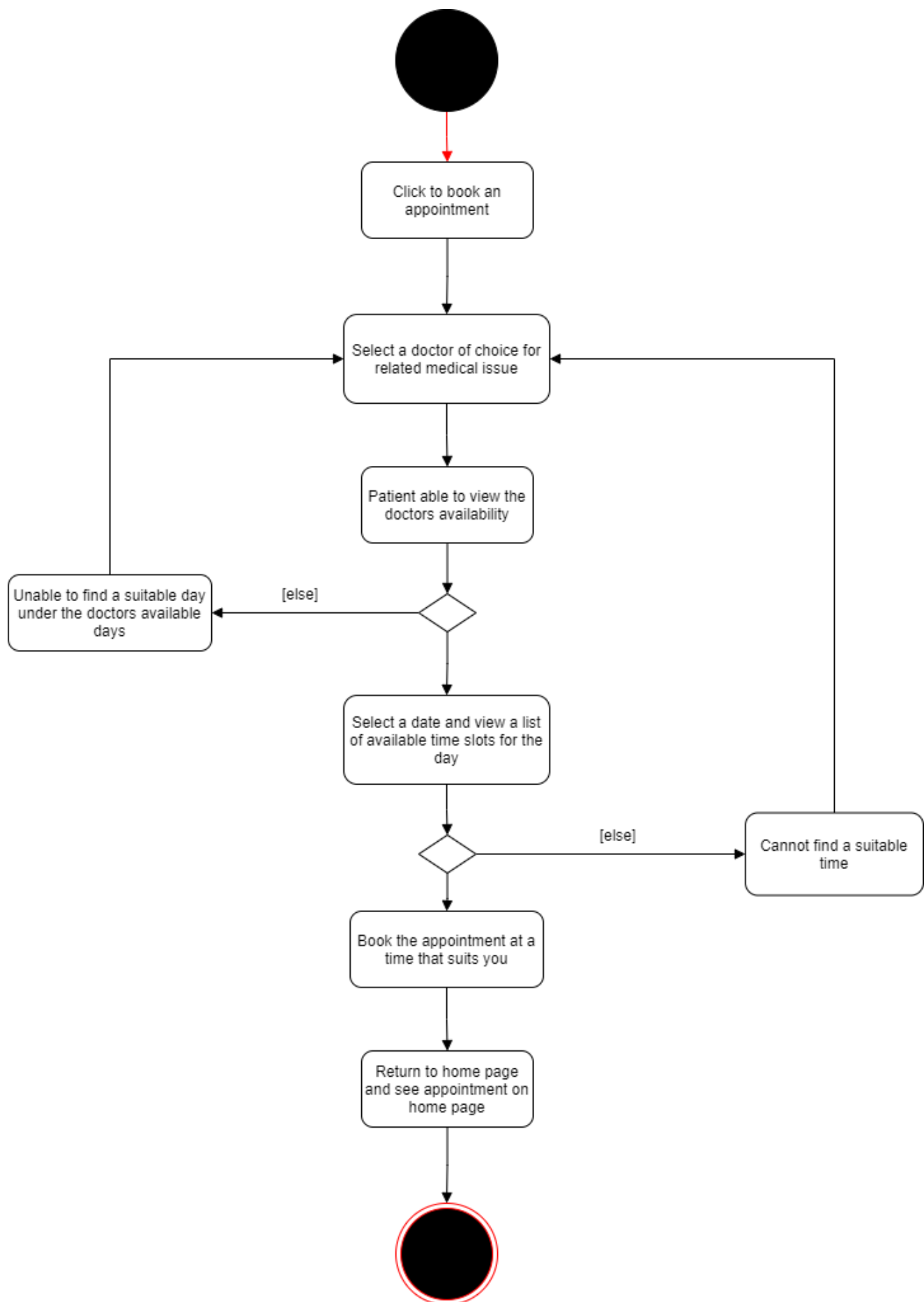Availability needs to be changed or updated

Figure – An activity diagram for Not Discovery Doctors

The diagram above shows an activity diagram for Not Discovery doctors. When a doctor logs into the website / app, he or she can click on the books tab on the home page. Here the doctor will be able to specify their availability over a certain period of time. Once the doctor specifies their available days, the time slots for these days should also be specified. Once the time slots have been specified, the doctor should then indicate if they would like to see patients in hourly intervals or half-hour intervals. After all the required information has been saved the doctor will be taken back to the home page and can view their availability. If the doctor is unhappy with anything he/she can go back into the doctor's availability and update the necessary information.

Figure – An activity diagram for Not Discovery Patients

The diagram above shows an activity diagram for the Not Discovery System. When a patient logs into the website / app, he or she can click the book an appointment tab on the home page. Here the patient will be able to select a doctor of their choice for any medical issues and view they doctors availability. Here the patient can see on which days that the doctor is available, and if none of these days are suitable the patient can go a back and find a different doctor. If the patient is happy with a particular day, he or she can select that day and a list of available times will appear. If the patient is not happy with any of these time, he/ she can select a different day or go back and select a different doctor. If the patient is happy with a particular day and time, he/ she can then book an appointment with the doctor. Once this has been done, the patient will be redirected to the home page and will be able to see when their appointment is scheduled for.

