Mayo Clinic Java Application

Hospital Input and Feedback Response

(Phase II)

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Project Schedule

For

Team 18's Mayo Clinic Java Application

Prepared By:

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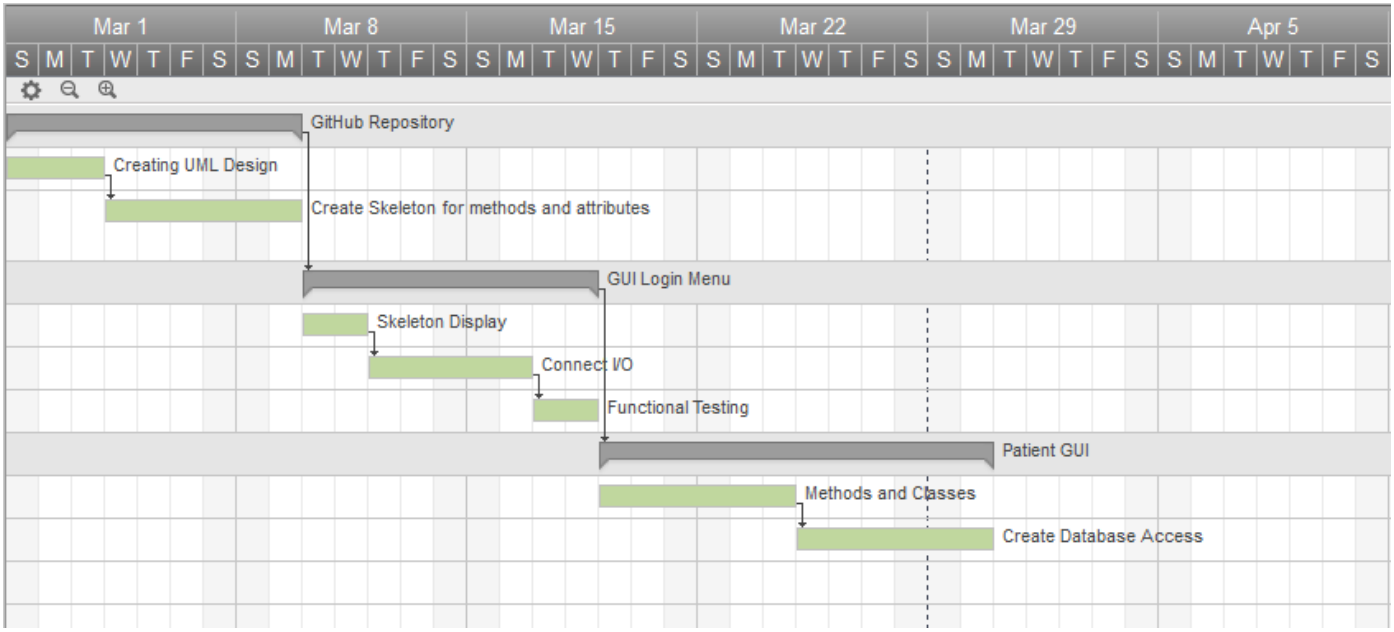
Task Name	Start Date	End Date	Assigned To	Duration
GitHub Repository	**03/01/15**	**03/09/15**		**7**
Creating UML Design	03/01/15	03/03/15	Matthew; Sharon	3
Create Skeleton for methods and attributes	03/04/15	03/09/15	Alexis; Loren; Autumn	4
GUI Login Menu	**03/10/15**	**03/18/15**		**7**
Skeleton Display	03/10/15	03/11/15	Matthew; Alexis	2
Connect I/O	03/12/15	03/16/15	Loren; Autumn	3
Functional Testing	03/17/15	03/18/15	Matthew; Sharon	2
Patient GUI	**03/19/15**	**03/30/15**		**8**
Methods and Classes	03/19/15	03/24/15	Alexis; Sharon	4
Create Database Access	03/25/15	03/30/15	Matthew; Loren; Autumn	4



