ONLIN(E)

HEALTH

Project Link: https://github.com/JotunMichael/Java/Spring

e-Health Web APP

TABLE OF CONTENTS

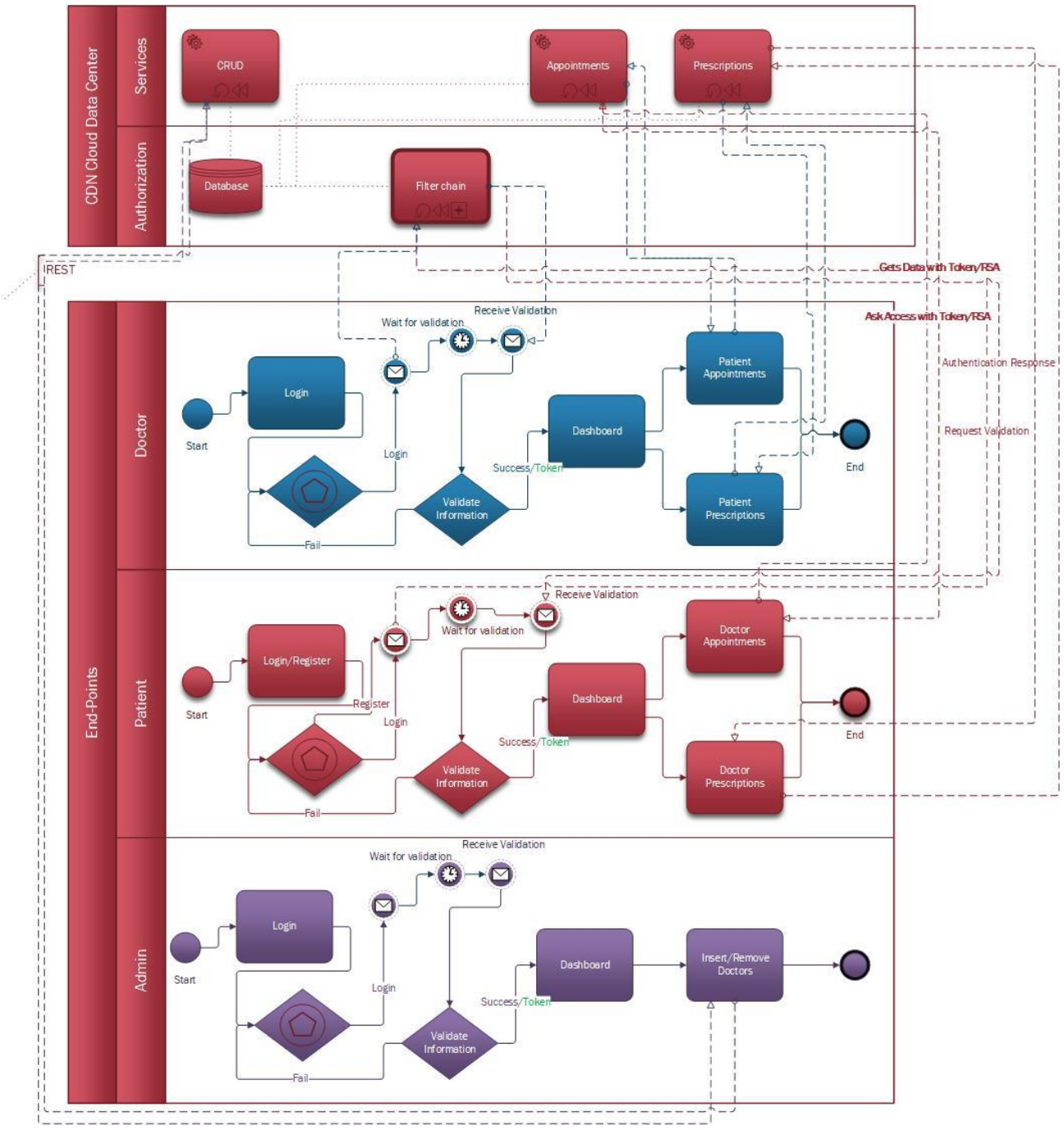
AGENDA

I. Brief

e-Health – Product Design (UI/UX back-end) Project end-to-end

- Project Name:
  - e-Health
- Project Description:
  - A client wishes to develop and test a platform to enable online Health system for Hospitals, to host their own content on their own domain.
- Who is this for?
  - Everyone – this product is for everyone who wishes to have an easy way about Health System or/and monitor their history record and Doctor Appointments.
- Feature List (product requirements)
  - Easy onboarding
  - Health Monitor, History
  - No monthly fees
  - Personalization screen
  - Health Appointments
  - Find Doctor
- Competitors & Product Inspiration
  - Gov.gr/aule-suntagographese
  - Idika
- Deliverables
  - Wireframes for client approval
  - High fidelity prototype of the product
  - User Testing
  - Usability Report
  - UI Assets for developers
- Cost
  - $4000 total with $93 p/hour for any additional work outside the brief
  - 50% payment required to begin work
- Timeline/Deadline
  - The duration is described below as subtasks

2. Description Scope



BPMN 2.0 Visual Process Representation of Description Below(**activity-like**)

The purpose of this document is to provide valid information for its members including Low level Design and High-Level design in a concise application of the Business Health Content application.

The application will consist of front & back-end interfaces functionality. It will allow the Patient to check Appointment list, make new ones, monitor their health and have a Complete Suite of Health Checking events. The application will be a subset of an information system that will interact with users and other database systems.

3. Financial Scope

The project will observe deadlines, Budget, vision of stakeholders.

- Investment decision
- Working Capital decision
- Financing decision
- Dividend decision
- Ensures liquidity
- Profit management

4. Focused on Delivery

Subtasks/activities.

1) Requirements analysis

2) Database/Business Entities design

3) Interface design

4) Database/ Business Entities development and data entry

5) Interface development

6) System completion

7) Application installation and control (integration)

8) Training and acceptance/support

5. Project Execution

Approaches available: procedural/waterfall, agile, Dev ops

A base of staff specialization and available infrastructure is selected agile scrum team approach. The main course recording and management will become a means of collaboration & agile platform JIRA with tracking and problem recording system/tickets source & version control DVCS GIT.

Product BACKLOG

Below is an initial estimate which will change dynamically (updated / passage of time) with more information as the priorities will change as well as the requirements of the project may change.

PRODUCT BACKLOG				
Priority	**ITEM**	**Description**	**Estimate**	**Value**
very high	1	Needs Assesment	89	medium
very high	2	Project Assesment	89	medium
very high	3	Site map	89	medium
high	4	Design wireframe	144	medium
high	5	Mock up + Review	89	High
very high	6	Slice And Code	144	High
very high	7	Development Framework	233	Very High
very high	8	Network Foundation	144	Very High
High	9	Internal Testing	55	Very High
Medium	10	Post Launch support	144	High
medium	11	Database Provisioning	55	High
high	12	Help and Support	233	High

*from the above section Agenda everything is abstracted including the Gantt and Product backlog these are not in any means any close to actual requirements but a close generalized estimate of what to be expected. Latter will be introduced actual implementations in this document.

6. Technologic Approach

The application will be web based

1) Web tech & frameworks: Spring boot(back-end) + Angular(front-end) + thymeleaf.
2) Spring Security
3) ORM: JPA Hibernate
4) Database System: MySQL
5) Third-Party libraries:
    a. `spring-boot-starter-thymeleaf`
    b. `spring-boot-starter-web`
    c. `spring-boot-starter-test`
    d. `spring-boot-starter-jdbc`
    e. `spring-boot-starter-data-jpa`
    f. `mysql-connector-java`
    g. `spring-boot-starter-security`
    h. `commons-lang3`
    i. `CSS`
        i. Bootstrap
        ii. DateTimePicker
        iii. Datatables,JQuery-UI,UIkit,themeroller
    j. `Javascript`
        i. BootBox
        ii. Bootsrap
        iii. DateTimePicker
        iv. Datatables,JQuery-UI,UIkit,easing

The corresponding progress will be on GitHub: https://github.com/JotunMichael/PHP

**This documentation will be changing to keep up with the updates

1. DESIGN

1.1. PERSONA

The project will expand as what NIKI wants.

1.2. Requirement Analysis (non/functional)

indicative specification functional requirements

Function Name: Account login

Description: Patient, Doctor, Admin login end-point portals

INPUTS: Front-end portal authenticated in back-end.

System behavior: The system takes Data comparing each unique user individually based on their input fields. The “user” asks for a token in Spring security if they provided correct a JWT comes back in order to access RESTful API to-do functionality.

OUTPUT: logged in profiles on site.

Function Name: Patient Appointments

Description: User Makes Appointments based on doctor set of availability.

INPUTS: Date, Doctor Category.

System behavior: The system search and logs available Doctor Dates in order for a patient to reserve one.

OUTPUT: User Scheduled Appointments.

Function Name: Medical Account

Description: Patient has its own medical account information review.

INPUTS: User Id generates a medical account based on a custom seed number.

PROCESS: The system creates a one-to-one medical account relationship. So, the user can review his/her medical instruction and history.

OUTPUT: Review any medical advice from the doctor.

Function Name: Patient Information Update

Description: User can update its own medical information if something changes.

INPUTS: Form post data fields.

PROCESS: The user gives valid information based on constraint check and sees his/her updated information output Live.

OUTPUT: Updated User Information.

Function Name: Admin CRUD's Database.

Description: Admin insert or removes a doctor entry from the system.

INPUTS: Front-end page admin account.

PROCESS: The system is capable of removing or add a new entry based on Admin operation actions.

OUTPUT: Doctor Business entity database update.

