CSCI-3508-001 Introduction to Software Engineering

PERSONA USE-CASE JOURNEY MAPS

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Allen, B; Palacios Herzog, E; Tran, J;
Truong, I; Yohannes, B
University of Colorado, Denver
Department of Computer Science

Contents

1 Sign-up (Mobile Application) 3
- 1.1 Actor . . . 3
- 1.2 Goal . . . 3
- 1.3 Precondition(s) . . . 3
- 1.4 Description . . . 3
- 1.5 Error Condition(s) . . . 3
- 1.6 Alternative Course(s) . . . 4
- 1.7 Post-condition(s) . . . 4

2 Enter Contact Information 5
- 2.1 Actor . . . 5
- 2.2 Goal . . . 5
- 2.3 Precondition(s) . . . 5
- 2.4 Description . . . 5
- 2.5 Error Condition(s) . . . 5
- 2.6 Alternative Course(s) . . . 6
- 2.7 Post-condition(s) . . . 6

3 Record Taken Medication 7
- 3.1 Actor . . . 7
- 3.2 Goal . . . 7
- 3.3 Precondition(s) . . . 7
- 3.4 Description . . . 7
- 3.5 Error Condition(s) . . . 7
- 3.6 Alternative Course(s) . . . 8
- 3.7 Post-condition(s) . . . 8

4 Notification for missed medication. 9
- 4.1 Actor . . . 9
- 4.2 Goal . . . 9
- 4.3 Precondition(s) . . . 9
- 4.4 Description . . . 9
- 4.5 Error Condition(s) . . . 9
- 4.6 Alternative Course(s) . . . 10
- 4.7 Post-condition(s) . . . 10

5 Linking Accounts. 11
- 5.1 Actor . . . 11
- 5.2 Goal . . . 11
- 5.3 Precondition(s) . . . 11
- 5.4 Description . . . 11
- 5.5 Error Condition(s) . . . 11

5.6 Alternative Course(s) . . . 12
5.7 Post-condition(s) . . . 12

6 Sign Up (Web App) 13
6.1 Actor . . . 13
6.2 Goal . . . 13
6.3 Precondition(s) . . . 13
6.4 Description . . . 13
6.5 Error Condition(s) . . . 13
6.6 Alternative Course(s) . . . 14
6.7 Post-condition(s) . . . 14

7 Add Patient Information. 15
7.1 Actor . . . 15
7.2 Goal . . . 15
7.3 Precondition(s) . . . 15
7.4 Description . . . 15
7.5 Error Condition(s) . . . 15
7.6 Alternative Course(s) . . . 16
7.7 Post-condition(s) . . . 16

8 Add Medication for a Patient 17
8.1 Actor . . . 17
8.2 Goal . . . 17
8.3 Precondition(s) . . . 17
8.4 Description . . . 17
8.5 Error Condition(s) . . . 18
8.6 Alternative Course(s) . . . 18
8.7 Post-condition(s) . . . 18

9 Notify Doctor of Missed Medications. 19
9.1 Actor . . . 19
9.2 Goal . . . 19
9.3 Precondition(s) . . . 19
9.4 Description . . . 19
9.5 Error Condition(s) . . . 19
9.6 Alternative Course(s) . . . 20
9.7 Post-condition(s) . . . 20

1 Sign-up (Mobile Application)

1.1 Actor

Bob. An elderly patient who needs some help with medication reminders.

1.2 Goal

Successfully sign up to the Daily Doses application.

1.3 Precondition(s)

Application is downloaded and installed on phone.

1.4 Description

The app user opens the app for the first time and selects the option to sign up. This takes them to a sign-up screen, where they enter their personal information needed for the type of account they are setting up (contact/patient). The user clicks continue and comes to a terms and conditions page with a scrolling page and a radio checkbox for confirmation. After checking the box, the user clicks continue one more time, and enters the app. If a medication schedule can be found for the information given for a patient account, it automatically loads into the app.

Actor Action	System Response
1. The user opens the app.	2. The options to sign up or log in appear.
3. The user chooses the option to sign up.	4. Options to choose the type of account (contact or patient) appear.
5. The user chooses the option for the appropriate account.	6. The interface to enter in all the needed personal information appears.
7. The user enters the information necessary to sign up and clicks continue.	8. The information for the user's account is updated in the database.
9. The user confirms they read and understand the terms & conditions, and clicks continue.	10. The information for the user's account is updated in the database.
	11. The home screen for the app loads and fetches the medication schedule if it exists.

