



CS361: Assignment 3: Project Plan, Sprint 1 Plan, and UI Design (for Milestone #1)

Overview

Now that you've been introduced to the microservices concept, start planning your individual project. It's OK to change your plan later!

First, define the entire set of user stories for your individual project. The timespan for the user stories is this term but you don't have to finish implementing all the user stories this term. These user stories will need to go in a **Product Backlog** column/section/category of your task management system.

Next, move some of those user stories into a **Sprint Backlog**—these will be the user stories you WILL complete during this Sprint (for Milestone #1) and comprise your **Sprint Plan**. **Note these minimum requirements for Milestone #1:**

- Has a way for users to interact (e.g., provide input, push buttons, etc.)
- Reflects CSH
- Reflects three quality attributes you choose
 - *Hint: If you choose “usability” or “inclusivity” as a quality attribute, your corresponding non-functional requirement can involve the CSH*

Lastly, design your UI. This is NOT required to be graphical (e.g., could be text-based).

Instructions

Complete each item below by replacing the **highlighted text** (**Usability note:** double-click the text to select it).

1) Task Management System

Choose a task management system based on the spike you did previously.

Which task management system did you choose?

Jira

2) Product Goal and Backlog

You'll be using *some* Scrum methods in this course. Unfortunately, the Scrum Master and Product Owner roles don't work well in this setting. You will, however, be experiencing Scrum Events and Artifacts.

- a) What is your **Product Goal** for your individual project?

Develop software users can use to book doctor appointments with total convenience.
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The Scrum Guide (<https://scrumguides.org/scrum-guide.html>) doesn't give a detailed description of the Product Goal: “**describes a future state**”, or “**long-term objective**”. Example Product Goal: “Develop software I can use to communicate with my dog when I'm on vacation.”

- b) In a **Product Backlog** column, section, or category of your task management system create **user stories** for your entire **individual project**. Use INVEST to guide you.

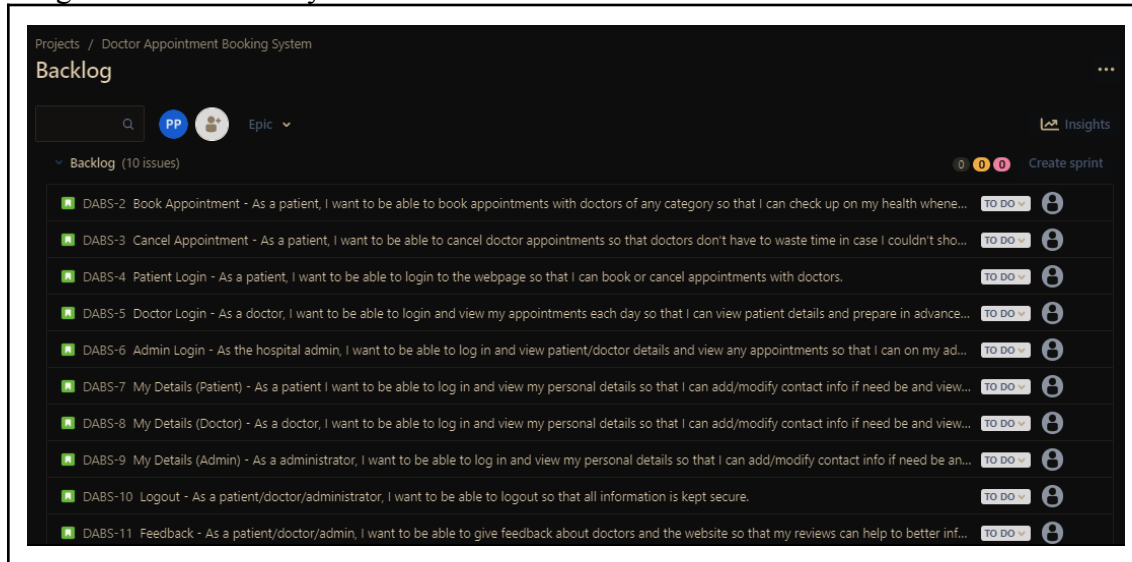
Requirements for user stories:

- Each has a **name**
- Each uses the “**As a... I want to... so that...**” format (see textbook)
- Total of at least **10** user stories (you will not have to implement all of these)
- As a set, must have **no obvious violations of INVEST**