Click to book an appointment

Select a doctor of choice for related medical issue

Patient able to view the doctors availability

[else]

Unable to find a suitable day under the doctors available days

Select a date and view a list of available time slots for the day

[else]

Cannot find a suitable time

Book the appointment at a time that suits you

Return to home page and see appointment on home page
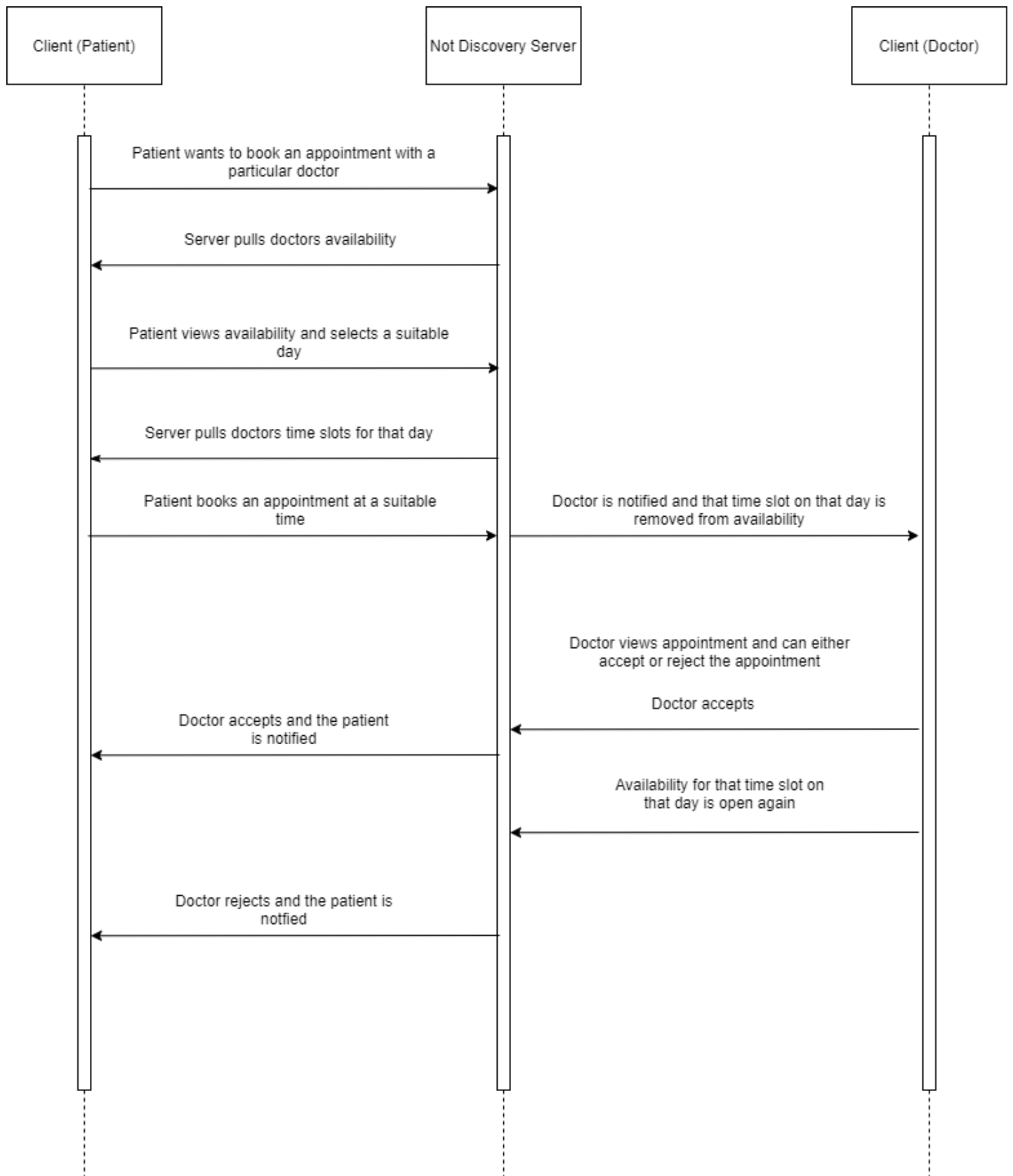
Sequence Diagram