Function Name: Doctor Prescribes

Description: Doctor prescribes medical instruction for a patient.

INPUTS: Form post data fields from the doctor

PROCESS: This system behaviour accepts inputs from corresponding any medical instruction made by doctor for a patient to follow.

OUTPUT: Patient medication account updated.

indicative specification non-functional requirements

Function Name: Portal differences on login

Function Name: Fast and responsive Database logging system

Function Name: Realtime updates

Function Name: ssl(https), pki connections

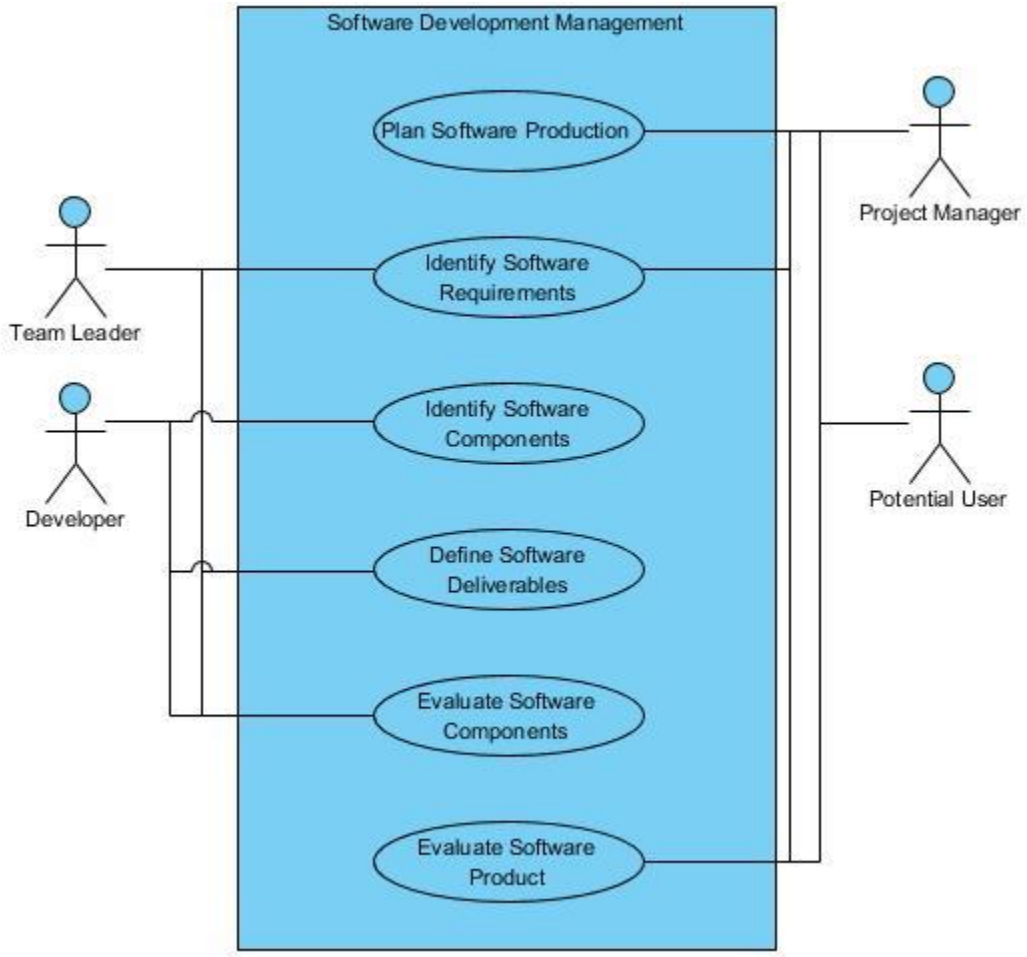
Function Name: Load balancing network server offload

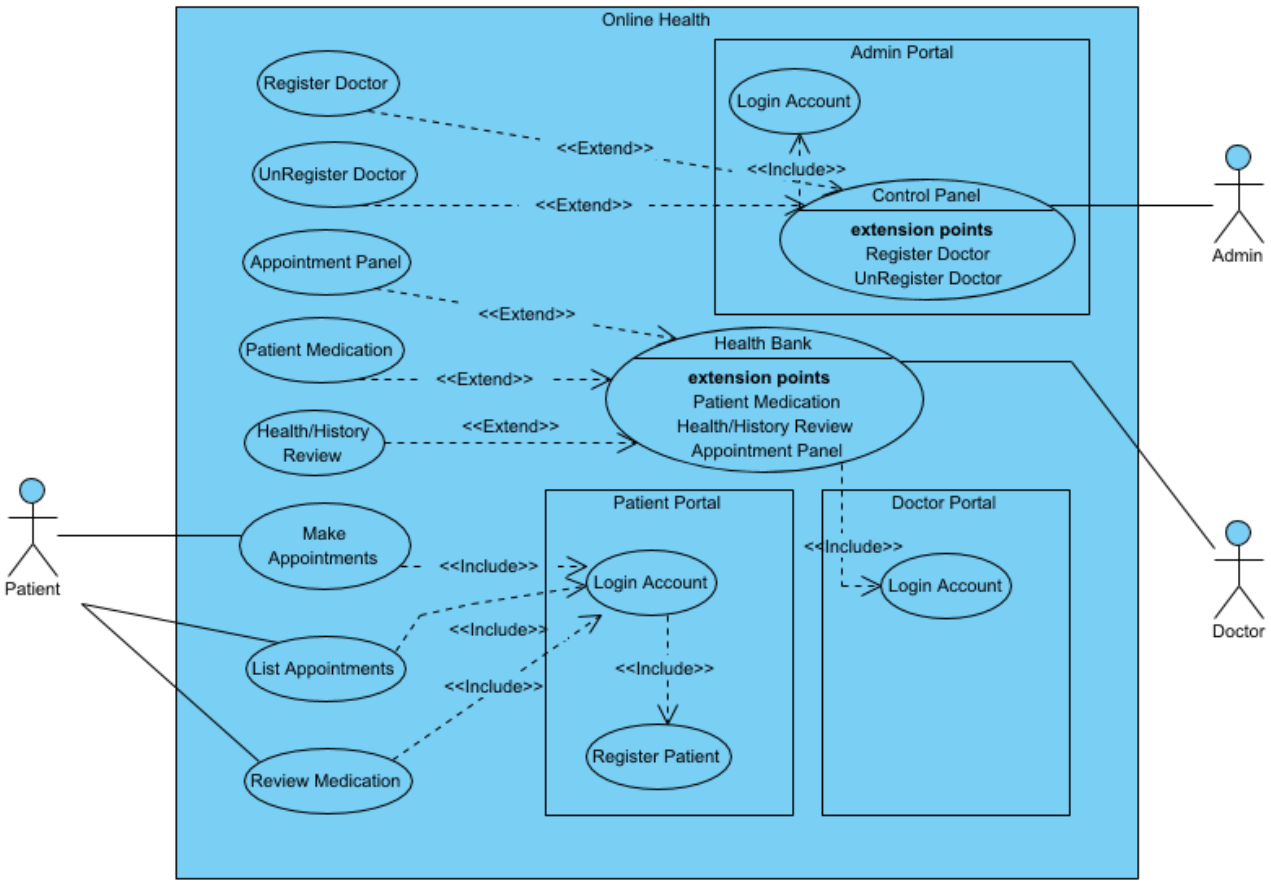
Function Name: Data center private cloud setup

Function Name: Esxi Vmotion enabled

Function Name: CIA (Confidentiality, integrity and availability) triad

1.3. UML Representation Analysis




Online Health
Admin Portal
Register Doctor
Login Account
UnRegister Doctor
<<Extend>>
<<Include>>
Control Panel
<<Extend>>
extension points
Register Doctor
UnRegister Doctor
Admin
Appointment Panel
<<Extend>>
Patient Medication
Health Bank
<<Extend>>
extension points
Patient Medication
Health/History Review
Appointment Panel
Health/History Review
<<Extend>>
Patient Portal
Doctor Portal
Patient
Make Appointments
<<Include>>
Login Account
<<Include>>
Login Account
Doctor
<<Include>>
List Appointments
<<Include>>
<<Include>>
Register Patient
Review Medication

1.4. Use Case

Use Case: Login portal

Main user: admin, user

Short Description: User or admin enter credentials and gets checked against database queries. The abstraction layer here is Spring Security that provides token data to the valid user as session cookies. The inputs fields apply security rules backend & front-end.

Conditions: only registered users can use the system with Health Services.

Exit status: Successful health Appointment system for patients.