	Name (e.g., “Login”)	“As a... I want to... so that...” format
1	Book Appointment	As a patient, I want to be able to book appointments with doctors of any category so that I can checkup on my health whenever I need to.
2	Cancel Appointment	As a patient, I want to be able to cancel doctor appointments so that doctors don't have to waste time in case I couldn't show up to an appointment.
3	Patient Login	As a patient, I want to be able to login to the webpage so that I can book or cancel appointments with doctors.
4	Doctor Login	As a doctor, I want to be able to login and view my appointments each day so that I can view patient details and prepare in advance about the meeting.
5	Admin Login	As the hospital admin, I want to be able to log in and view patient/doctor details and view any appointments so that I can on my administrative tasks each day.
6	My Details	As a patient I want to be able to log in and view my personal details so that I can add/modify contact info if need be and view other personal information.
7	My Details	As a doctor, I want to be able to log in and view my personal details so that I can add/modify contact info if need be and view other personal information.
8	My Details	As a administrator, I want to be able to log in and view my personal details so that I can add/modify contact info if need be and view other personal information.

9	Logout	As a patient/doctor/administrator, I want to be able to logout so that all information is kept secure.
10	Feedback	As a patient, I want to be able to give feedback about doctors and the website so that my reviews can help to better inform others.

Enter these user stories into your task management system. Take a **screenshot** so that the grader can confirm you added the stories.



3) Non-Functional Requirements

Select the top three quality attributes you care about for your individual project. See https://en.wikipedia.org/wiki/List_of_system_quality_attributes for ideas. Convert them into **non-functional requirements**.

a) **Which three quality attributes did you choose?**

Usability
Availability
Durability

b) **Why did you choose these quality attributes?** Ex: How are they relevant to your end-user? How are they relevant to your Product Goal? (1+ sentence per quality attribute)

Quality attribute	Why it's relevant to YOUR project
Usability	Usability is highly relevant to my project because the web application should provide a condition for the users to perform the tasks safely, effectively, and efficiently while enjoying the experience. Users should be able use the site with greater satisfaction.

Availability	As the website becomes popular, people and hospital staffs will highly rely on the website to add/cancel appointments and performs other tasks. So, I expect the website to be a highly available system (99.999%).
Durability	Durability is important because important transactions such as payment or appointment booking information should be stored confidentially. So, failure of system should not result in data loss.

- c) Convert your quality attributes to non-functional requirements. Must be testable. What are your three non-functional requirements? How would you test them? (1+ sentence each)

Quality Attribute 1	Usability
Non-functional requirement 1	Testable
How you would test that the non-functional requirement is satisfied	To test the usability quality attribute, I will make sure to create the appointment booking system as simple as possible to make it easy for first-time visitors and regular patients. There will be a feedback menu for all users (patients/doctors/admins) interacting with the app to submit their feedback for improving the user experience.

Quality Attribute 2	Availability
Non-functional requirement 2	Traceable
How you would test that the non-functional requirement is satisfied	In order to test the “availability” quality attribute, I, as the developer, will make sure there are less system downtimes maintaining high availability, and in case of downtimes, I will need to trace what caused the system downtime. User feedback such as “slow response” will also help me to bring the situation into consideration.

Quality Attribute 3	Durability
Non-functional requirement 3	Relevant

How you would test that the non-functional requirement is satisfied	To test that the “relevant” criteria is satisfied, I will need to ensure the software meets the stakeholder’s need. The system will gather specific feedback from all types of users including patients, doctors, and admins, and ask specific questions about their overall experience with the website to make sure the users enjoy the site knowing their data is durable.
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4) Sprint 1 Plan (for Milestone #1)

a) What is your **Sprint Goal**?

I plan to implement a web-based graphical doctor appointment booking system featuring primarily “Patient Login” and “Patient Booking Details” for my Spring 1 Plan (for Milestone #1).