Figure – A sequence diagram for Not Discovery

This figure shows a sequence diagram for the Not Discovery System. This diagram shows how the different components / objects in a system interact in a sequential order (i.e., it describes how & in what order the objects in the system function). Here we can clearly see three objects interaction (the client (a patient), the Not Discovery server, and the second client (a doctor)). When a patient clicks to book an appointment with a certain doctor, the server pulls the information on that doctor's availability. The patient can then click on a suitable day, and the server will pull information on the time slots the doctor has for that day. Once the patient has found a suitable time and books an appointment, the server will notify the doctor and remove this time slot from the availability (to avoid double booking). The doctor can either accept or reject to see the patient. If the doctor accepts then the patient will be notified. However, if the doctor rejects, then the patient will be notified and the availability for that slot will become available once again.
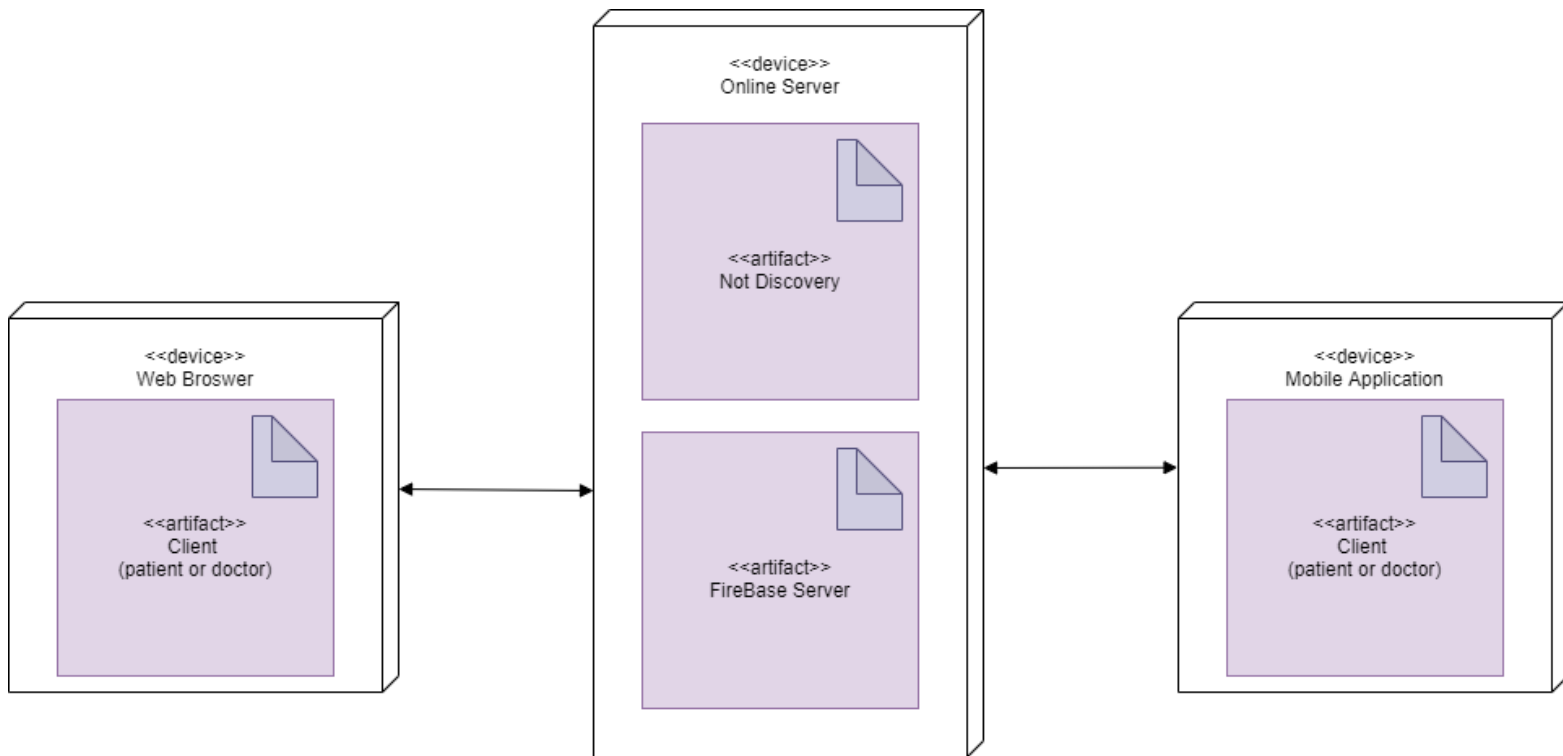
Physical View