Main Flow:

1. User registers
2. System checks input integrity [Alternative Flow A]
3. User Logins
4. System Checks input integrity [Alternative Flow B]
5. Enjoy e-health

Alternative flows

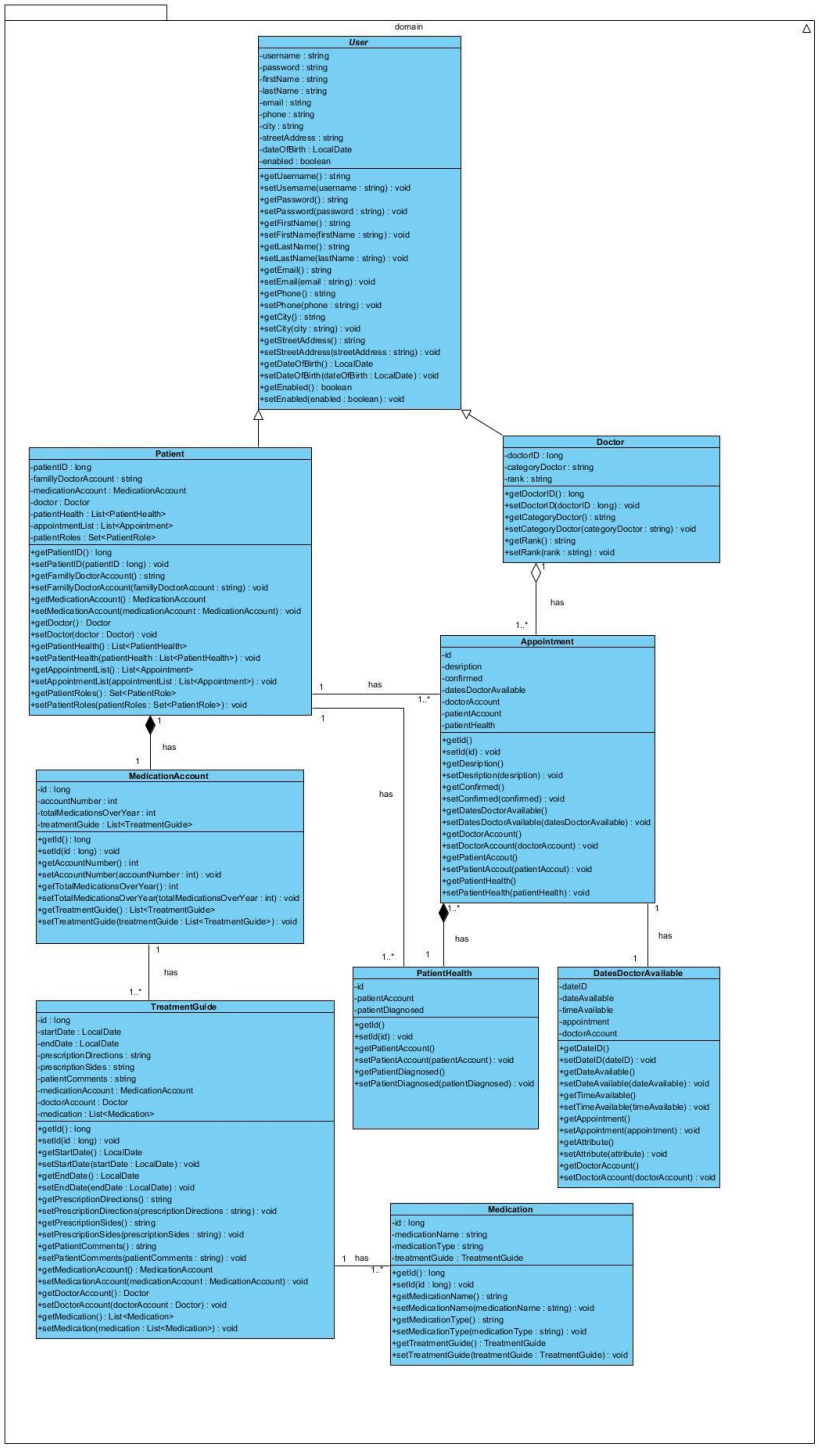
Alternative flow A: Field checking

If not valid input check jumps on Step 1

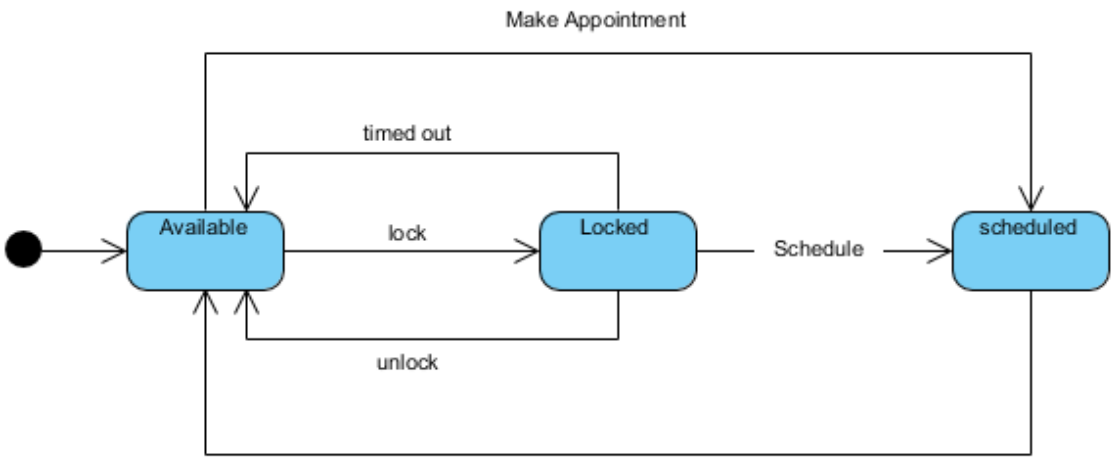
Alternative flow B: Field checking

If not valid input check jumps on Step 3