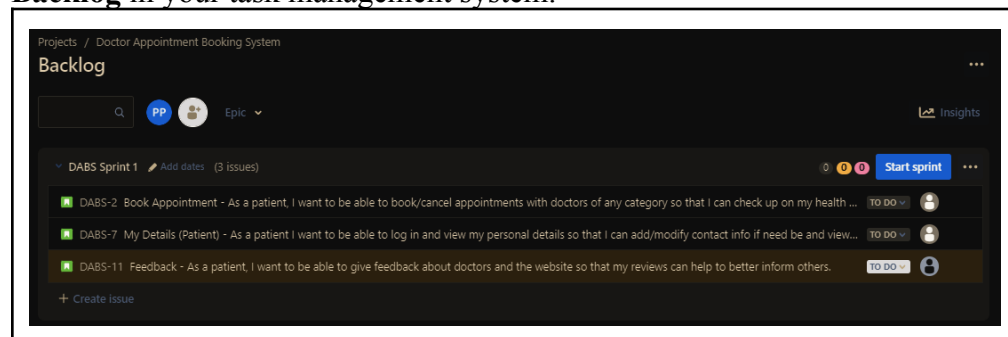
b) Next, select **at least three** user stories from your Product Backlog and move them to your **Sprint Backlog**. Choose what you think you can complete, but recall the minimum requirements (see Overview). Which user stories did you select?

As a patient, I want to be able to book/cancel appointments my doctor appointments so that I can check up on my health whenever I need to.

As a patient, I want to be able to log in and view my personal details so that I can add/modify contact info and view other personal information.

As a patient, I want to be able to give login/logout and give feedback about doctors and the website so that my reviews can help to better inform others.

c) Take a **screenshot** that shows you’ve moved these user stories into a **Sprint Backlog** in your task management system.



d) Now that you’ve selected your Sprint user stories, you will define several tasks for each user story—the tasks you’ll need to complete to complete the user story. Add tasks to each user story and take **screenshots** showing each user story’s tasks in your task management system. **Note:** It might work best to make your user story a task and your tasks subtasks of the user story.

Task/User story 1:

Add epic / DABS-2

Book Appointment - As a patient, I want to be able to book/cancel appointments with doctors of any category so that I can check up on my health whenever I need to.

Attach

Add a child issue

Link issue

Description

Add a description...

Activity

Show:

All

Comments

History

PP

Add a comment...

Pro tip: press **M** to comment

To Do

Pinned fields

Click on the next to a field label to start pinning.

Details

Assignee, Labels, Sprint, Story point estimate, Reporter

Created 1 hour ago

Updated 1 hour ago

Configure

Subtasks:

Name	Description	Icon	Actions
Book Appointment Feature 2	Add a category type and doctor name		<div>EditDelete</div>
Cancel Appointment	Allow user to view appointments first. Enter appointment ID to cancel appointment.		<div>EditDelete</div>
Error Handling	Error handle user selection for valid date & time selection as well as validate ID to cancel appt		<div>EditDelete</div>
Book Appointment Feature 1	Add appointment ID #		<div>EditDelete</div>
Book Appointment Feature 3	Allow user to select a date & time to book appointment		<div>EditDelete</div>

Task/User story 2:

Add epic / DABS-7

My Details (Patient) - As a patient I want to be able to log in and view my personal details so that I can add/modify contact info if need be and view other personal information.

Attach

Add a child issue

Link issue

Description

Add a description...

Activity

Show:

All

Comments

History

PP

Add a comment...

Pro tip: press **M** to comment

To Do

Pinned fields

Click on the next to a field label to start pinning.

Details

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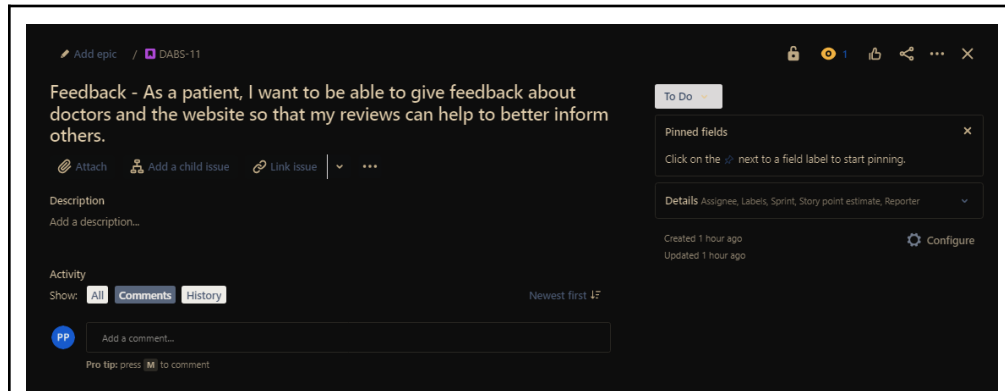
Updated 1 hour ago

Configure

Subtasks:

Name	Description	Icon	Actions
Cancel Appointment	Allow user to view appointments first. Enter appointment ID to cancel appointment.		<div>EditDelete</div>
Error Handling	Error handle user selection for valid date & time selection as well as validate ID to cancel appt		<div>EditDelete</div>
Book Appointment Feature 2	Add a category type and doctor name		<div>EditDelete</div>
Personal Details	Log in and view/edit personal details such name, contact, etc		<div>EditDelete</div>
Book Appointment Feature 1	Add appointment ID #		<div>EditDelete</div>
Book Appointment Feature 3	Allow user to select a date & time to book appointment		<div>EditDelete</div>

Task/User story 3:



Subtasks:

Name	Description	Icon	Actions
Cancel Appointment	Allow user to view appointments first. Enter appointment ID to cancel appointment.		Edit Delete
Error Handling	Error handle user selection for valid date & time selection as well as validate ID to cancel appt		Edit Delete
Add Feedback Menu	Add a feedback box and a rating option to receive user feedback.		Edit Delete
Add Common Questions Search Box	Add a dropdown list of common questions to answer general questions.		Edit Delete
Chat with Representative	Add the option to chat with a representative.		Edit Delete
Book Appointment Feature 2	Add a category type and doctor name		Edit Delete
Personal Details	Log in and view/edit personal details such name, contact, etc		Edit Delete
Book Appointment Feature 1	Add appointment ID #		Edit Delete
Book Appointment Feature 3	Allow user to select a date & time to book appointment		Edit Delete

- e) Lastly, you'll need a **Definition of Done** for each user story. Figure out where to put this on your user story task in your task management system (e.g., in the task's description area).

Requirements for each Definition of Done:

- Placed with its user story
- Has at least four acceptance criteria
- Acceptance criteria should include checking that your **non-functional requirements** are met
- Acceptance criteria use the "Given... when..." format

Enter your Definitions of Done below and in your task management system.

User Story Definition of Done 1

Which **user story** is this Definition of Done for?

As a patient, I want to be able to book/cancel appointments my doctor appointments so that I can check up on my health whenever I need to.

What is its **Definition of Done**?

Acceptance criterion	For which quality attribute (if any)?
Given the user is trying to book an appointment	Availability

with a doctor, when the user enters the ID number and selects a category type and doctor name they will be able to select a particular date/time for an appointment.	
Given the user is trying to book an appointment with a doctor, when the user selects an unavailable date/time, then the system prompts the user to select a valid response.	Usability
Given the user is trying to cancel an appointment with a doctor, when the user enters the correct ID number associated with the booked appointment then the user will be able to cancel his/her appointment	Usability
Given the user is trying to book/cancel an appointment and wants to submit feedback, the data should be stored and reported directly to the hospital team admin.	Durability

User Story Definition of Done 2

Which **user story** is this Definition of Done for?

As a patient, I want to be able to log in and view my personal details so that I can add/modify contact info and view other personal information.

What is its **Definition of Done**?

Acceptance criterion	For which quality attribute (if any)?
Given the user is trying to view personal information, when the user clicks the “My Details” page then the user should be able to see all previously stored user information.	Durability
Given the user is trying to view personal information, when the user wants to modify existing PII then the user should be able to update any PII data with ease of convenience.	Usability
Given the user is trying to view personal information, when the user wants to view appointment booking details then the user should be able to view/modify any booking information with ease of convenience	Availability
Given the user is trying to view personal information when the user is experiencing	Availability

issues viewing/updating any data on the webpage then the user should be able to submit immediate feedback to the system without system errors or downtime.	
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User Story Definition of Done 3

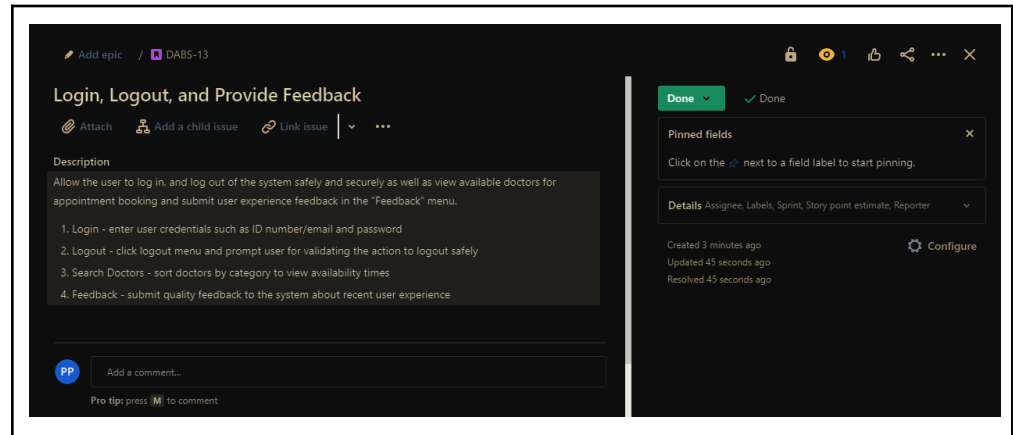
Which **user story** is this Definition of Done for?