Figure – A deployment diagram for Not Discovery

This figure shows a deployment diagram for the Not Discovery system. This diagram shows the structural view used to model the physical aspects of the software system. Here we see three devices (the web browser, the online server, and the mobile application). In this diagram we also see that there are artifacts associated to each device. Client is associated with the web browser as well as the mobile application, Not Discovery and the Firebase Server are associated with the online server.
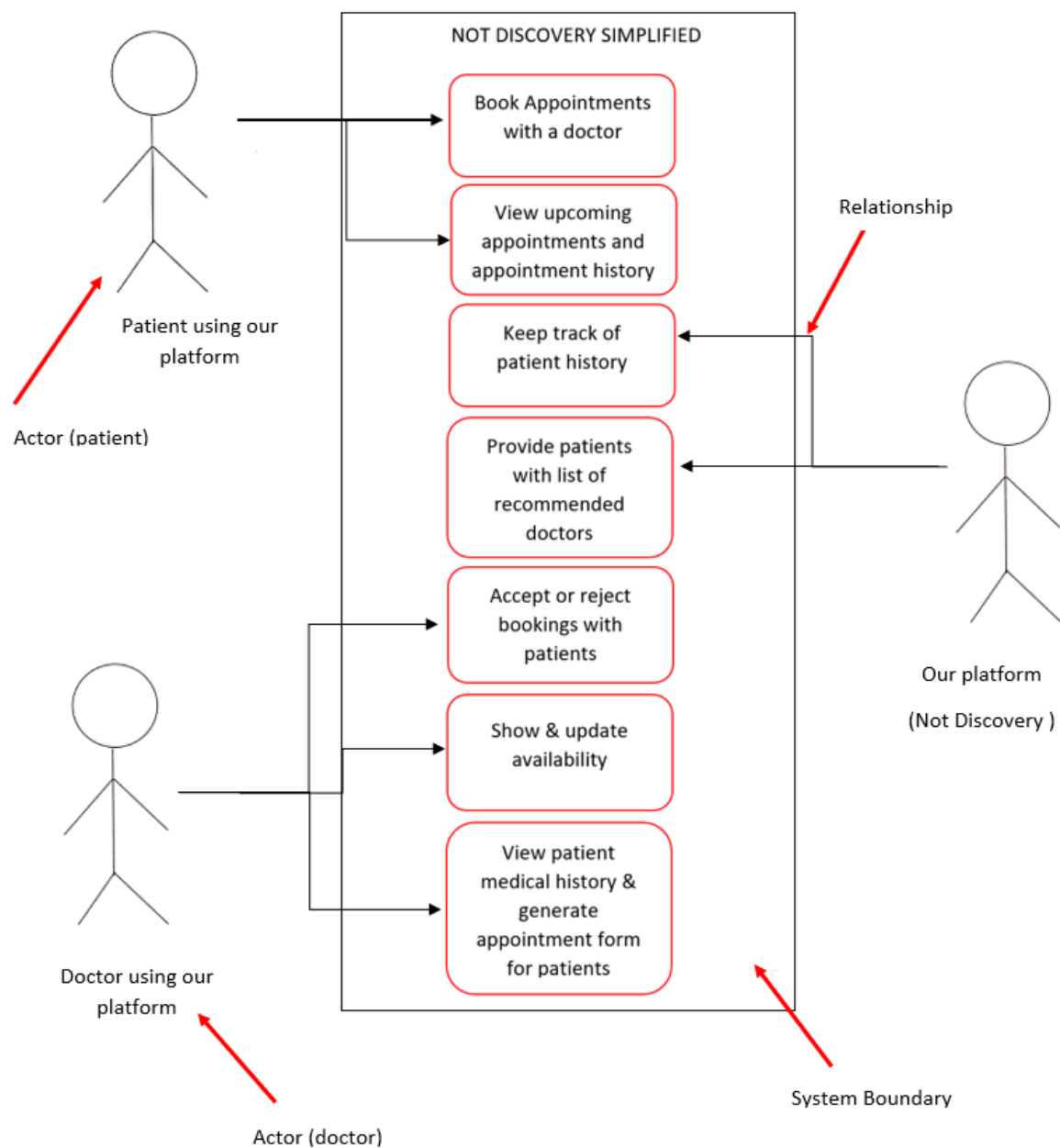
Figure - A use case diagram showing a simplified overview of Not Discovery

The figure above shows a user case diagram. In this diagram we can see the activities that a user (either a patient or doctor) using our system can perform. For a patient these activities include booking appointments, viewing appointment history, and viewing upcoming appointments. For a doctor these activities include accepting or rejecting appointments, showing availability, viewing patient history, and generating appointment forms after consulting with a patient. The diagram also shows the tasks and activities that the Not Discovery system can perform. These activities include keeping track of patient history and providing patients with a list of recommended doctors.

SPRINT 1

1. User Login App
   As a user, I want to be able to login to the app with my email address / username and password so that I can use the app.

   This includes:
   - Creating the respective tables
   - Login with username and password
   - Incorrect username or password should deny access to the system
   - Password must be hashed for security purpose

2. User Login Website
   As a user, I want to be able to login to the website with my email address / username and password so that I can use the website.

   This includes:
   - Creating the respective tables
   - Login with username and password
   - Incorrect username or password should deny access to the system
   - Password must be hashed for security purpose

3. New User Registration App
   As a user, I want to be able to register with the app, so that I can use the app.

   This includes:
   - A registration for doctors and a registration for patients
   - Patients must provide their name, age, identification number, place of residence, email address, pre-existing conditions, and password
   - Doctors must provide their field of specialization, qualifications, years of experience, email address and password

4. New User Registration Website
   As a user, I want to be able to register on the website, so that I can use the website.

   This includes:
   - A registration for doctors and a registration for patients
   - Patients must provide their name, age, identification number, place of residence, email address, pre-existing conditions, and password
   - Doctors must provide their field of specialization, qualifications, years of experience, email address and password

5. Landing page / screen (one for the app and one for the website)
   As a user, after successfully logging-in I want to be directed to a "home" page so that I can start using the system for all my medical needs and appointments.

   - Note: The doctors landing page and patients User interface should not look the same. The patient should see his/ her last appointment with a doctor and a doctor should see his/her last appointment with a patient

6. Template form for a doctor to record information after / during a patient visit on App
   As a doctor, I want to be able to generate an appointment form for patients so that I can keep a record with all the important information from that appointment.

   This includes:
   - Name of patient
   - Date of visit
   - Notes from the appointment
   - Prescribed medication
   - Save button

7. Template form for a doctor to record information after / during a patient visit on Website
   As a doctor, I want to be able to generate an appointment form for patients so that I can keep a record with all the important information from that appointment.

   This includes:
   - Name of patient
   - Date of visit
   - Notes from the appointment
   - Prescribed medication
   - Save button

Acceptance Criteria

1. User Login App
   As a user, I want to be able to login to the app with my email address / username and password so that I can use the app.

   Acceptance Criteria:

   - ✓ Given that I am a doctor, when I log onto the app with my respective email address / username, then I should be taken to the home screen off the app. When I type in the incorrect login details, then I should not be taken to the home screen of the app.
   - ✓ Given that I am a patient, when I log onto the app with my respective email address / username, then I should be taken to the home screen off the app. When I type in the incorrect login details, then I should not be taken to the home screen of the app.
   - ✓ Both the doctor and the patient will be required to login with their respective email address / username and password, if either of these credentials are incorrect the user will be denied access to the app.