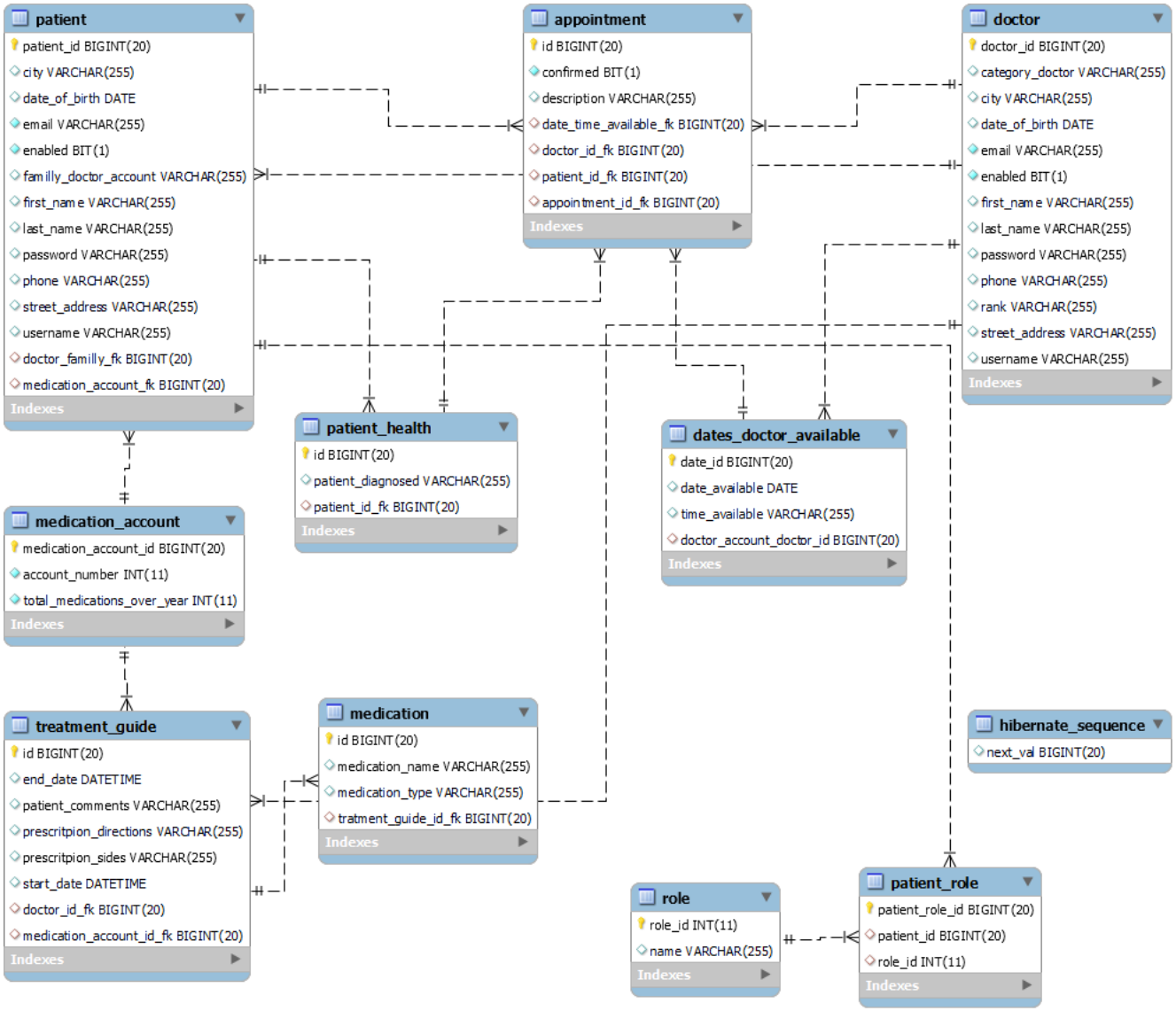
1.5. Class Diagrams



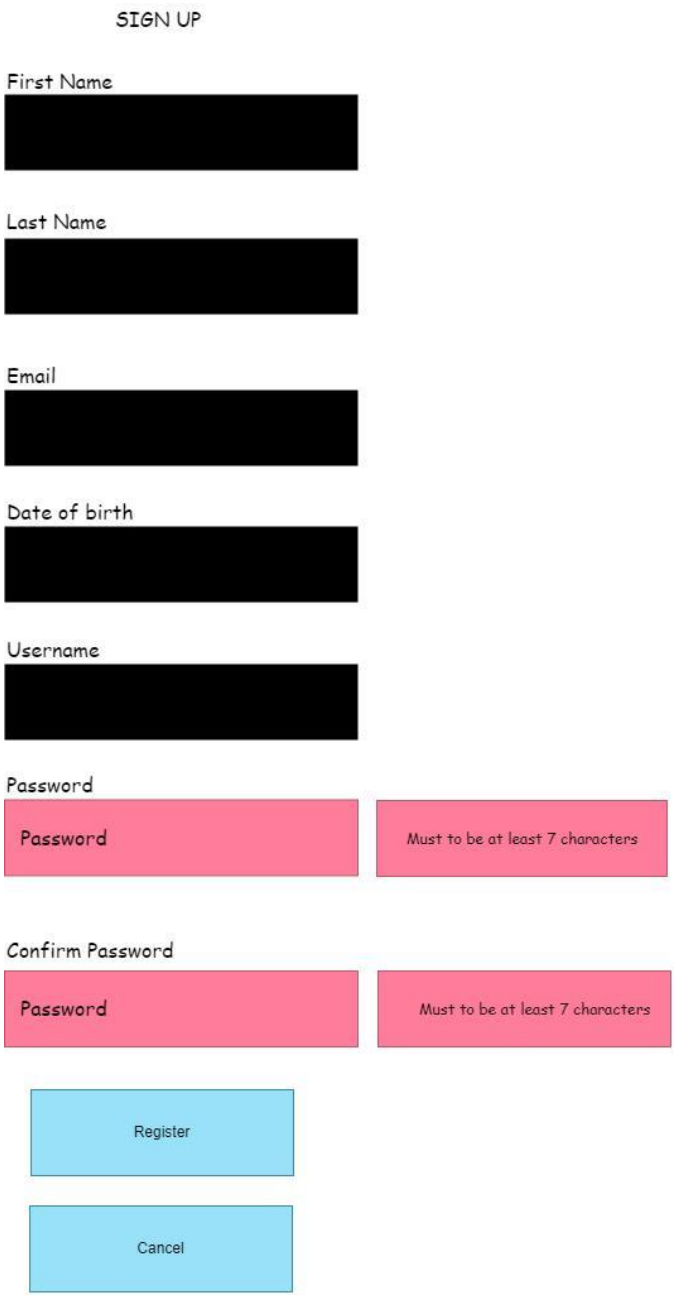
1.6. State Machine/State Chart Diagram

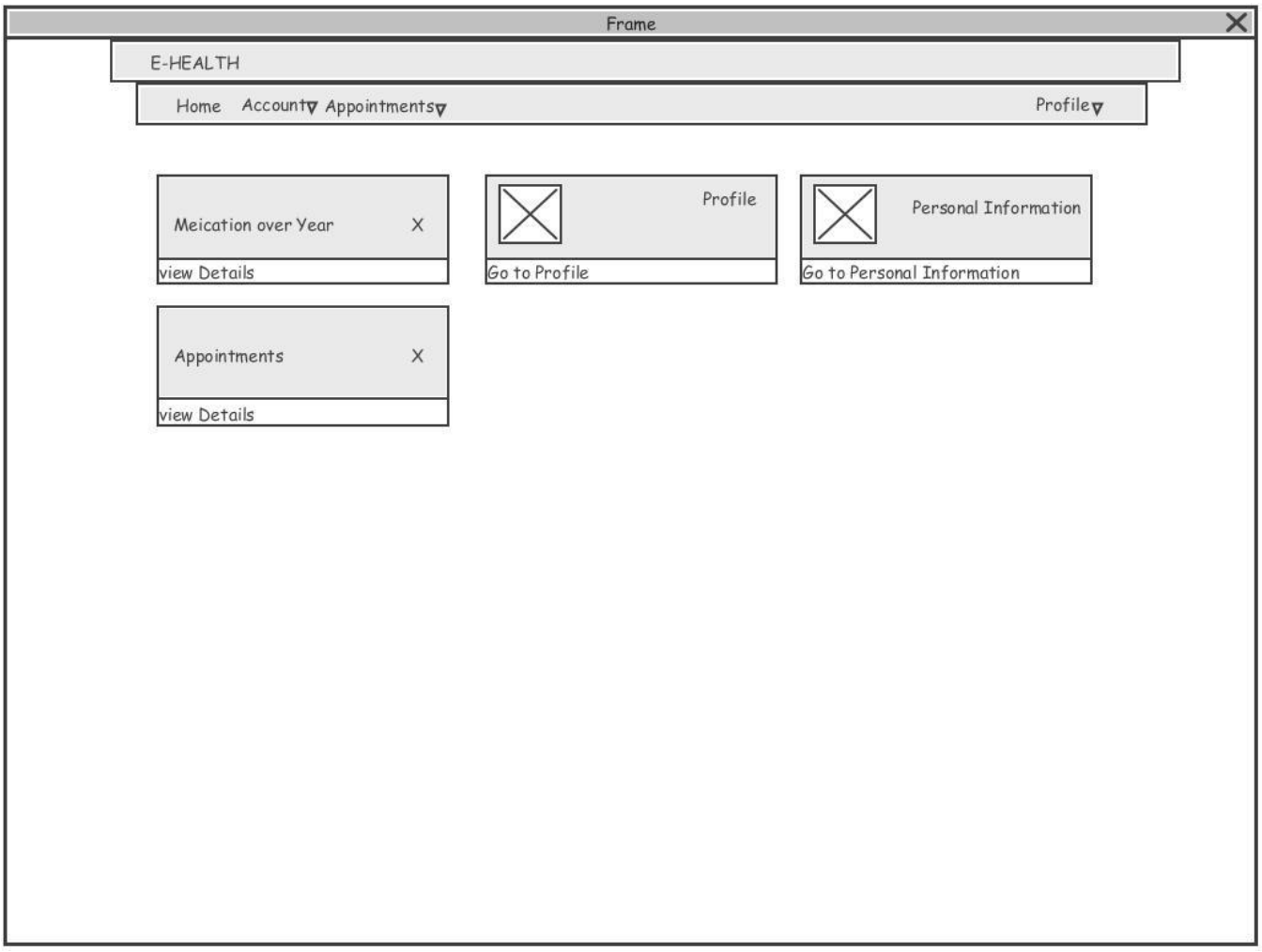


I.7. ER Diagram

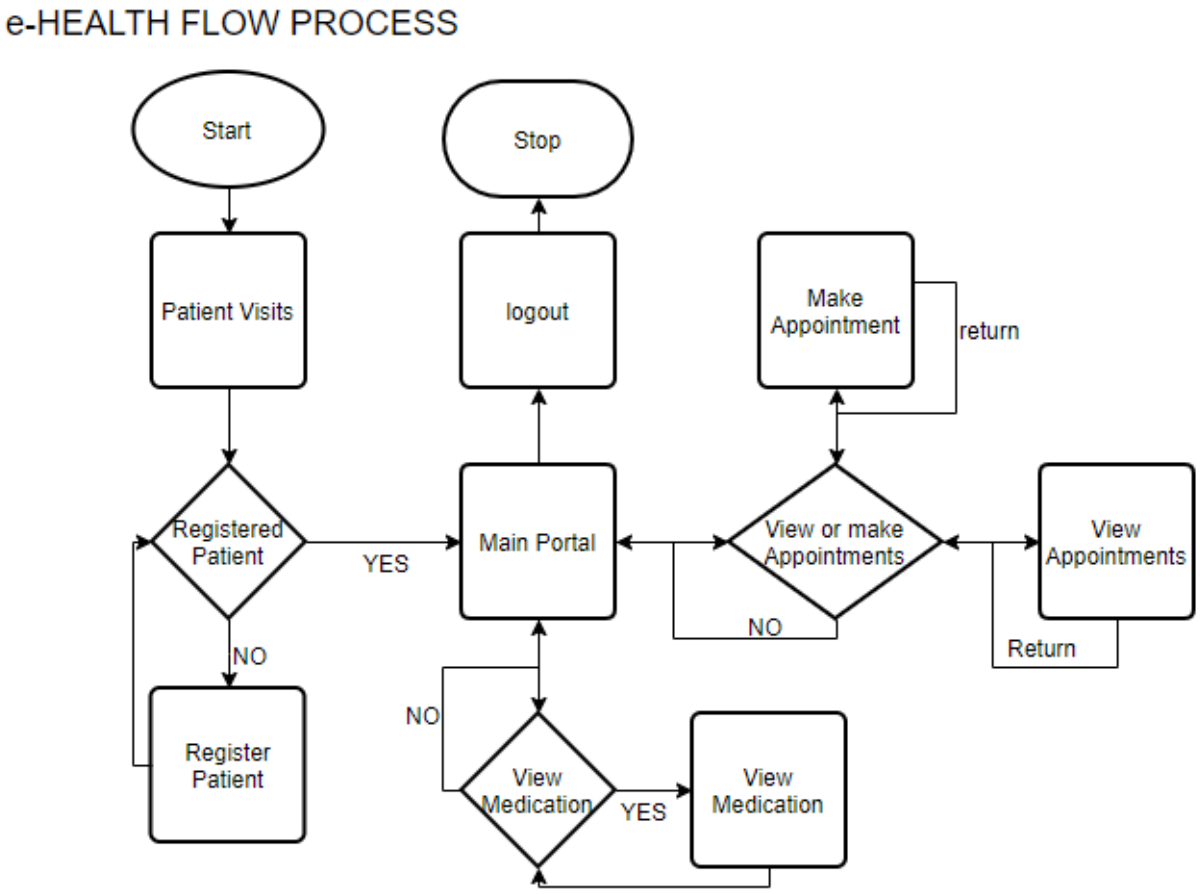


1.8. Storyboards & Wireframes (low fidelity)

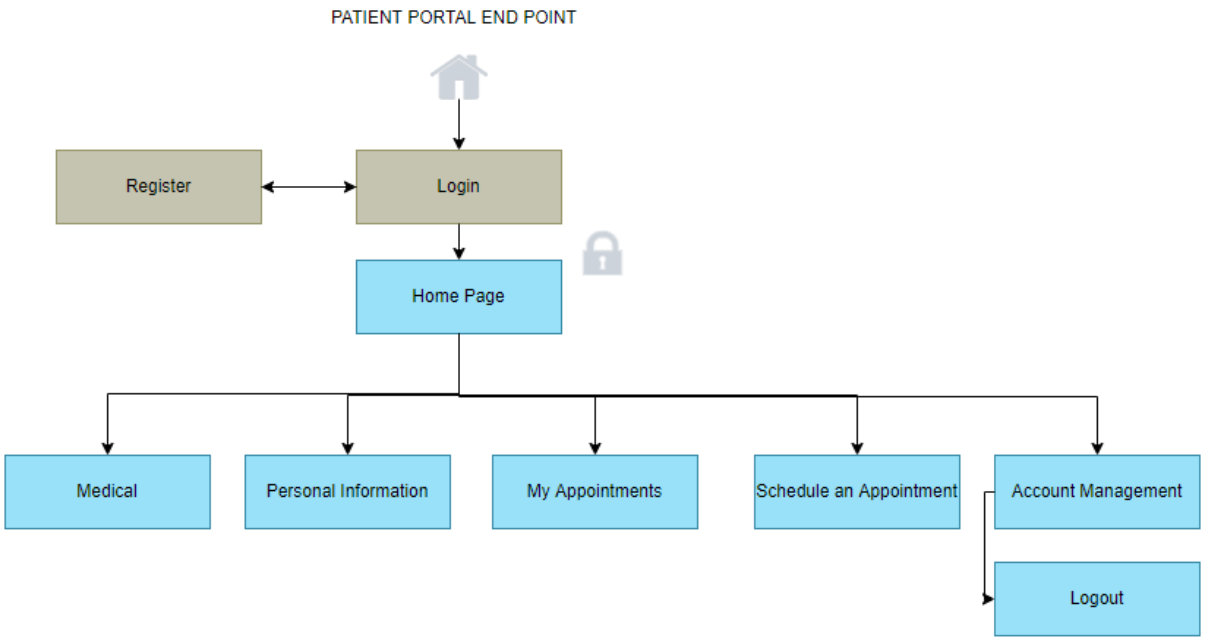



Frame
E-HEALTH
Home
Account
Appointments
Profile
Meication over Year
X
view Details