Class Diagram and class descriptions

For

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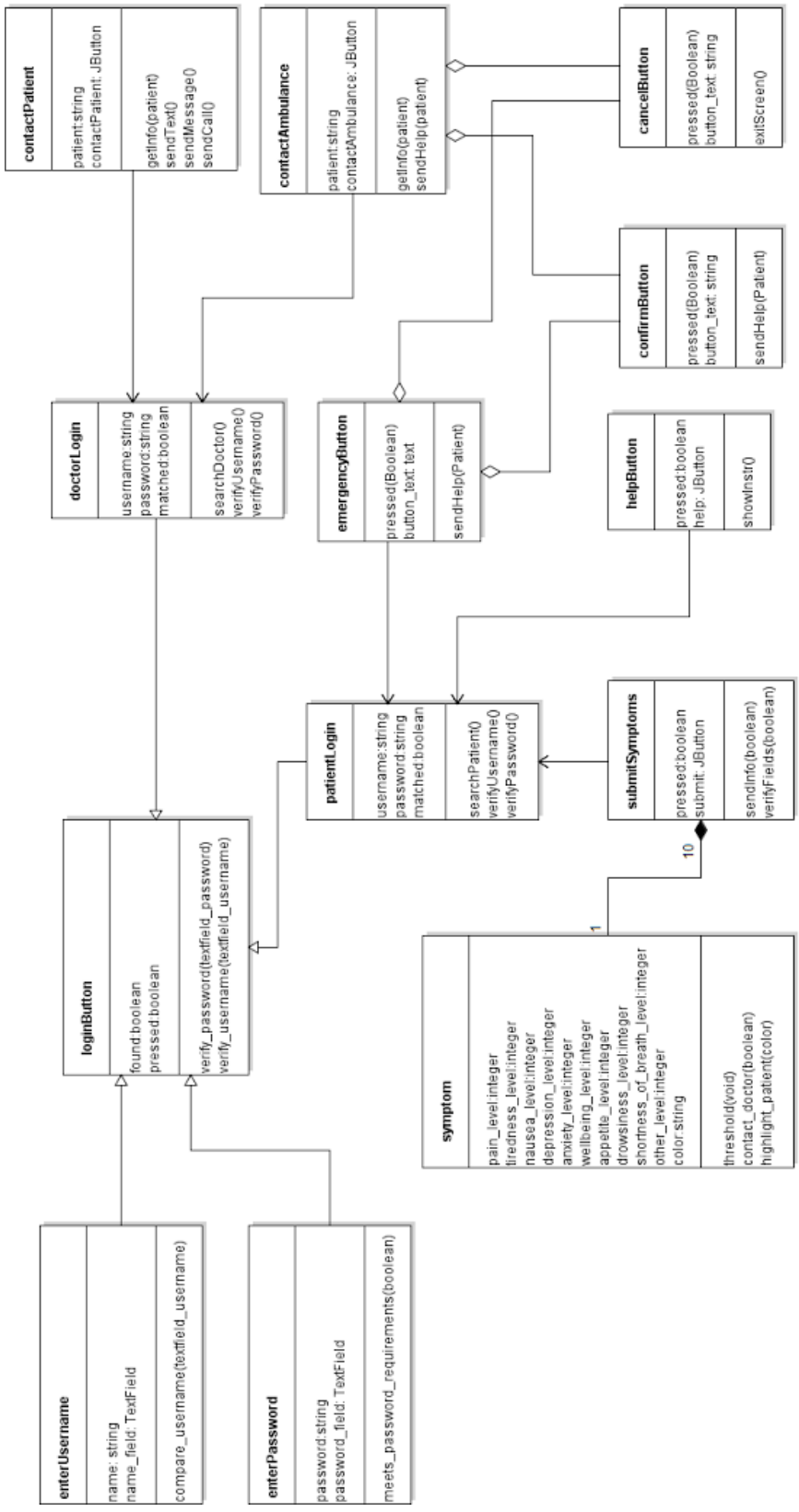
UML Class Diagrams



CRC Cards

enterUsername	
Responsibilities	Collaboration
1. Compares username to check if user exists	1. loginButton

enterPassword	
Responsibilities	Collaboration
1. Passes requirements for sufficient password	1.loginButton
2. Compares password to check if password is correct	

loginButton	
Responsibilities	Collaboration
1.Checks if username and password are correct	1.patientLogin
	2.doctorLogin

doctorLogin	
Responsibilities	Collaboration
1. Checks if username belongs to doctor	1.loginButton
2. Opens up doctor GUI	2.contactPatient
	3.contactAmbulance
	4.symptom

patientLogin	
Responsibilities	Collaboration
1.Checks if username belongs to patient	1. submitSymptoms
2. Opens up patient GUI	2.symptom
	3.helpButton
	4. emergencyButton

submitSymptoms	
Responsibilities	Collaboration
1.Check all required fields are filled	1. patientLogin
2. Store the symptoms	2. symptom

helpButton	
Responsibilities	Collaboration
1.Stores the user manual	1.enterUsername
2. Displays the user manual	2. enterPassword

emergencyButton	
Responsibilities	Collaboration
1.Calls the ambulance	1.enterUsername
	2. enterPassword

contactPatient	
Responsibilities	Collaboration
1.Allows doctor to communicate with patient	1. doctorLogin
2. Retrieving the patient's information	2. symptom
	3.cancelButton

contactAmbulance	
Responsibilities	Collaboration
1. Contacts emergency services	1. doctorLogin
2. Retrieves patients information	2.symptom
	3.cancelButton

cancelButton	
Responsibilities	Collaboration
1. Cancel requests	1. contactPatient
2. Exits window	2.contactAmbulance

confirmButton	
Responsibilities	Collaboration
1. Confirm requests	1. emergencyButton
2. Performs action	2.contactAmbulance

symptom	
Responsibilities	Collaboration
1. Records patient's symptoms	1. patientLogin
2. Displays Jsliders	2.submitSymptoms

Enter pain data use case:

Actors: Patient

Pre-conditions (Entry Conditions): Patient login password entered and verified. Accesses the "Symptoms" tab to send information to the physician.