2. User Login Website
   As a user, I want to be able to login to the website with my email address / username and password so that I can use the website.

   Acceptance Criteria:

   - ✓ Given that I am a doctor, when I log onto the website with my respective email address / username, then I should be taken to the home page off the website. When I type in the incorrect login details, then I should not be taken to the home page of the website.
   - ✓ Given that I am a patient, when I log onto the website with my respective email address / username, then I should be taken to the home page off the website. When I type in the incorrect login details, then I should not be taken to the home page of the website.
   - ✓ Both the doctor and the patient will be required to login with their respective email address / username and password, if either of these credentials are incorrect the user will be denied access to the website.

3. New User Registration App
   As a user, I want to be able to register with the app, so that I can use the app.

   Acceptance Criteria:

   - ✓ Given that I am a doctor, when I register on the app, then I should be able to fill out all the necessary information required before I can use the app.
   - ✓ Given that I am a patient, when I register on the app, then I should be able to fill out all the necessary information required before I can use the app.
   - ✓ Patient registration should include name, age, identification number, place of residence (some address field), email address, field for pre-existing medical conditions and password.
   - ✓ Doctor registration should include name, age, field of specialization (i.e., optometrist, dentist, surgeon, etc.), qualifications, years of experience, email address and password.

4. New User Registration Website
   As a user, I want to be able to register on the website, so that I can use the website.

   Acceptance Criteria:

   - ✓ Given that I am a doctor, when I register on the website, then I should be able to fill out all the necessary information required before I can use the website.
   - ✓ Given that I am a patient, when I register on the website, then I should be able to fill out all the necessary information required before I can use the website.
   - ✓ Patient registration should include name, age, identification number, place of residence (some address field), email address, field for pre-existing medical conditions and password.
   - ✓ Doctor registration should include name, age, field of specialization (i.e., optometrist, dentist, surgeon, etc.), qualifications, years of experience, email address and password.

5. Landing page / screen (one for the app and one for the website)
   As a user, after successfully logging-in I want to be directed to a "home" page so that I can start using the system for all my medical needs and appointments.

   Acceptance Criteria:

   - ✓ Given that I am a doctor, when I login successfully and see the home screen of the app, then I should be able to see my most recent patient form.
   - ✓ Given that I am a patient, when I login successfully and see the home screen of the app, then I should be able to see my most recent appointment with a doctor.
   - ✓ For now, this can be a template form / dummy form saved in the database.

- ✓ Details of the patient form should include patient name, date of visit, notes form the appointment and any prescribed medication.
- ✓ NOTE! Important to also save the relationships between patients and doctors in the database.

6. Template form for a doctor to record information after / during a patient visit on App
As a doctor, I want to be able to generate an appointment form for patients so that I can keep a record with all the important information from that appointment.

Acceptance Criteria:

- ✓ Given that I am a doctor, when I click to generate an appointment form, then I can record all the important information from that appointment.
- ✓ For now, this can be a template form / dummy form saved in the database.
- ✓ Details of the patient form should include patient name, date of visit, notes form the appointment and any prescribed medication as well as a save button so that the information can be stored in the database.
- ✓ NOTE! Important to also save the relationships between patients and doctors in the database.

7. Template form for a doctor to record information after / during a patient visit on Website
As a doctor, I want to be able to generate an appointment form for patients so that I can keep a record with all the important information from that appointment.

Acceptance Criteria:

- ✓ Given that I am a doctor, when I click to generate an appointment form, then I can record all the important information from that appointment.
- ✓ For now, this can be a template form / dummy form saved in the database.
- ✓ Details of the patient form should include patient name, date of visit, notes form the appointment and any prescribed medication as well as a save button so that the information can be stored in the database.
- ✓ NOTE! Important to also save the relationships between patients and doctors in the database.

SPRINT 2

1. Bookings Form for Patient – App
   As a patient, I want to be able to make an appointment with a doctor of my choice so that a doctor can attend to all my medical needs / problems.

   This includes:
   - Creating the respective tables
   - Patient able to specify field of specialization they want the doctor to be in (e.g., dentist, surgeon, etc.)
   - Patient should see a calendar with highlighted days to show when the doctor is available for consultations (i.e., available to see patients)
   - When a patient clicks on an available date, a list of times should appear in either hourly or half hourly intervals.
   - Once a patient has booked an appointment, that specific slot should no longer be available on the doctor's side. Both the doctor and the patient should be notified.

2. Bookings Form for Patient – Website
   As a patient, I want to be able to make an appointment with a doctor of my choice so that a doctor can attend to all my medical needs / problems.

   This includes:
   - Creating the respective tables
   - Patient able to specify field of specialization they want the doctor to be in (e.g., dentist, surgeon, etc.)
   - Patient should see a calendar with highlighted days to show when the doctor is available for consultations (i.e., available to see patients)
   - When a patient clicks on an available date, a list of times should appear in either hourly or half hourly intervals.
   - Once a patient has booked an appointment, that specific slot should no longer be available on the doctor's side. Both the doctor and the patient should be notified.

3. Bookings / Availability for Doctors – App
   As a doctor, I want to be able to select my available days in a month so that I can see patients and help them to know when I am available for a consultation.