Profile
Go to Profile
Personal Information
Go to Personal Information
Appointments
X
view Details

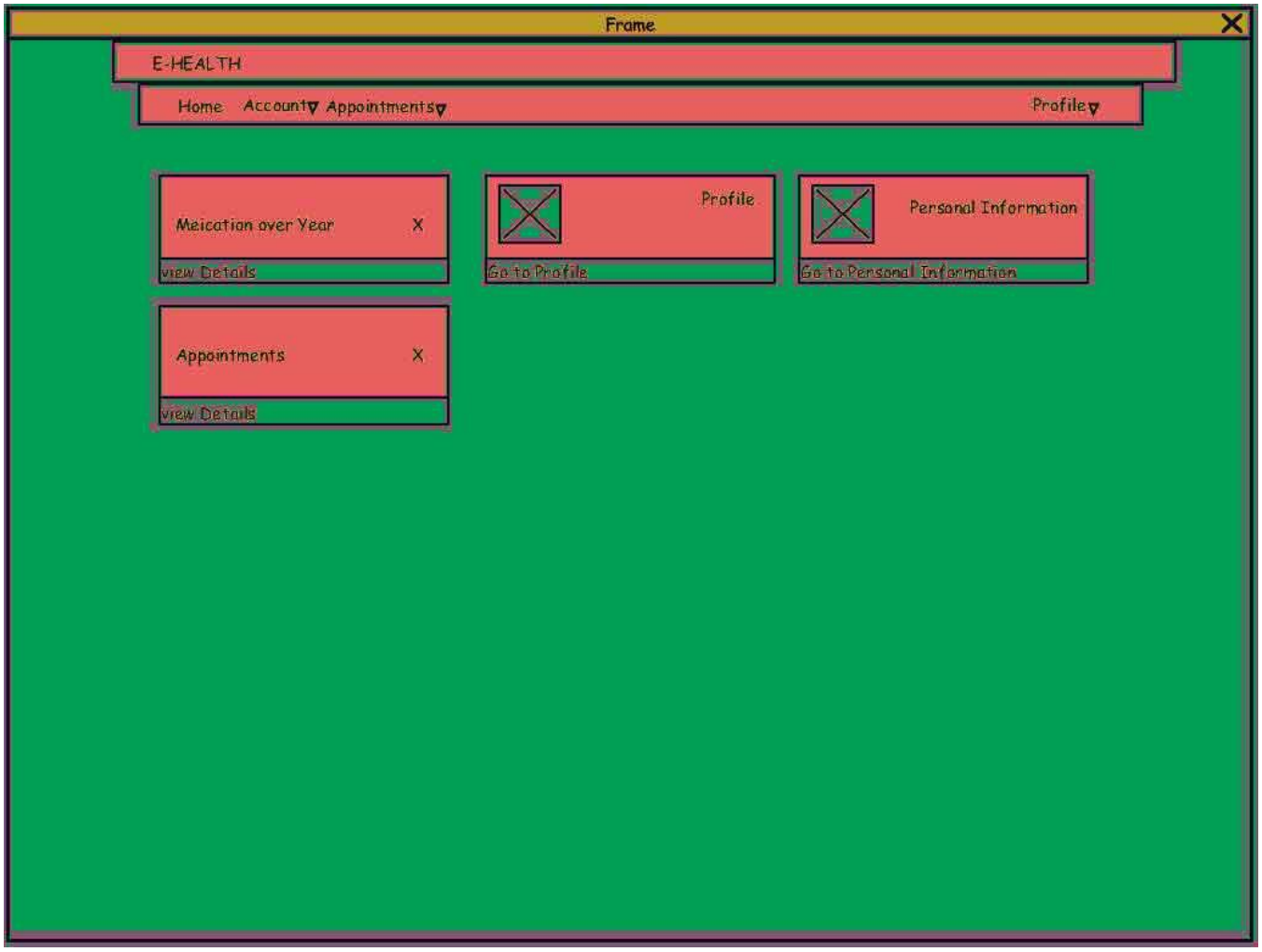
1.9. User Flows



1.10. Web Site Map Design & Planning



1.11. Heat Map/Mockup



Various testing and design patterns should be deployed for measure user accesibility and preference.

Bounce Rate, Sex, Age, Device, Interests, A/B Testing + real case users though Analytics