Post-conditions (Exit Conditions): Results are documented and saved to the database and/or sent to physician for immediate response. Prompted with a message verifying the information was sent.

Scenario: The patient opens the application on any device that has access to the internet. The patient is prompted to login and enter credential (this scenario does not involve the emergency option as that option is an exception case where login credentials are overlooked). Once login credentials are validated, the patient may choose the option to send symptoms to their physician that they are feeling. Sending this information would also send the severity of the symptom based on a simple scale for understanding. Patient may also send a note to the physician that is related to the symptom for further understanding. Patient then verifies the information is as correct to their knowledge and sends the information. A dialogue of "Information Sent" will be presented to the patient to verify the physician has received the information.

Exceptions:

Invalid Login/password: An error will pop up to the patient and prompt for the information be re-entered into the system.

Exiting mid-entry/computer malfunction: Survey may not be saved properly.

Emergency option chosen: If the emergency option is chosen an ambulance will be summoned to get the patient to the nearest hospital.

Use-Case Relationships: Includes "Login" and "Access Patient conditions".

Viewing patient pain data use case:

Actors: Doctor

Pre-conditions (Entry Conditions): Doctor login and password entered and verified. Chooses a patient to view symptoms and information.

Post-conditions (Exit Conditions):

Scenario: Doctor accesses information for each patient that has set an appointment. Doctor is able to write notes and additional information with the information presented during the appointment.

Exceptions:

Invalid login/password: An error will show to the Doctor prompting the information be re-entered into the system.

Exiting mid-view/ computer malfunction: Current view location will be saved, this will allow immediate access to the patient's information once the connection has been restored to the application.

Use-Case Relationships: Includes "Login", "Suggest Treatment", and "Access Patient Conditions",

Doctor submits advice to patient use case:

Actors: Doctor

Pre-conditions (Entry Conditions): Doctor login and password entered and verified. Patient's symptoms are accessed.

Post-conditions (Exit Conditions): Dialog tells the user the information has been sent to patient.

Scenario: The Doctor accesses the application and is prompted for their login information. Once validated, the Doctor is shown a list of their patients. The Doctor accesses their patients' symptoms. From here the Doctor is able to suggest treatment for the patient or respond to the symptoms with the use of the emergency button.

Exceptions:

Invalid login/password: An error will show to the Doctor prompting the information be re-entered into the system.

Incomplete Submission/computer malfunction: Submission advice will be temporarily saved for the Doctor to access and edit. Otherwise user will be prompted they are leaving the document without it being completed.

Use-Case Relationships: Includes "Login", "Suggest Treatment" and "Access Patient Conditions"

Help button use case:

Actors: Patient and Doctor

Pre-conditions (Entry Conditions): User needs access to the program. The user can click the help button to view additional guides to the program.

Post-Conditions (Exit Conditions): Patient is able to close the help screen and continue inputting information or log out of the program. The help screen will not interfere with the information previously added to the survey.

Scenario: The user opens the application on any devices that has access to the internet. The user is then able to access the help button which will open in a new window and provide basic guides to access the application. The guide will contain useful information for both patients and doctors. The help guide is completely independent from the application and will not interfere with the surveys being done. User can exit out of the help guide whenever necessary.

Exceptions:

Help Directory Error: An error will display to the user the help button is not properly displaying, and will prompt user to restart the program.

Exiting mid-view/computer malfunction: The help screen will close when the program closes.

Use-Case Relationships: Includes “Login” and “Help” screen display.

Emergency button use case:

Actors: Patient and Doctor

Pre-conditions (Entry Conditions): Patient username and password logged in and verified.

Post-conditions (Exit Conditions): Doctor and ambulance contacted with patient information.

Scenario: Patient is in critical need of help. They enter their username and password to access the screen of the interface that allows them to press the Emergency Button. After pressing this button, there is a Confirm and a Cancel Button. The Cancel Button is available if it was accidental. However, if the Patient needs help, they the Confirm Button, and their Doctor and an ambulance are contacted with the Patient's information.