   This includes:
   - Storing information in respective tables
   - A doctor should be able to specify their availability to see patients in a month or they can select a date range so that patients know when they are available

- The doctor should then be able to specify the hours they are available for.
- The hours the doctor is available for should be specified by either half hour intervals or one-hour intervals
- Once this information has been saved (i.e., stored in the database) the patients should be able to see the doctor's availability.

4. Bookings / Availability for Doctors - Website
As a doctor, I want to be able to select my available days in a month so that I can see patients and help them to know when I am available for a consultation.

This includes:
- Storing information in respective tables
- A doctor should be able to specify their availability to see patients in a month or they can select a date range so that patients know when they are available
- The doctor should then be able to specify the hours they are available for.
- The hours the doctor is available for should be specified by either half hour intervals or one-hour intervals
- Once this information has been saved (i.e., stored in the database) the patients should be able to see the doctor's availability.

Acceptance Criteria

1. Bookings Form for Patient – App
   As a patient, I want to be able to make an appointment with a doctor of my choice so that a doctor can attend to all my medical needs / problems.

   Acceptance Criteria:

   - ✓ Given that I am a patient, when I want to book for an appointment, then I should be able to enter a specific field (e.g., dentist, surgeon, etc.) and a list of relevant doctors should appear.
   - ✓ Given that I am a patient, when I select a certain doctor, then the doctors calendar should show up with available days (doctor is able to see a patient) in a month highlighted.
   - ✓ Given that I am a patient, when I click on an available date, then a list of corresponding time slots for the day (either in 1 hour or half an hour intervals) should appear.
   - ✓ Given that I am a patient, when I have booked an appointment, then the available slot should be removed from the doctor's calendar and the doctor should be notified.

2. Bookings Form for Patient – Website
   As a patient, I want to be able to make an appointment with a doctor of my choice so that a doctor can attend to all my medical needs / problems.

   Acceptance Criteria:

   - ✓ Given that I am a patient, when I want to book for an appointment, then I should be able to enter a specific field (e.g., dentist, surgeon, etc.) and a list of relevant doctors should appear.
   - ✓ Given that I am a patient, when I select a certain doctor, then the doctors calendar should show up with available days (doctor is able to see a patient) in a month highlighted.
   - ✓ Given that I am a patient, when I click on an available date, then a list of corresponding time slots for the day (either in 1 hour or half an hour intervals) should appear.
   - ✓ Given that I am a patient, when I have booked an appointment, then the available slot should be removed from the doctor's calendar and the doctor should be notified.

3. Bookings / Availability for Doctors – App
   As a doctor, I want to be able to select my available days in a month so that I can see patients and help them to know when I am available for a consultation.

   Acceptance Criteria:

   ✓ Given that I am a doctor, when I want to show my availability in a month, then I can select a date range to show when I am available.
   ✓ Given that I am a doctor , when I specify the days, I am available in a week, then I should be able to specify the hours in a day that I am available.
   ✓ Given that I am a doctor, when I specify the hours, I am available, then I should be able to specify if I am available in hourly or half hourly intervals.
   ✓ Given that I am a doctor, when I specify my intervals and save everything, then my patients should be able to see my availability.

4. Bookings / Availability for Doctors - Website
   As a doctor, I want to be able to select my available days in a month so that I can see patients and help them to know when I am available for a consultation.

   Acceptance Criteria:

   ✓ Given that I am a doctor, when I want to show my availability in a month, then I can select a date range to show when I am available.
   ✓ Given that I am a doctor , when I specify the days, I am available in a week, then I should be able to specify the hours in a day that I am available.
   ✓ Given that I am a doctor, when I specify the hours, I am available, then I should be able to specify if I am available in hourly or half hourly intervals.
   ✓ Given that I am a doctor, when I specify my intervals and save everything, then my patients should be able to see my availability.

SPRINT 3

User Stories

1. Displaying appointments on doctor side and patient side when a patient books and appointment – Website (fix from sprint 2)
   As a user, when an appointment has been made the appointment should appear on the home page of the respective doctor and patient so that both users are informed and made aware of the appointment.

2. Show list of upcoming appointments on doctor side and patient side – App (fix from sprint 2)
   As a user, when an appointment has been made the appointment should appear on the home page of the respective doctor and patient in a list format showing all the upcoming appointments.

3. Implementation of doctor's appointment form to bookings – Website
   As a doctor, I want to be able to fill out an appointment form for all my patients so that I can keep a history of the appointment.

   This includes:
   - Clickable option for doctor to generate an appointment form for a patient who has booked an appointment
   - Certain information such as the patients name, date and time of the appointment should be preloaded onto the form
   - The information on this form should be saved in the database and should be accessible to the doctor at a later stage if need be
   - See sprint 1 for a general idea of what the form should have

4. Implementation of doctor's appointment form to bookings – App
   As a doctor, I want to be able to fill out an appointment form for all my patients so that I can keep a history of the appointment.

   This includes:
   - Clickable option for doctor to generate an appointment form for a patient who has booked an appointment
   - Certain information such as the patients name, date and time of the appointment should be preloaded onto the form
   - The information on this form should be saved in the database and should be accessible to the doctor at a later stage if need be
   - See sprint 1 for a general idea of what the form should have

5. Implementation of Appointment History, both the doctor and the patient should be able to see the appointment form once the appointment has taken place – Website
As a user, I should be able to see my appointment history so that I can either track patient progress or view patient medical history.