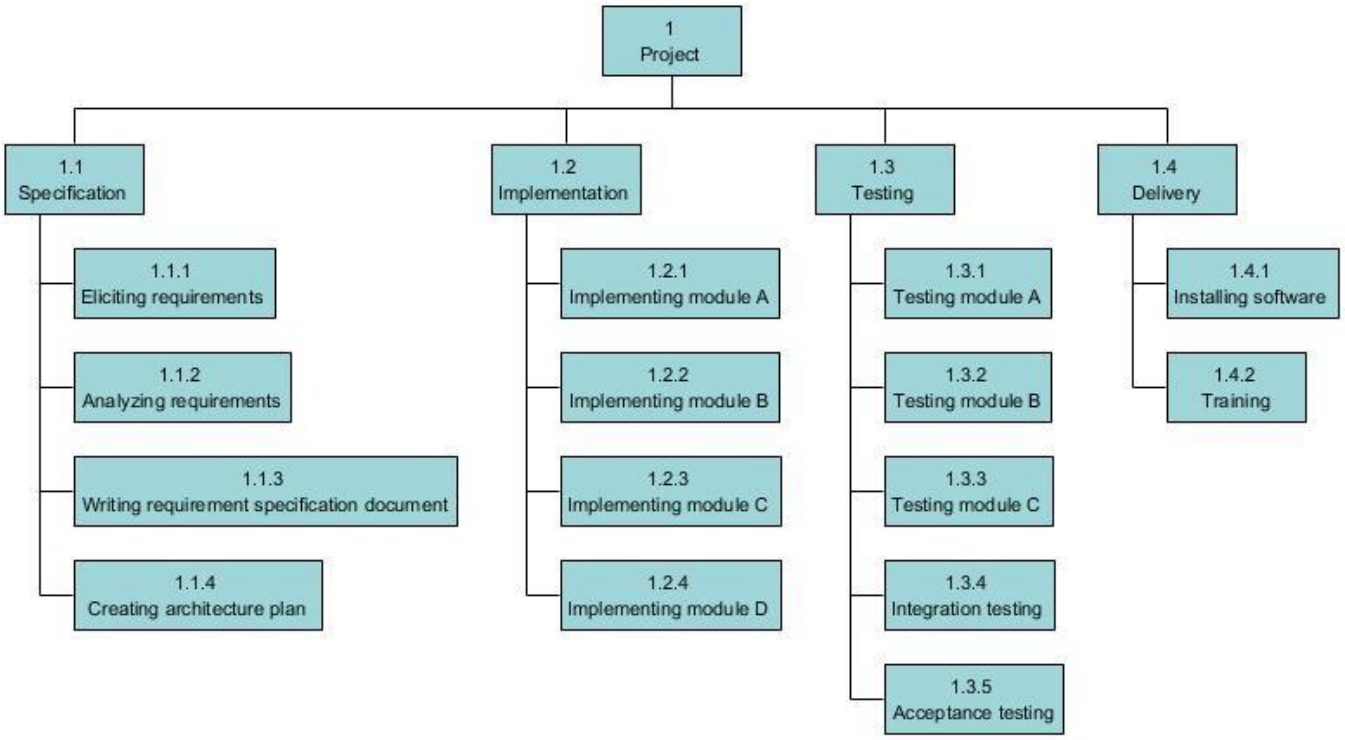
2. PROJECT MANAGEMENT

2.1. Task/Time Schedule PERT

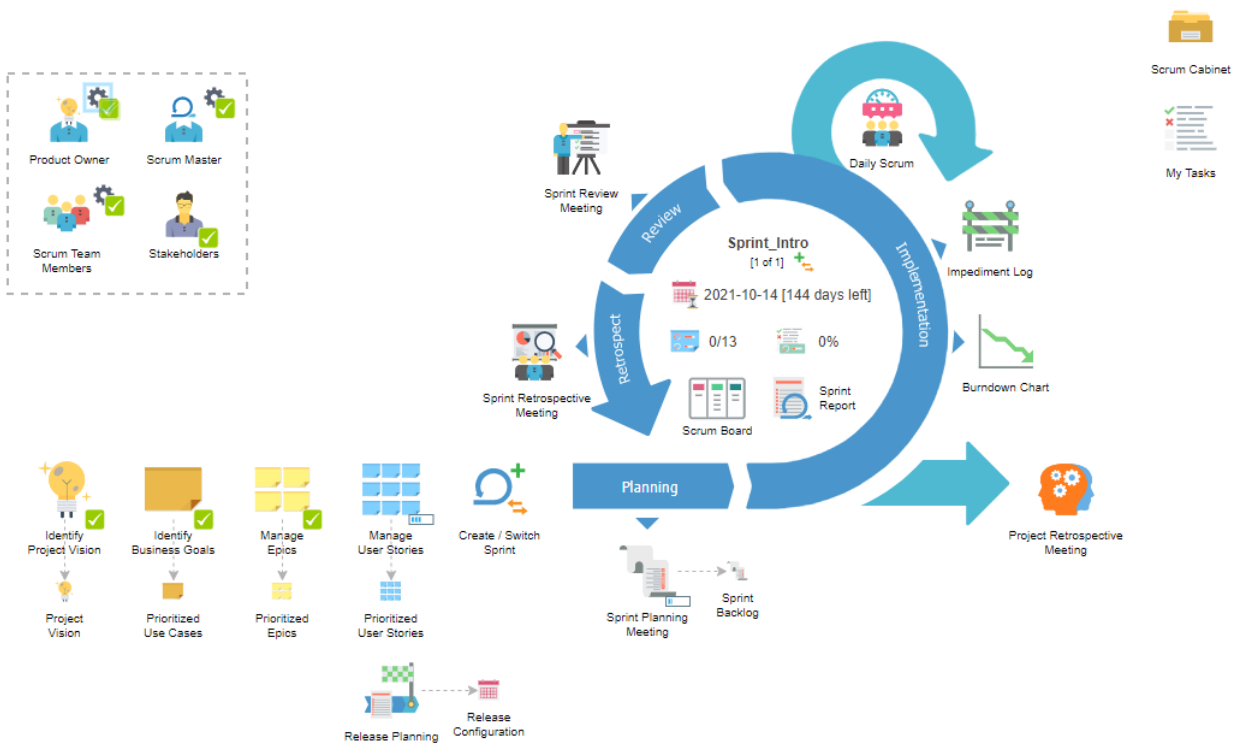
Upcoming features

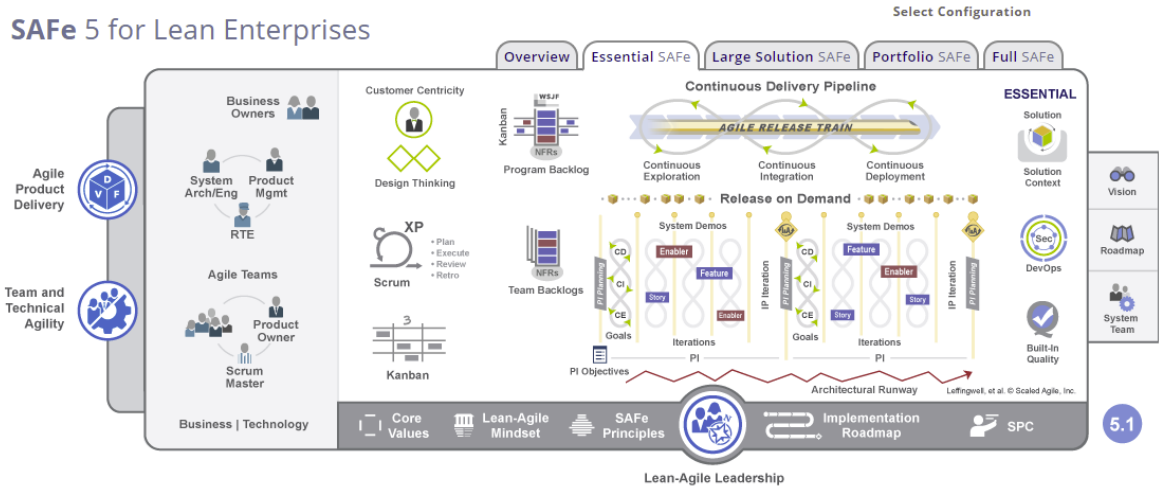
Critical path method in red lines (CPM)

2.2. Work Breakdown Structure (WBS)

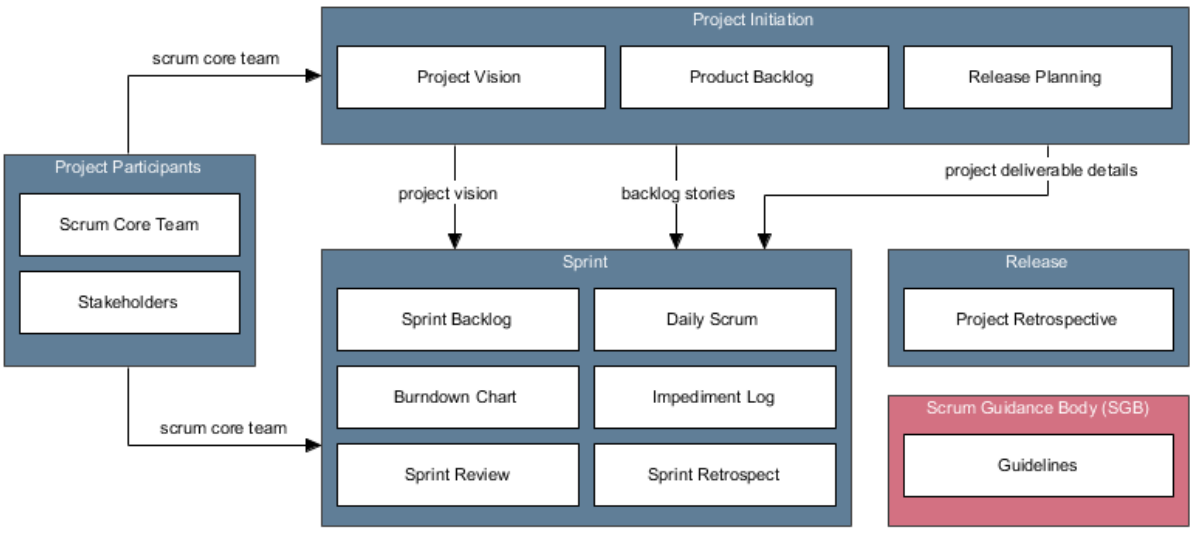


2.3. Sprint Canvas





2.4. Scrum Cabinet Reports



2.5. Project Participants

2.5.1. Stakeholder List

Name	Role	Responsibilities	Contact
Michail Markou	Sponsor, Customer, User	Vision Leader	backtrackpower@gmail.com

2.5.2. Product Owner

Member	Michail Markou
Responsibilities	Articulating customer/sponsors/users requirements • Defines the project vision • Helps create the Project Charter • Identifies project stakeholders • Helps determine scrum team members • Create epics • Create, define and prioritize user stories • Create Release Plan and keep it updated • Approve user stories • Explains user stories and clarifies requirements to scrum team in sprint planning meeting • Provides guidance and clarification in estimating effort for tasks • Grooms prioritized product backlog • Accept/reject deliverables • Provide feedback to scrum master and scrum teams • Help deploy product releases and coordinates this with the customer • Participate in sprint retrospective meeting
Notes	

2.5.3. Scrum Master

Member	Michail Markou
Responsibilities	• Helps identify project stakeholders • Facilitates the formation of scrum team • Facilitates the creation of epics • Helps product owner in creating and maintain product backlog • Coordinates the creation of Release Plan • Assists in creating and defining user stories • Facilitates meetings • Facilitates the scrum team in creating tasks for the next sprint • Facilitates the scrum team in effort estimation • Supports the scrum team in creating deliverables • Helps maintain the impediment log • Ensures that issues affecting the development are discovered and resolved
Notes	

2.5.4. Scrum Team Members

Member	Responsibilities	Notes
Michail Markou	• Ensures a clear understanding of epics and user stories • Agrees with the other team members on sprint length • Seeks clarification on new updates in requirements • Provides inputs to the product owner in defining and estimating user stories • Commits user stories to be done in a sprint • Provides inputs in creating and estimate tasks • Develops the product, service or other results	

Member	Responsibilities	Notes
	• Identifies the risk and implements risk mitigation actions, if required • Provides inputs to update the impediment log • Discusses progress and issues in daily scrum meeting • Demonstrates completed deliverables in sprint review • Suggests improvement opportunities in sprint retrospective meeting • Participates in the project retrospective meeting	