1.5 Error Condition(s)

- App does not open and crashes.
- Options to sign up or log in are not visible.
- Options to input certain information do not appear while setting up account.

1.6 Alternative Course(s)

- The user chooses the option to log in because they have already created an account. They enter the information that they have already signed up with, and log into their account.
- The user enters incorrect information when signing up for their account. They realize and go back to correct it, or do not notice, and continue.
- The user enters invalid information when signing up for their account. Clicking continue directs them to the field that is invalid, with a red note indicating the issue.
- The user chooses the incorrect account type or clicks log in when they intend to sign up. They click a back button, which returns them to the previous screen. Information previously entered is saved and fills out the new form.

1.7 Post-condition(s)

- The user's new account is created, and the information is stored in the database.
- If a medicine schedule can be found for a 'patient' type account, it is loaded.

2 Enter Contact Information

2.1 Actor

Bob. An elderly patient who needs some help with medication reminders.

2.2 Goal

Enter a contact on the app.

2.3 Precondition(s)

- App is installed on phone.
- Someone is around to help install the app.
- User is signed into a 'patient' type account.

2.4 Description

Bob opens the app and selects the button for editing his contacts. A screen appears where the contact information for the contact can be entered, which includes the email of the contact. He enters the information and selects the option to confirm the contact. An email with a link is sent to the contact to allow their accounts to be connected.

Actor Action	System Response
1. Bob selects the option to edit his contact.	2. The screen to enter in information for a contact appears.
3. Bob enters the information for his contact and clicks confirm.	4. An email is sent to the contact to link the accounts.
	5. The contact's information is updated in the database.
	6. A confirmation message appears on the app, and the contact screen closes.

2.5 Error Condition(s)

- The screen does not open, or options do not appear.
- Bob does not know the contact information for his daughter.
- Email confirmation is not sent to the emergency contact to initiate linking.

2.6 Alternative Course(s)

- The email link that is sent to Bob's contact does not work. Bob returns to the contact screen and chooses the option to resend the link to his contact.
- Bob enters the wrong contact information. He will edit the contact information again, so the email is sent to the correct contact.
- Bob's phone is not connected to the internet. A message appears stating that the phone is not connected to the internet, and that the email will be sent once the phone is. The message is sent at first internet connection.

2.7 Post-condition(s)

A link is sent to the contact, and the information for Bob's contact is updated in the database.

3 Record Taken Medication

3.1 Actor

Bob. An elderly patient who needs some help with medication reminders.

3.2 Goal

Bob records if he has taken his medication or not.

3.3 Precondition(s)

- The phone must be on.
- App should be downloaded on phone.
- Bob has signed into his account.

3.4 Description

At the scheduled time, a reminder appears on Bob's phone. He recognizes this as a reminder for his medication, takes the medication, and presses the green check indicating he has taken the medicine. The reminder disappears.

Actor Action	System Response
	1. Reminder pops up at scheduled time.
2. Bob takes his medication.	
3. Bob presses the green check button, indicating that he has taken his medication.	4. Database marks medication as taken.
	5. Alarm reminder disappears on phone.

3.5 Error Condition(s)

- Bob does not receive a reminder because his phone is off, out of battery, or the app is currently shut down.
- Reminder pops up earlier or later than what is scheduled in the app.
- Database does not record medication as taken/not taken or does not record the information at all.
- Alarm on app does not stop ringing even when button is pressed to turn it off.
- Bob pushes the button but forgets to take the medication.
- Bob does not have any more medication to take.

3.6 Alternative Course(s)

- Bob snoozes the alarm. The alarm goes off again after a set amount of time and Bob takes his medication.
- Bob snoozes the alarm too many times or does not respond to the notification past the time limit set for the medication. The app sends a reminder to the contact(s) that the medication has been missed.
- Bob's phone is not connected to the internet. A message appears stating that the phone is not connected to the internet, and that his contacts will receive a message that he did not take his medication if it is not turned on. He turns on his internet, and the database updates.

3.7 Post-condition(s)

- Database marks Bob's medications as taken (or not taken) for that day at that time.
- Alarm reminder disappears on phone.

4 Notification for missed medication.

4.1 Actor

Susy. Bob's daughter; a busy school teacher.