This includes:
- The doctor being able to see a list of patient histories
- The patient being able to see a list of doctors the patient has recently visited

6. Implementation of Appointment History, both the doctor and the patient should be able to see the appointment form once the appointment has taken place – App
As a user, I should be able to see my appointment history so that I can either track patient progress or view patient medical history.

This includes:
- The doctor being able to see a list of patient histories
- The patient being able to see a list of doctors the patient has recently visited

7. When a booking has been made, a message should be sent to the doctor and the patient in the form of an email – Website
As a user, I want an email sent to me whenever an appointment has been made, so that I am aware of the appointment and so that I can be reminded of the appointment

This includes:
- The patient receiving an email confirming the booking
- The doctor receiving an email notifying him/ her that an appointment had been made

8. When a booking has been made, a message should be sent to the doctor and the patient in the form of an email – App
As a user, I want an email sent to me whenever an appointment has been made, so that I am aware of the appointment and so that I can be reminded of the appointment

This includes:
- The patient receiving an email confirming the booking
- The doctor receiving an email notifying him/ her that an appointment had been made

Acceptance Criteria

1. Displaying appointments on doctor side and patient side when a patient books and appointment – Website (fix from sprint 2)
   As a user, when an appointment has been made the appointment should appear on the home page of the respective doctor and patient so that both users are informed and made aware of the appointment.

   Acceptance Criteria:

   ✓ Given that I am a patient, when I have booked an appointment with a particular doctor, then the appointment should appear on my home page under a list of upcoming appointments
   ✓ Given that I am a doctor, when a patient has booked an appointment with me, then that available slot should be removed from my calendar and the appointment should appear on my home page under a list of upcoming appointments

2. Show list of upcoming appointments on doctor side and patient side – App (fix from sprint 2)
   As a user, when an appointment has been made the appointment should appear on the home page of the respective doctor and patient in a list format showing all the upcoming appointments.

   Acceptance Criteria:

   ✓ Given that I am a patient, when I have booked an appointment with a particular doctor, then the appointment should appear on my home page under a list of upcoming appointments
   ✓ Given that I am a doctor, when a patient has booked an appointment with me, then the appointment should appear on my home page under a list of upcoming appointments

3. Implementation of doctor's appointment form to bookings – Website
   As a doctor, I want to be able to fill out an appointment form for all my patients so that I can keep a history of the appointment.

   Acceptance Criteria:

   ✓ Given that I am a doctor, when I see an appointment on my home page, then I should have the option of filling out an appointment form for the patient.
   ✓ Given that I am a doctor, when I click on the appointment form, then certain information should already be preloaded to make filling out the form much quicker and easier

- ✓ Given that I am a doctor, when click to save the appointment form information, then everything should be saved in the database so that I can view this information at a later stage if need be
- ✓ Note! The appointment should form should have the patients name preloaded, the date and time of the appointment, doctors name and specialization, a text area for a general description where the doctor can make notes on how the appointment went and a second text are for any prescribed medication (this text area is optional, the rest is compulsory)

4. Implementation of doctor's appointment form to bookings – App
   As a doctor, I want to be able to fill out an appointment form for all my patients so that I can keep a history of the appointment.

   Acceptance Criteria:

   - ✓ Given that I am a doctor, when I see an appointment on my home page, then I should have the option of filling out an appointment form for the patient.
   - ✓ Given that I am a doctor, when I click on the appointment form, then certain information should already be preloaded to make filling out the form much quicker and easier
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5. Implementation of Appointment History, both the doctor and the patient should be able to see the appointment form once the appointment has taken place – Website
   As a user, I should be able to see my appointment history so that I can either track patient progress or view patient medical history.

   Acceptance Criteria:

   - ✓ Given that I am a doctor, when I want to view my appointment history , then a list of respective appointment forms should appear.
   - ✓ Given that I am a patient, when I want to view my appointment history, then a list of doctor's appointment forms should appear.
   - ✓ Create an Appointment History Button

6. Implementation of Appointment History, both the doctor and the patient should be able to see the appointment form once the appointment has taken place – App
As a user, I should be able to see my appointment history so that I can either track patient progress or view patient medical history.

   Acceptance Criteria:

   - ✓ Given that I am a doctor, when I want to view my appointment history , then a list of respective appointment forms should appear.
   - ✓ Given that I am a patient, when I want to view my appointment history, then a list of doctor's appointment forms should appear.
   - ✓ Create an Appointment History Button

7. When a booking has been made, a message should be sent to the doctor and the patient in the form of an email – Website
As a user, I want an email sent to me whenever an appointment has been made, so that I am aware of the appointment and so that I can be reminded of the appointment

   Acceptance Criteria:

   - ✓ Given that I am a doctor, when a patient books an appointment with me, then an email should be sent to me informing me about the appointment.
   - ✓ Given that I am a patient, when I book an appointment with a doctor, then an email should be sent to me confirming the appointment.

8. When a booking has been made, a message should be sent to the doctor and the patient in the form of an email – App
As a user, I want an email sent to me whenever an appointment has been made, so that I am aware of the appointment and so that I can be reminded of the appointment

   Acceptance Criteria:

   - ✓ Given that I am a doctor, when a patient books an appointment with me, then an email should be sent to me informing me about the appointment.
   - ✓ Given that I am a patient, when I book an appointment with a doctor, then an email should be sent to me confirming the appointment.