As a patient, I want to be able to give login/logout and give feedback about doctors and the website so that my reviews can help to better inform others.

What is its **Definition of Done**?

Acceptance criterion	For which quality attribute (if any)?
Given the user wants to access the website, when the user wants to log in then the system should be able to authorize/deny log in credentials based on stored credentials on the server without any data corruption.	Durability
Given the user wants to access the website, when the user wants to logout then the system should be highly available in order to safely and securely log the user out without crashing.	Availability
Given the user wants to search a list of available doctors sorted by category, when the user clicks on any dropdown menu then the user should be able to select and view doctors as well a list of booking appointments for each doctor.	None
Given the user wants to give overall feedback about the quality of doctors for treatments or their recent experiences with the website, when the user clicks the “Feedback” menu on the top of the screen, the user should be able to submit their reviews with ease of convenience.	Usability

Take a **screenshot** of at least one user story’s Definition of Done in your task management system for your grader to confirm.



5) UI Design with the CSH

Create a **paper prototype** of Milestone #1's UI design. **Low-fidelity** is acceptable and appropriate. Make your UI design **reflect all the CSH**.

Requirements for paper prototype:

- Show **every** screen / **user-facing view**
- Indicate **what** users can interact **with** (Ex: make buttons look buttony)
- Indicate **how** users interact if it's not obvious (Ex: arrows to show an element can be rotated)
- Indicate **what happens** when users interact (Ex: a modal appears)
- Must have **no obvious violations of the CSH**. Graders will look at your work but won't spend all day scrutinizing it!

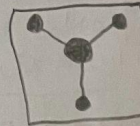
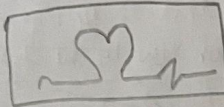
Doesn't have to be a *graphical* user interface. Can be text-based / speech-controlled / a robot / etc. (but don't design a robot if you can't implement a robot during the remainder of this term!)

You can change your design later if you want to.

- (a) Paste **scans / photos / screenshots** of your paper prototype below.

LOGIN SCREEN

DOCTOR APPOINTMENT BOOKING



CHOOSE YOUR LOGIN

ADMIN LOGIN

PATIENT LOGIN

DOCTOR LOGIN

PATIENT LOGIN

Email/ID:

Password:

DOCTOR LOGIN

Email/ID:

Password:

ADMIN LOGIN

ID:

Password:

NEW PATIENT BOOKING

NEW FEATURE

You can now search for specific doctors using the "Search Doctor" menu

OK!

INFORMATION!!!

If you want to book this slot, click "OK"!

OK

CANCEL

Appointment ID:

Category:

Doctor:

Date:
SMTWRFSS
25

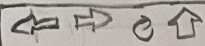
TIME SLOT
ALREADY TAKEN!

Time:

VALID
TIME
SLOT

CONFIRM!

PATIENT BOOKING:



<https://www.india.com/hijetails>

Go

NEW Feature

Just wanted to let you know that if you're a new user, view a short demo on how to get things!

Not right now!

Yes please!

My Details

Book Appt

View Bookings

Cancel Booking

Search Doctor

Feedback

Logout

DETAILS

User ID:

Name:

Address:

Phone:

Email:

UPDATE

CANCEL BOOKING

Appointment ID:

Booking Cancelled!
OK!

CANCEL BOOKING!

INFORMATION!!!

Are you sure you want to cancel the booking?

Yes!

No!