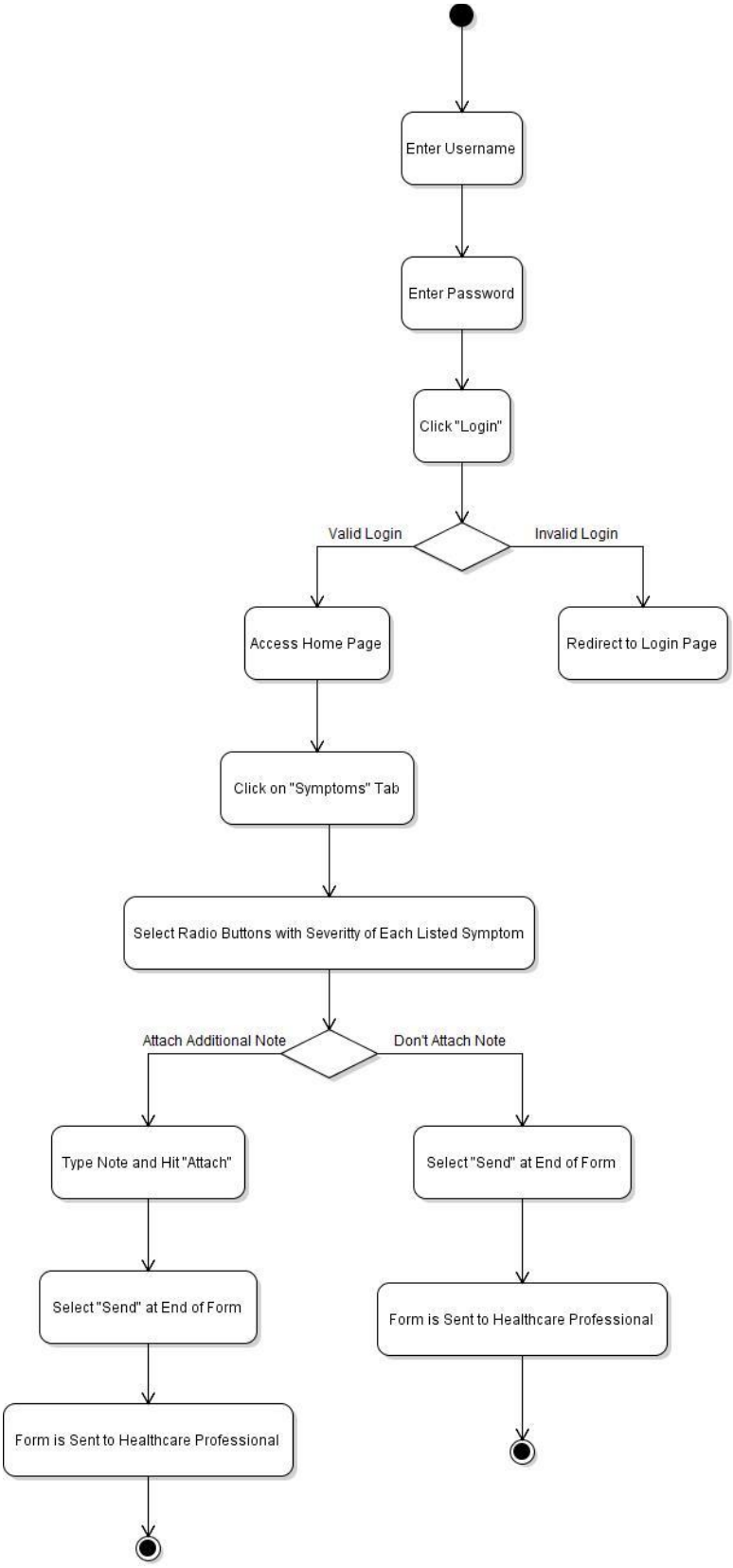
Exceptions:

Invalid login/password: An error stating that the password or the username entered was incorrect and/or not found.