4.2 Goal

Know if her dad has missed his medication.

4.3 Precondition(s)

- App should be downloaded on Susy's phone.
- Susy has signed into her account.
- Susy is an emergency contact on Bob's account.
- Susy's account has confirmed the connection to Bob's account.
- Bob did not take his medication.

4.4 Description

Susy's phone alerts her with a unique sound that her father has not taken a dose of medicine. Susy dismisses the notification and takes an action she deems appropriate.

Actor Action	System Response
	1. A notification pops up.
2. Susy dismisses the notification.	
3. Susy reminds her father through calling his landline or takes another course of action.	

4.5 Error Condition(s)

- Susy does not receive the notification because her phone is off, out of battery, or the app is currently shut down.
- Notification does not pop up on Susy's phone when Bob does not take his medication.
- Notification pops up on Susy's phone a day after Bob misses his medication.
- Notification pops up for a different patient due to malfunction in database system.

4.6 Alternative Course(s)

- Susy dismisses the notification but does not remind her dad to take the medicine.
- Susy is busy and does not immediately dismiss the notification. She checks on it when she has time, calls her dad, and then dismisses it.

4.7 Post-condition(s)

The notification is dismissed and disappears from Susy's phone screen.

5 Linking Accounts.

5.1 Actor

Susy. Bob's daughter; a busy school teacher.

5.2 Goal

Link her account to her father's account to receive notifications.

5.3 Precondition(s)

- App should be downloaded on Susy's phone.
- Signed into a 'contact' type account.
- Susy is an emergency contact on Bob's account and the link has been sent to the email connected to her account.

5.4 Description

Susy opens her email and clicks on the link that was sent from Bob's account. It opens a web-page and updates the database to reflect the confirmation. The website offers a confirmation message and an option to open the app to see what 'patient' type accounts Susy will receive notifications from.

Actor Action	System Response
1. Susy opens her email and selects the link.	2. Web-page pops up and sends information to database to confirm.
3. Susy opens the app.	4. The app opens showing the newly added contact.

5.5 Error Condition(s)

- Susy does not receive the email because her phone is off, out of battery, or the app is currently shut down.
- Susy does not open her email and click on the confirmation link within the first 24 hours of when the link was sent to her to connect her account with Bob's account.
- Option to link the account is not visible.

5.6 Alternative Course(s)

Susy does not open the app after she confirms her email. She closes the web-page and continues with her day.

5.7 Post-condition(s)

- The database is updated to reflect that Susy has confirmed receiving notifications.
- The app updates on Susy's phone to show that her account is connected to Bob's account.

6 Sign Up (Web App)

6.1 Actor

The Doctor / Doctor's office

6.2 Goal

Sign up on the web application.

6.3 Precondition(s)

- Web-page is opened on computer.
- Internet access is required to access the web application.

6.4 Description

The app user opens the app for the first time and selects the option to sign up. This takes them to a sign-up screen, where they enter their information. The user clicks continue and comes to a scroll-able terms and conditions page with a radio checkbox for confirmation. After checking the box, the user clicks continue one more time.

Actor Action	System Response
1. The user opens the web-page.	2. The options to sigh up or log in appear.
3. The user selects the sign up option.	4. The interface to enter all the details appears.
5. The user enters the information necessary to sign up.	6. The information for the user's account is updated in the database.

6.5 Error Condition(s)

- App does not open and crashes.
- Options to sign up or log in are not visible.
- The internet connection drops.
- Options to input certain information do not appear while setting up account.
- The user signs up for their account using incorrect information and does not notice it.

6.6 Alternative Course(s)

- The user chooses the option to log in because they have already created an account. They enter the information that they have already entered, and log into their account.
- The user enters incorrect information when signing up for their account. They notice and correct it.
- The user clicks log in when they intend to sign up. They click a back button, which returns them to the previous screen.

6.7 Post-condition(s)

The user's new account is created, and the information is stored in the database.

7 Add Patient Information.

7.1 Actor

The Doctor / Doctor's office

7.2 Goal

Add a patient to the system.

7.3 Precondition(s)

- System to hold schedule information exists.
- Internet access is required to access the web application.
- Doctor has logged in to the web application.

7.4 Description

Doctor (or staff at Doctor's office) logs into web application and clicks a button to create a new patient. A screen opens to enter the personal information of the patient. They enter the information for the patient based off documents they have at the office. They click save and the information is saved in the database.