VIEW BOOKINGS

Appt #	Patient Name	Doctor Name	Date	Time
1001	Mohit	ABC	05-15-2021	3:30 PM
3759	Mohit	DEF	08-12-2021	4:00 PM

SEARCH DOCTOR

Search By:

Rate

Heart

Kidney

Doctor ID	Name	Address	Mobile	Gate
103	ABC	NYC	9076613012	Gate
105	EFG	NYC	9134453312	Gate

PATIENT SCREEN:

My Details	Book Appointment	View Bookings	Cancel Booking	Search Doctor	Feedback	Logout
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FEEDBACK

Provide your feedback below!

Choose question ▼

What is your medical insurance policy?

How do I change my billing address?

What are costs by operation type?

Chat with representative!

DOCTOR LOGIN

Email/ID: NOTE: Must end with @drc.com Password:

DOCTOR SCREEN

My Appointments	My View Patient	My Details	Logout
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PATIENT DETAILS

Customer ID:

ID	Name	Address	Mobile	Email	Sex	Age
1001	Amitesh	NYC	5312990090	drc@gmail.com	M	35

PATIENT'S TREATMENT HISTORY

ID	Treatment Category	Treatment	Doctor Note	Date
1001	Bone	Pills	Normal	04-22-2020
1001	Lungs	Operation	Minor operation	12-16-2020

DOCTOR SCREEN

MY APPOINTMENTS

ID	Doctor Name	Date	Time
1537	ABC	09-09-2022	3-4 PM
2486	ABC	10-16-2022	8-9 PM

MY DETAILS

Doctor ID	Name	Category	DOB	Sex	Age
103	ABC	Bone	05-19-1979	Male	43

Admin Screen

View Doctors View Appointments Advanced Options Logout

VIEW DOCTORS

Doctor ID	Name	Address	Mobile	Sex	Age	Category
101	Amit	NYC	599-377-1111	M	41	Heart
102	Evan	NYC	244-866-3792	M	36	Bone
103	Natalie	NYC	975-444-6631	F	31	Kidney

VIEW APPOINTMENTS

User ID	Appointment Date	Appointment Time	Delete
9134	07-23-2022	4-5 PM	Delete
6694	08-18-2022	7-8 PM	Delete

FEEDBACK

User ID	Feedback	Date
1001	Good	01-27-22
1266	Average	06-14-22

Advanced Options

MY PROFILE

Name:

VIEW DOCTOR INFO:

Doctor ID:

Change Password: ☐ YES ☒ NO

My Profile

Add Doctor

View Feedback

Remove Doctor

Log Out

Remove Doctor

Category:

ID	Name	Category
1103	ABC	Bone
422	XYZ	Bone

ID:

(b) How does your design reflect each CSH? (1+ sentence per CSH)

CSH	How your design reflects it
1	On the patient screen, there is a "New Feature" dialog window (<i>bottom half of the first screenshot</i>) which lets a new patient search for specific doctors using their name or category type using the "Search Doctor" menu.

2	In the admin screen, there are “Advanced Options” which let the admin of hospital view, add, modify, and delete personal information as well as doctor information. Clicking an option would explain the costs.
3	Each user (patient, doctor, and admin) has the option to see the contents of the webpage and jump to the section they are interested in. These contents are listed on the very top of every page, listed as columns. For example, a patient is able to view his/her profile, book a doctor appointment, cancel an appointment, search doctor(s), give feedback, and logout.
4	Familiar features of this app are always kept available and will not be removed to better facilitate a smooth user experience. They can only be improved. For example, the smartphone and tablet versions of this app offer the same features which makes switching between the two easy.
5	Backtracking options such as undo/redo are always kept available at the top of each every window in their browser and within the website. For example, a patient can click the back button before scheduling a appointment and a patient can also reverse his/her actions after booking an appointment.
6	On the patient screen, there is a “New Feature” dialog window (<i>top half of second screenshot</i>) which lets a new patient watch a short tutorial on how to get started in navigating the doctor appointment booking web application.
7	Inside the “Feedback” menu on the patient’s screen, users (patients) have the ability to select a commonly asked question before in the dropdown box and get their question answered. If they have further questions, they will be presented with the option to chat with a representative.
8	A dialog box with a warning message will be presented to all users (patients, doctors, and admin) which will notify them before impactful actions are executed such a patient canceling an appointment, a doctor modifying his/her personal details, and an admin exercising admin rights.

Now that you have a plan, begin implementation!

Submission

PDF or Word format via Canvas.

Grading

You are responsible for satisfying all criteria listed in the Canvas rubric for this assignment. You will be able to revise this assignment if you miss points.

Questions?

Please ask via Ed so that others can benefit from the answer.