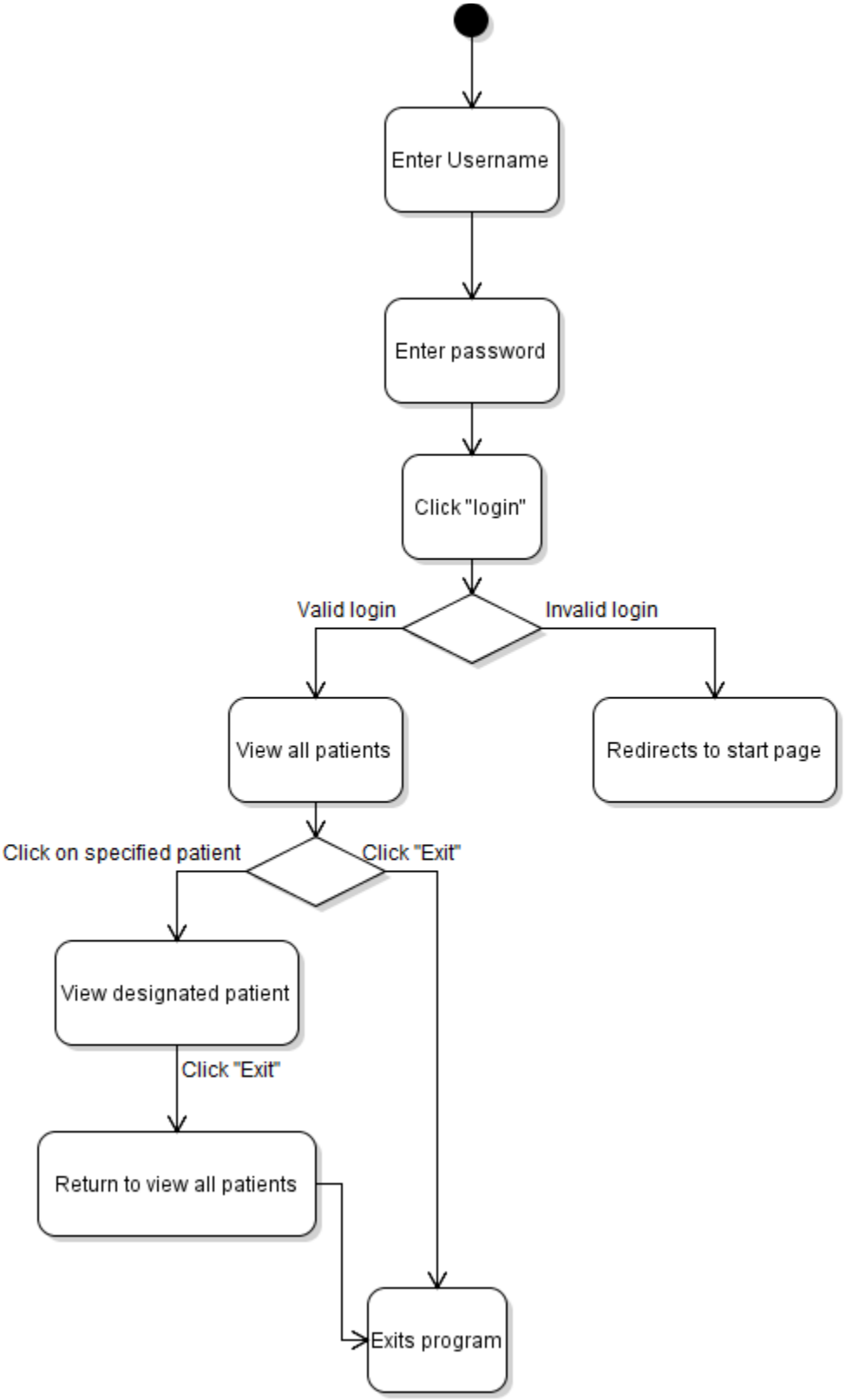
Incomplete Submission/computer malfunction: Submission advice will be temporarily saved for the Doctor to access and edit. Otherwise user will be prompted they are leaving the document without it being completed.

Use-Case Relationships: Includes "Login" and aggregate the "Cancel" Button and "Confirm" Button.