2.6. Project Initiation

2.6.1. Project Vision

For consumers/patients who need to check their health, e-health is an online health service for appointments while keeping the record for your all-medical conditions and prescriptions. Unlike the other competitors, our system can run on all modern web browsers and provide rapid health solutions

2.6.2. Project Charter

2.6.2.1. Project Vision

For consumers/patients who need to check their health, e-health is an online health service for appointments while keeping the record for your all-medical conditions and prescriptions. Unlike the other competitors, our system can run on all modern web browsers and provide rapid health solutions

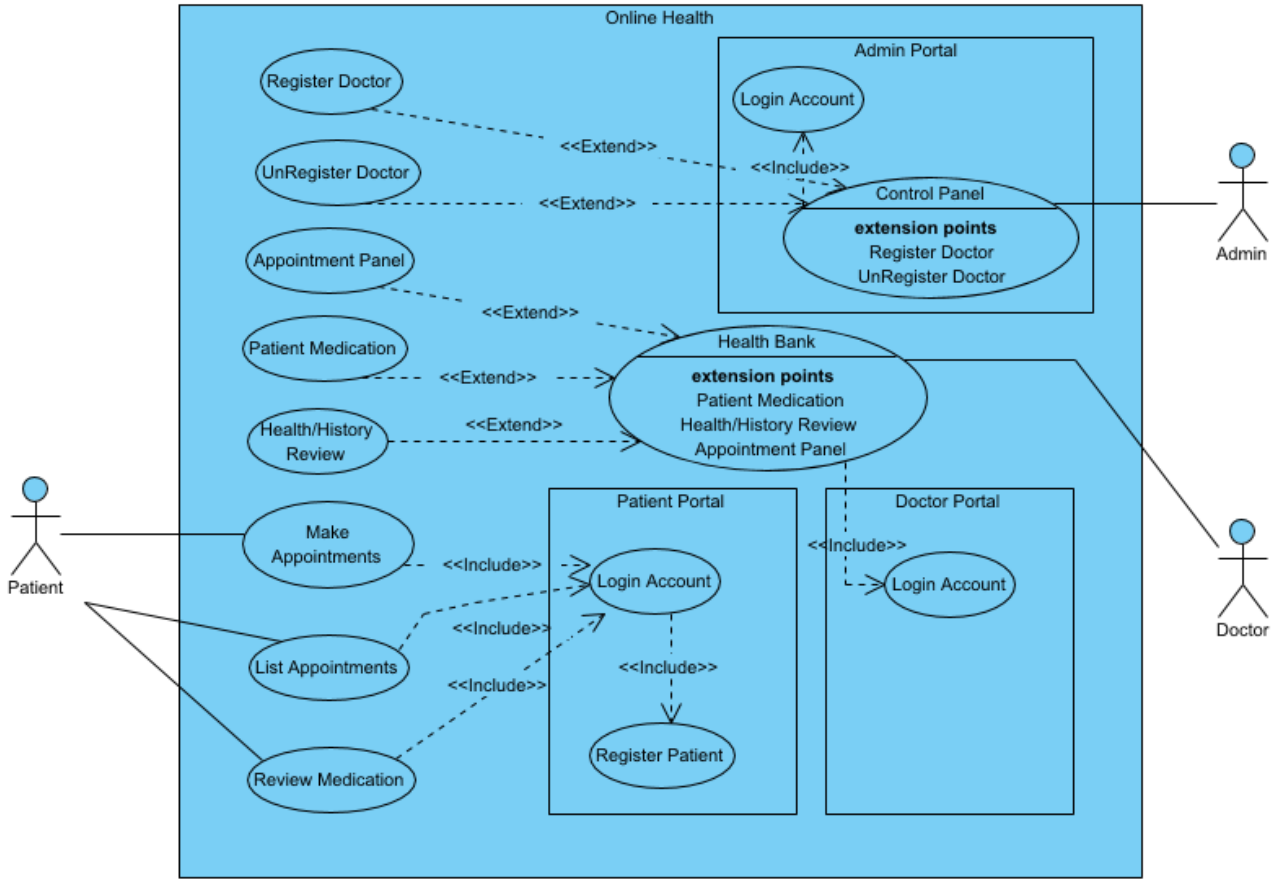
2.6.2.2. Project Mission

- Provide an online e-health system to automate and facilitate the whole process of health monitoring.
- Support on modern web browsers.
- Appointments and medical history of prescriptions of your health status

2.6.2.3. Project Success Criteria

Success for the e-health project will be achieved when a fully tested e-health and all technical documentation, are fully deployed within the time and cost constraints defined.

2.6.3. Use Case Diagram



2.6.4. Prioritized Use Cases

Name	Description	Priority	Size	Complexity
Register Doctor	Admin Inserts Doctor to the system	Must	Medium	Low
Control Panel	Admin Inserts or Removes Doctor from the System	Must	Medium	Medium
Login Account	Admin Logins	Must	Small	Medium
Login Account	Patient Logins	Must	Small	Medium
Register Patient	Patient Register to the System	Must	Small	Medium
List Appointments	Patient Make or Unset Appointments	Must	Medium	Medium
Patient Medication	Doctor Prescription	Must	Medium	Medium
Health/History Review	Doctor Review Patient's history	Must	Medium	Medium
Review Medication	Patient follows medication instruction from doctor	Must	Medium	Medium
Make Appointments	Patient Make Appointments	Must	Medium	Medium
UnRegister Doctor	Remove Doctor from the system	Must	Medium	Medium
Login Account	Doctor Logins	Must	Medium	High
Health Bank	Doctor main panel for interaction to Patients	Must	Medium	High
Appointment Panel	Doctor See upcoming Appointments and sets availability for new ones	Must	Medium	High

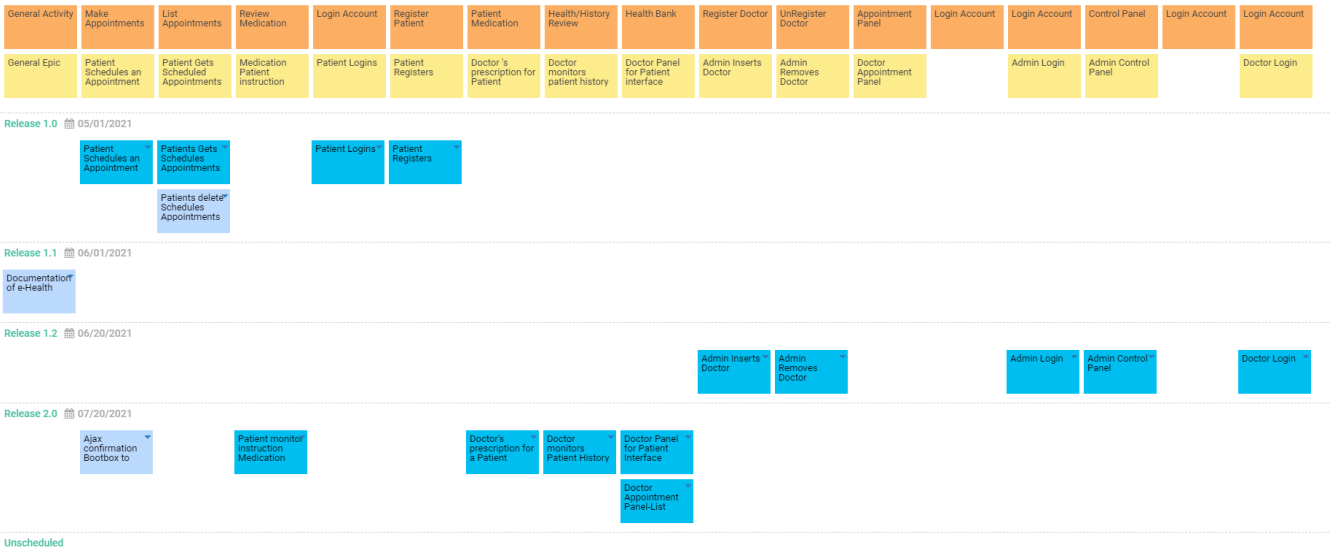
2.6.5. Epics

Name	Description	Parent Use Case	Priority	Risk
Admin Removes Doctor	Admin removes Doctor from system	UnRegister Doctor	Should	Low
Doctor monitors patient history	Doctor monitors Patient's History record	Health/History Review	Should	Medium
Admin Inserts Doctor	Admin Insert Doctor to the System	Register Doctor	Must	Medium
Patient Schedules an Appointment	Patient Schedules an Appointment with Doctor	Make Appointments	Must	Medium
Doctor Panel for Patient interface	Doctor Health Bank Panel for Patient Interface	Health Bank	Should	Medium
Patient Gets Scheduled Appointments	Patients Gets schedules Appointment List	List Appointments	Must	Low
General Epic		General Activity		
Patient Logins	Patient Logins to the System	Login Account	Must	Low
Admin Control Panel	Admin Control Panel UI	Control Panel	Must	Medium

Name	Description	Parent Use Case	Priority	Risk
Patient Registers	Patient Registers to the system	Register Patient	Must	Low
Doctor 's prescription for Patient	Doctor's prescription for Patient Medication	Patient Medication	Should	Medium
Doctor Appointment Panel	Doctor Appointment Panel depends on health Bank	Appointment Panel	Must	Medium
Medication Patient instruction from Doctor	Doctor's Instruction for Patient to a specific medication/cure	Review Medication	Must	High
Doctor Login	Doctor Login Portal	Login Account	Must	High
Admin Login	Admin Login Portal	Login Account	Must	Medium