SPRINT 4

User Stories

1. Doctors and patients have the ability to cancel an appointment – Website
   As a user, I want to be able to cancel an appointment if I am unable to attend the appointment.

   This includes:
   - Doctor can cancel an appointment and the respective patient should be notified
   - Patient can cancel an appointment and the respective doctor should be notified
   - Remove appointment from database and free up that specific timeslot in the doctor's availability
   - Remove appointment from the respective doctor and patient home page

2. Doctors and patients have the ability to cancel an appointment – App
   As a user, I want to be able to cancel an appointment if I am unable to attend the appointment.

   This includes:
   - Doctor can cancel an appointment and the respective patient should be notified
   - Patient can cancel an appointment and the respective doctor should be notified
   - Remove appointment from database and free up that specific timeslot in the doctor's availability
   - Remove appointment from the respective doctor and patient home page

3. Notify doctor and patient when an appointment has been missed – Website
   As a user, I want to be notified when an appointment has been missed, so that I know an appointment has been missed.

   This includes:
   - Notifying a doctor when an appointment has been missed
   - Notifying a patient when an appointment has been missed
   - This can be done with an email or with a popup / toast message

4. Notify doctor and patient when an appointment has been missed – App
   As a user, I want to be notified when an appointment has been missed, so that I know an appointment has been missed.

   This includes:
   - Notifying a doctor when an appointment has been missed
   - Notifying a patient when an appointment has been missed
   - This can be done with an email or with a popup / toast message

5. Implement forget password
   As a user, I want to be able to have forget password feature, so that if I do forget my password, I can still access my account.

   This includes:
   - Implementing a forget password function on the login screen of the website, so that if a user has forgotten their password, they can still get access to their account.
   - This had already been implemented on the app User story from the group (this user story was not given by Rylan)

6. User Interface
   As a user, I want to be able to interact with a platform that is visually appealing so that my overall experience is better.

   This includes:
   - On the website, make sure that the website resizes and fills the whole screen correctly despite the screen resolution and the size of the screen
   - On the website, make the colour of the welcome page/ login and registration one solid colour
   - On the app, when viewing the appointment history, the patient and doctor should not be able to add / change anything on the appointment form (view instead of edit)
   - On the website and the app, find a template for the emails to make them look more professional

1. Doctors and patients have the ability to cancel an appointment – Website
   As a user, I want to be able to cancel an appointment if I am unable to attend the appointment.

   Acceptance Criteria:

   - ✓ Given that I am a doctor, when I am unable to attend an appointment, then I should be able to cancel the appointment and the respective patient should be notified
   - ✓ Given that I am a patient, when I am unable to attend an appointment, then I should be able to cancel the appointment and the respective doctor should be notified
   - ✓ Given that I am a doctor, when an appointment has been cancelled by a patient, then that timeslot should become available in my available bookings
   - ✓ Given that I am a user, when an appointment has been cancelled, then that appointment should be removed from my home page.

2. Doctors and patients have the ability to cancel an appointment – App
   As a user, I want to be able to cancel an appointment if I am unable to attend the appointment.

   Acceptance Criteria:

   - ✓ Given that I am a doctor, when I am unable to attend an appointment, then I should be able to cancel the appointment and the respective patient should be notified
   - ✓ Given that I am a patient, when I am unable to attend an appointment, then I should be able to cancel the appointment and the respective doctor should be notified
   - ✓ Given that I am a doctor, when an appointment has been cancelled by a patient, then that timeslot should become available in my available bookings
   - ✓ Given that I am a user, when an appointment has been cancelled, then that appointment should be removed from my home page.

3. Notify doctor and patient when an appointment has been missed – Website
   As a user, I want to be notified when an appointment has been missed, so that I am aware of the fact that an appointment has been missed.

   Acceptance Criteria:

   - ✓ Given that I am a doctor, when an appointment has been missed, then I should be notified
   - ✓ Given that I am a patient, when an appointment has been missed, then I should be notified

4. Notify doctor and patient when an appointment has been missed – App
As a user, I want to be notified when an appointment has been missed, so that I am aware of the fact that an appointment has been missed.

Acceptance Criteria:

✓ Given that I am a doctor, when an appointment has been missed, then I should be notified
✓ Given that I am a patient, when an appointment has been missed, then I should be notified

5. Implement forget password
As a user, I want to be able to have forget password feature, so that if I do forget my password, I can still access my account.

Acceptance Criteria:

✓ Given that I am a user, when I forget my password, then I can click on "forget password" and still have access to my account.

6. User Interface
As a user, I want to be able to interact with a platform that is visually appealing so that my overall experience is better.

Acceptance Criteria:

✓ Given that I am a user, when interacting with the website, then the website should correctly fill my screen despite my screen size and screen resolution
✓ Given that I am a user, when interacting with the app, then when I click to view appointment history, I should not be able to change or add anything to the appointment form
✓ Given that I am a user, when interacting with the website, then the website should have solid colours on the login, registration, and welcome page to make the website look more professional
✓ Given that I am a user, when interacting with the website and the app, then when an email is sent to notify me about an appointment, the email should be presented in a more professional way
✓ Given that I am a user, when interacting with the website and the app, then when an email is sent to notify me about an appointment, the email should be presented in a more professional way