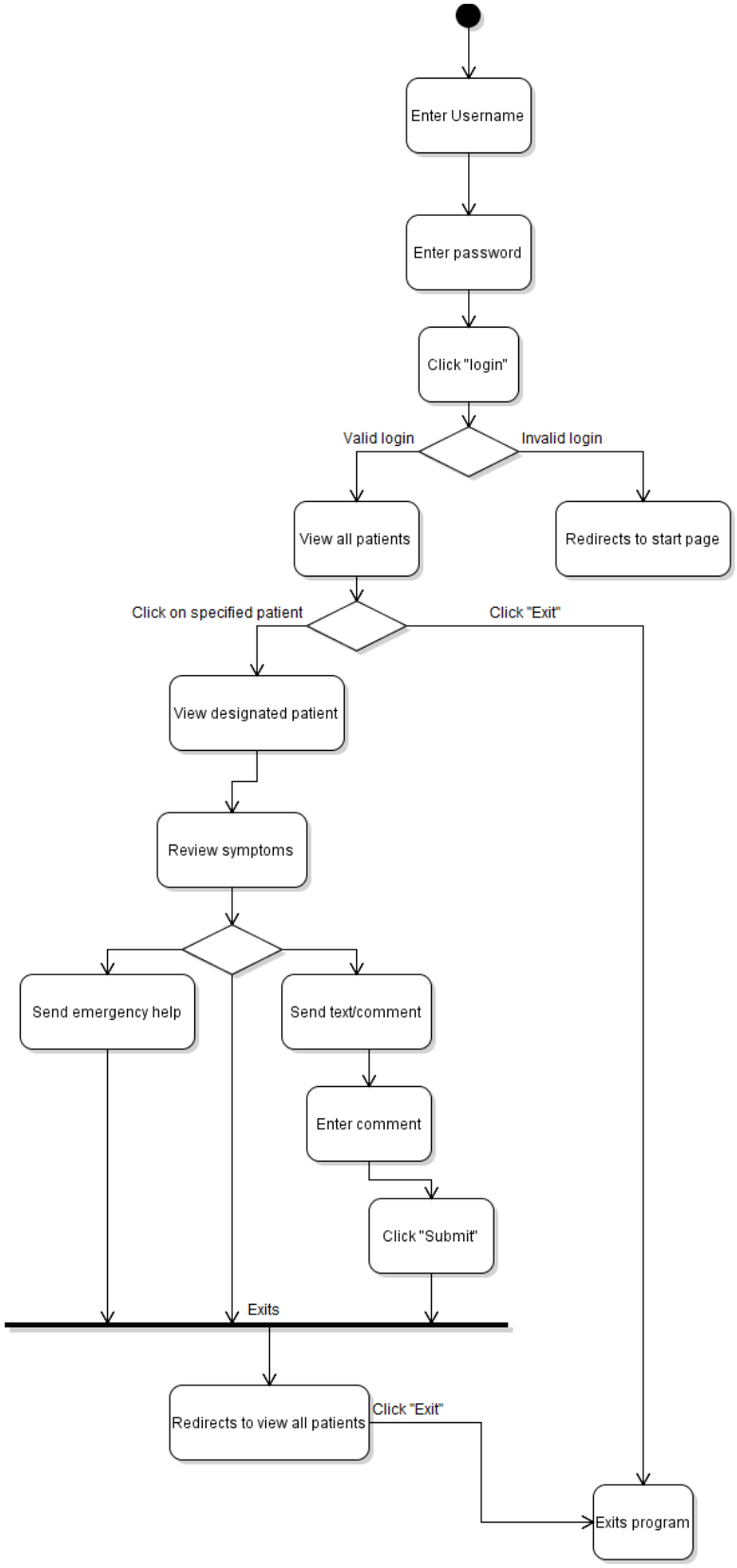
Enter pain data activity diagram:



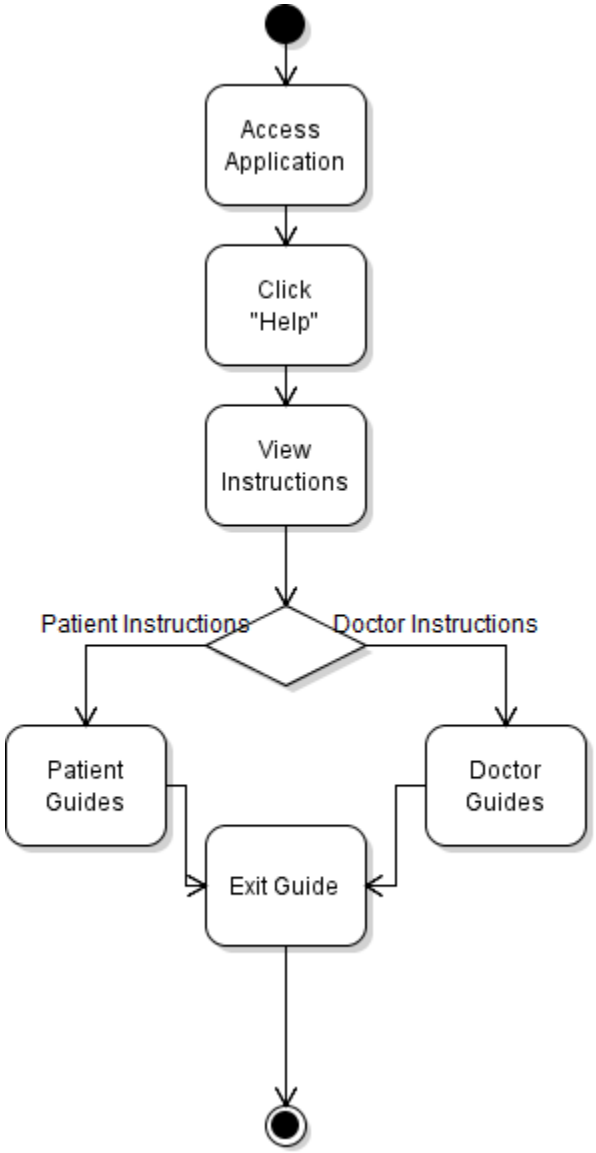
Viewing patient pain data activity diagram:



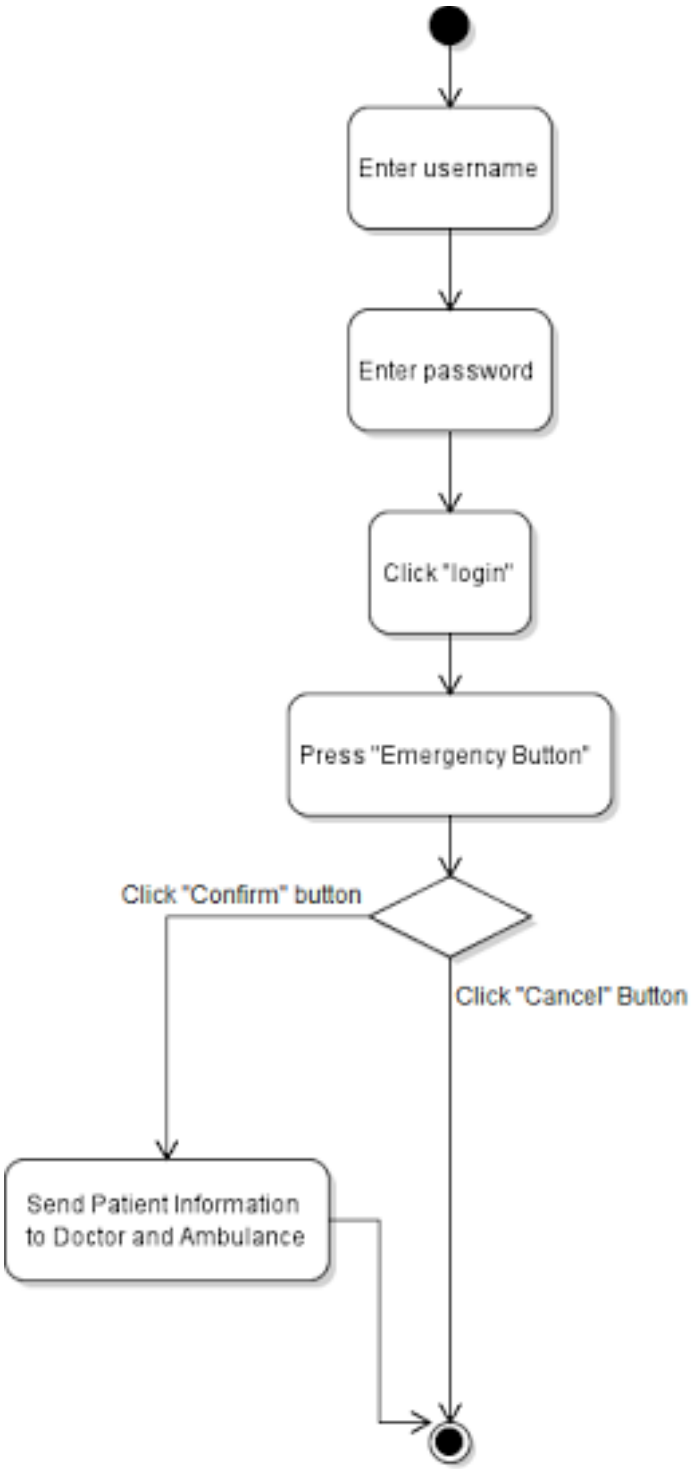
Doctor submits advice to patient activity diagram:



Help button activity diagram:



Emergency button activity diagram:



Enter pain data test cases:

Path1: correct username field-> blank password field -> click login button -> enter password window
Path2: blank username field -> correct password field -> click login button -> enter username window
Path3: incorrect username field -> incorrect password field -> click login button -> failed login window
Path4: correct username field -> incorrect password field -> click login button -> failed login window
Path5: incorrect username field -> correct password field -> click login button -> failed login window
Path6: correct username field -> correct password field -> click login button -> login success window -> patient window with symptoms -> leave symptoms blank -> Error message
Path7: correct username field -> correct password field -> click login button -> login success window -> patient window with symptoms -> answer symptoms -> attach note -> submit symptoms
Path8: correct username field -> correct password field -> click login button -> login success window -> patient window with symptoms -> answer symptoms -> don't attach note -> submit symptoms

Test Case			Inputs					Expected Output
	Username Text Field	Password Text Field	Select "Login" Button	Select "Symptoms" Tab	Select Radio Button from Scale	Attach Note	Select "Send"	
1	Correct Username	--	Select "Login" Button	--	--	--	--	"Please Enter Password"
2	--	Correct Password	Select "Login" Button	--	--	--	--	"Please Enter Username"
3	Incorrect Username	Correct Password	Select "Login" Button	--	--	--	--	Redirect to Login Page
4	Correct Username	Incorrect Password	Select "Login" Button	--	--	--	--	Redirect to Login Page
5	Correct Username	Correct Password	Select "Login" Button	--	--	--	--	Redirect to Home Page
6	--	--	--	Select Tab	--	--	--	Redirect to Symptoms Page
7	--	--	--	--	Leave symptoms blank	--	Select Button	Display Error Message – "Please enter answer for each symptom"
8	--	--	--	--	Answer 0-10 for every symptom	--	Select Button	Send Information to Healthcare Professional without Attached Note
9	--	--	--	--	Answer 0-10 for every symptom	Select "Attach Note"	Select Button	Send Info to Healthcare Professional with Attached Note