Actor Action	System Response
1. Doctor chooses option to add a patient on the web app.	2. Screen is updated to show form to enter patient's information.
3. Doctor inputs patient information and clicks the save button.	4. Web app adds patient to the database.
	5. Web app updates screen to show the added patient in the list.
6. Doctor can click on patient's profile and resume using the web app.	

7.5 Error Condition(s)

- Web application crashes or internet fails at some point during process.
- Interface to create or edit patient information does not open, so the doctor cannot add it to the system.
- Buttons or options on the interface of the application do not correspond to its actual functionality (i.e., Adding a scheduled medication instead deletes the scheduled medication).
- Doctor forgets to save the added patient's information.

7.6 Alternative Course(s)

- Doctor inputs incorrect information about the patient while creating the patient's profile. They notice the errors and fix them accordingly.
- Doctor chooses to edit a current patient in the system to update their information.

7.7 Post-condition(s)

- Web app displays screen showing that the new patient is added to the doctor's list of patients on the app. New patient's information is added to the database.
- The doctor can view and update new patient's information by clicking on the patient's profile.

8 Add Medication for a Patient

8.1 Actor

The Doctor / Doctor's office

8.2 Goal

Add medication to the schedule of a patient.

8.3 Precondition(s)

- System to hold schedule information exists.
- Has internet connection.
- Doctor has login to web application.
- Patient is already entered in the database.

8.4 Description

Doctor (or staff at Doctor's office) logs into web application and clicks a button to create a new schedule event for a specific patient to take their medicine. They edit the schedule options as appropriate, including the number of missed doses needed for their office to be notified, and then click a save button. The schedule event is saved into the database for that patient.

Actor Action	System Response
1. Doctor prescribes the medication.	
2. Doctor selects patient to add medication event to.	3. Options to edit schedule or add new scheduled medication appear.
4. Doctor chooses option to add new medication schedule.	5. Opens interface to create medication schedule.
6. Doctor edits schedule options for specific medication.	
7. Doctor clicks button to save medication schedule.	8. Scheduling information is saved in database for patient.
	9. The screen updates indicating the schedule event has been saved.

8.5 Error Condition(s)

- Web application crashes or internet fails at some point during process.
- Interface to create or edit new scheduled medication does not open, so the doctor cannot add it to the system.
- Scheduling information inputted is saved for the wrong patient in the database. Doctor does not notice error.
- Changes in schedule are not reflected on the patient's account.
- Buttons or options on the interface of the application do not correspond to its actual functionality (i.e., Adding a scheduled medication instead deletes the scheduled medication).

8.6 Alternative Course(s)

Doctor inputs medication schedule for wrong patient. Doctor removes medication schedule for wrong patient and adds it to the correct patient.

8.7 Post-condition(s)

- Schedule event is added to database for patient.
- The doctor can view and update new patient's information by clicking on the patient's profile.

9 Notify Doctor of Missed Medications.

9.1 Actor

The Doctor / Doctor's office

9.2 Goal

Know if a patient has missed a certain number of medications.

9.3 Precondition(s)

- Doctor's office has an account on the web app.
- Account for doctor's office is linked to phone number.
- Patient's account is linked to that doctor's office.
- Doctor's office has set a medication schedule for a certain medication (or pill pack) for the patient.
- A critical number of doses is set for the medication schedule. (Denoted as 'n').

9.4 Description

The database marks that the nth instance of the medicine was missed by a patient. An automatic call is sent out to the doctor's office associated with the patient, indicating the patient, which medication they missed, and how many times. Staff answers the call and takes appropriate action.

Actor Action	System Response
	1. Bob forgets to take his medication for the nth time.
	2. An automatic call is sent to the doctor's office.
3. Staff picks up the call and listens to the message.	
4. Staff reach out to Bob to see if everything is OK.	

9.5 Error Condition(s)

- Web application crashes or the doctor's internet connection fails at some point during the process.
- Doctor's office does not receive the call because the database is currently down, or no one is in the office.

- There is no one to answer the phone call and the voicemail is full.

9.6 Alternative Course(s)

- Staff listens to the voicemail message a few hours after the automated call was received.
- Staff are not able to reach Bob after receiving the automated call. They take the appropriate action (call 911, etc.).

9.7 Post-condition(s)

The database updates the number of times the doctor's office was called due to missed medications for the patient.