2.6.6. Product Backlog - Features

2.6.6.1. User Story Map - ROADMAP



2.6.6.2. Prioritized User Stories - FEATURES of the App

ID	Name	Description	Epic	Status	Acceptance Criteria	Story Points	Priority	Risk
US 001	Patient Schedules an Appointment	As a Patient, I want to be able to schedule online appointments	Patient Schedules an Appointment	Approved	Search doctor and pick available appointments, Confirmation	3	Must	Low
US 002	Patients Gets Schedules	As a Patient, I want to be able to see	Patient Gets Scheduled	Approved	remove appointments, review	1	Must	Low

ID	Name	Description	Epic	Status	Acceptance Criteria	Story Points	Priority	Risk
	Appointments	my schedule list so to remove or not to forget when an appointment is.	Appointments		appointments, Confirmation			
US 003	Patient monitor instruction Medication from Doctor	As a Patient, I want to see my medication instruction so to know the dosages and timing	Medication Patient instruction from Doctor	Approved	See medication instructions, See who is from, See how long to take them and dosages	1	Must	Medium
US 004	Patient Logins	As a Patient, I want to sign in to my health services	Patient Logins	Approved	Security check, Patients Logins to main e-health Portal, Another Portal	2	Must	Low
US 005	Patient Registers	As a Patient, I want to be	Patient Registers	Approved	security checks	5	Must	Low

ID	Name	Description	Epic	Status	Acceptance Criteria	Story Points	Priority	Risk
		able to Register to Health Services						
US 006	Doctor's prescription for a Patient	As a Doctor, I want to write proper steps for a medication so a patient can follow	Doctor 's prescription for Patient	Approved	For each Patient from the Appointment	3	Must	Medium
US 007	Doctor monitors Patient History	As a Doctor, I want to review the history of my Patient so to have a clearer understanding	Doctor monitors patient history	Approved	Review previous medications, See Dates information	3	Must	Medium
US 008	Doctor Panel for	As a Doctor, I want an easy way	Doctor Panel for	Approved	List area of all patient interactions, Add Appointments, Edit	3	Must	Medium

ID	Name	Description	Epic	Status	Acceptance Criteria	Story Points	Priority	Risk
	Patient Interface	to interface with my Patients so to keep organized	Patient interface		Appointment Dates if not scheduled from patient, Writes prescription to Patient			
US 009	Admin Inserts Doctor	As an Admin, I want to register Doctor to the System	Admin Inserts Doctor	Approved		2	Must	Low
US 010	Admin Removes Doctor	As an Admin, I want to un-register Doctor to the System	Admin Removes Doctor	Approved		2	Should	Low
US 011	Doctor Appointment Panel-List	As a Doctor, I want to set or unset Appointments	Doctor Panel for Patient interface	Approved	Depends on Doctor Health Bank Panel	3	Must	Medium

ID	Name	Description	Epic	Status	Acceptance Criteria	Story Points	Priority	Risk
US 012	Admin Login	As an Admin, I want to login to Health Service Administration Panel	Admin Login	Approved	Another Portal, 1 admin	2	Must	Medium
US 013	Admin Control Panel	As an Admin, I want a main area to centralized adjust everything	Admin Control Panel	Approved	Main Panel for Admin interaction to users	3	Must	Medium
US 014	Doctor Login	As a Doctor, I want to Sign-In to Health Services.	Doctor Login	Approved	After Admin insert, Another Portal	2	Must	Medium
US 015	Ajax confirmation Bootbox to		Patient Schedules an Appointment	New				

ID	Name	Description	Epic	Status	Acceptance Criteria	Story Points	Priority	Risk
	Controller HTTPreq							
US 017	Documentation of e-Health		General Epic	New				
US 016	Patients delete Schedules Appointments		Patient Gets Scheduled Appointments	New				

2.6.7. Project Deliverables – Release Planning

2.6.7.1. Project Deliverables

Deliverable	Description	Planned Release Date	Priority	Status	Owner
e-Health (web)	A web-based online Health Services system that automates and facilitates the whole process of Health Monitoring	2021-07-20	High	In Progress	Michail

2.6.7.1. Release Configuration

Release	Description	Planned Release Date
Release 1.0	Support some of major features of the web-based e-Health online system.	2021-05-01
Release 1.1	Completion of Documentation of e-Health Services system.	2021-06-01
Release 1.2	Support the most of major features of the web-based e-Health online system.	2021-06-20
Release 2.0	Completion of the web version of e-health online system.	2021-07-20

2.7. Sprint Planning Meeting Agenda

2.7.1. Sprint Planning Meeting Agenda

Date	2021-08-01
Time	09:00

Date	2021-08-01
Location	Teams
Prepared by	Michail
Attendees	Michail

2.7.2. Agenda Topics

Topic	Presenter	Time Allotted
Project Initiation and Vision of Business	Michail	10 mins
Select user stories to support in this sprint	Michail	20 mins
Identify tasks involved	Michail	30 mins
Identify sprint deliverable	Michail	5 mins

2.7.3. Other Information

Observers	sylvi, miontragk
Resources	Internet, Teams
Special Notes	Just Keep Watching!

2.7.4. Sprint Planning Meeting Minutes

Date	2021-08-01
Time	09:00

Date	2021-08-01
Location	Teams
Prepared by	Michail
Attendees	Michail

2.7.4.1. Agenda Topics

Topic	Project Initiation and Vision of Business
Presenter	Michail
Time Allotted	10 mins
Discussion	The Project Vision summary
Conclusions	The assignments that we must make

Topic	Select user stories to support in this sprint
Presenter	Michail
Time Allotted	20 mins
Discussion	Which user stories we will give priority and what kind of features to implement
Conclusions	• 13 User Stories have been selected • Database and UI first

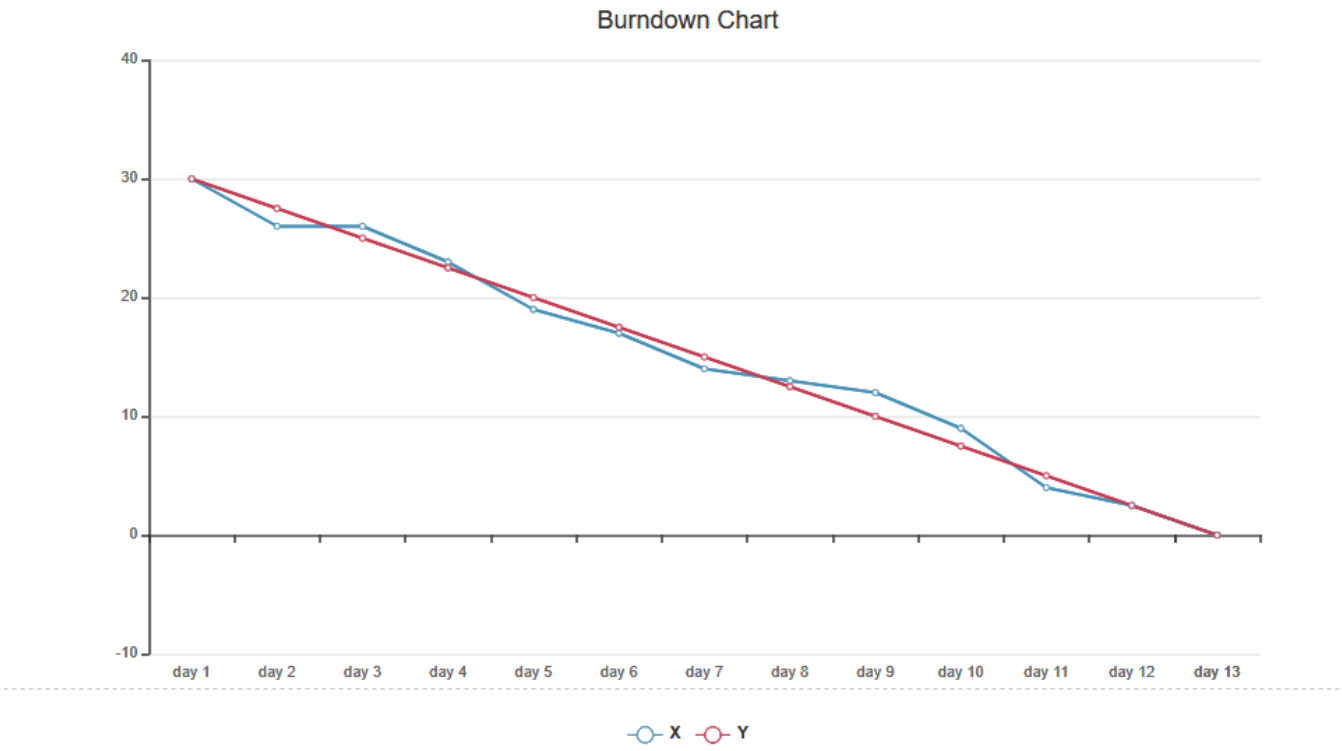
Topic	Identify tasks involved
Presenter	vpuser
Time Allotted	30 mins
Discussion	The tasks required to complete the user stories Identified
Conclusions	Tasks are created for the user stories selected.

Topic	Identify sprint deliverable
Presenter	Michail
Time Allotted	5 mins
Discussion	Concluded the sprint deliverable to be delivered by the end of this sprint.
Conclusions	We(I) concluded that be the end of this sprint, the Login and Change credentials for user and Admin scheduling will be working

2.7.4.2. Other Information

Observers	sylvi, miontragk
Resources	Internet, Teams
Special Notes	Just Keep Watching!

2.8. Burnout Chart/Line



Spring**1 above

Y as Story points of Sprint No.1 == 30 task points