Viewing patient pain data test cases:

Path1: correct username field-> blank password field -> click login button -> enter password window
Path2: blank username field -> correct password field -> click login button -> enter username window
Path3: incorrect username field -> incorrect password field -> click login button -> failed login window
Path4: correct username field -> incorrect password field -> click login button -> failed login window
Path5: incorrect username field -> correct password field -> click login button -> failed login window
Path6: correct username field -> correct password field -> click login button -> login success window -> view patient window -> click exit -> exit program

Test Case			Inputs			Expected Output
	UserName Textfield	Password Textfield	Login	Patient Name	Exit	
1	Correct Login	---	Click Login	---	---	"Enter Password"
2	---	Correct Password	Click Login	---	---	"Enter Username"
3	Incorrect Login	Incorrect Password	Click Login	---	---	"Failed Login"
4	Correct Login	Incorrect Password	Click Login	---	---	"Failed Login"
5	Incorrect Login	Correct Password	Click Login	---	---	"Failed Login"
6	Correct Login	Correct Password	Click Login	---	---	"Login Success"
	---	---	---	Click Patient	---	"View Patient Info"
	---	---	---	---	Click Exit	"Exit Program"

Doctor submits advice to patient test cases:

Path1: correct username field-> blank password field -> click login button -> enter password window
Path2: blank username field -> correct password field -> click login button -> enter username window
Path3: incorrect username field -> incorrect password field -> click login button -> failed login window
Path4: correct username field -> incorrect password field -> click login button -> failed login window
Path5: incorrect username field -> correct password field -> click login button -> failed login window
Path6: correct username field -> correct password field -> click login button -> login success window -> view patient window -> click exit -> exit program
Path7: correct username field -> correct password -> click login button -> click patient name -> click send text -> click submit -> sends patient a text
Path8: correct username field -> correct password -> click login button -> click patient name -> click send help -> sends patient help

Test Case			Inputs						Expected Output
	UserName Textfield	Password Textfield	Login	Patient Name	Exit	Send Text	Submit	Send Help	
1	Correct Login	---	Click Login	---	---	---	---	---	"Enter Password"
2	---	Correct Password	Click Login	---	---	---	---	---	"Enter Username"
3	Incorrect Login	Incorrect Password	Click Login	---	---	---	---	---	"Failed Login"
4	Correct Login	Incorrect Password	Click Login	---	---	---	---	---	"Failed Login"
5	Incorrect Login	Correct Password	Click Login	---	---	---	---	---	"Failed Login"
6	Correct Login	Correct Password	Click Login	---	---	---	---	---	"Login Success"
	---	---	---	Click Patient	---	---	---	---	"View Patient Info"
	---	---	---	---	Click Exit	---	---	---	"Exit Program"
7	Correct Login	Correct Password	Click Login	---	---	---	---	---	"Login Success"
	---	---	---	Click Patient	---	---	---	---	"View Patient Info"
	---	---	---	---	---	Click Send Text	---	---	"Write Patient a Text"
	---	---	---	---	---	---	Click Submit	---	"Sends Patient the Text"
8	Correct Login	Correct Password	Click Login	---	---	---	---	---	"Login Success"
	---	---	---	Click Patient	---	---	---	---	"View Patient Info"
	---	---	---	---	---	---	---	Click Send Help	"Send Patient Help"

Help button test cases:

Path1: patient opens application -> click help -> help window
Path2: doctor opens application -> click help -> help window

Test Case			Inputs	Expected Output
	Patient	Doctor	Help	
1	Open Application	---	Click Help	"Help Window"
2	---	Open Application	Click Help	"Help Window"

Emergency button test cases:

Path1: click emergency-> enter patient name -> click confirm button -> emergency window
Path2: click emergency-> enter patient name -> click cancel button -> cancels emergency window
Path3: click emergency-> enter wrong patient name -> patient not found window

Test Case	Inputs				Expected Output
	Emergency	Username Textfield	Cancel	Confirm	
1	Click Emergency	Enters Patient Username	---	Clicks Confirm	"Emergency Window"
2	Click Emergency	Enters Patient Username	Clicks Cancel	---	"Cancels Emergency Window"
3	Click Emergency	Enters Wrong Patient Username	---	---	"Patient Not Found"

Version Control System

For

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GitHub CSE360 Project Link:

https://github.com/M-J-S/CSE360Project