WAIT TIME MANAGEMENT

The A Team: Alain Brown (abrown361), Heidi Braunstein (gte810m), Rajan Chaudhari (rchaudhari3), James Fry (jfry7), Yuan Shan (Tracy) Hu (yhu437)

Final Project Presentation
https://www.youtube.com/watch?v=x1Xd5S_zkdA

A mobile system whereby patients and families can see what is occurring in anticipation and during procedures.

Team & Roles

TRACY HU
Project Manager

Epic EHR, Population Health, SQL, Python

ALAIN BROWN
Developer

Java, C++, Python, Cloud Services

JAMES FRY
Developer

Javascript, Node.js, Python, PHP, SQL, React, JQuery

RAJAN CHAUDHARI
Developer

Python, SQL/Hive/Pig, Data Science/Stat/ML

HEIDI BRAUNSTEIN
Developer / QA

HCI, Java, Python, Frontend - Angular, Backend - Java, SQL, Data Science, ML
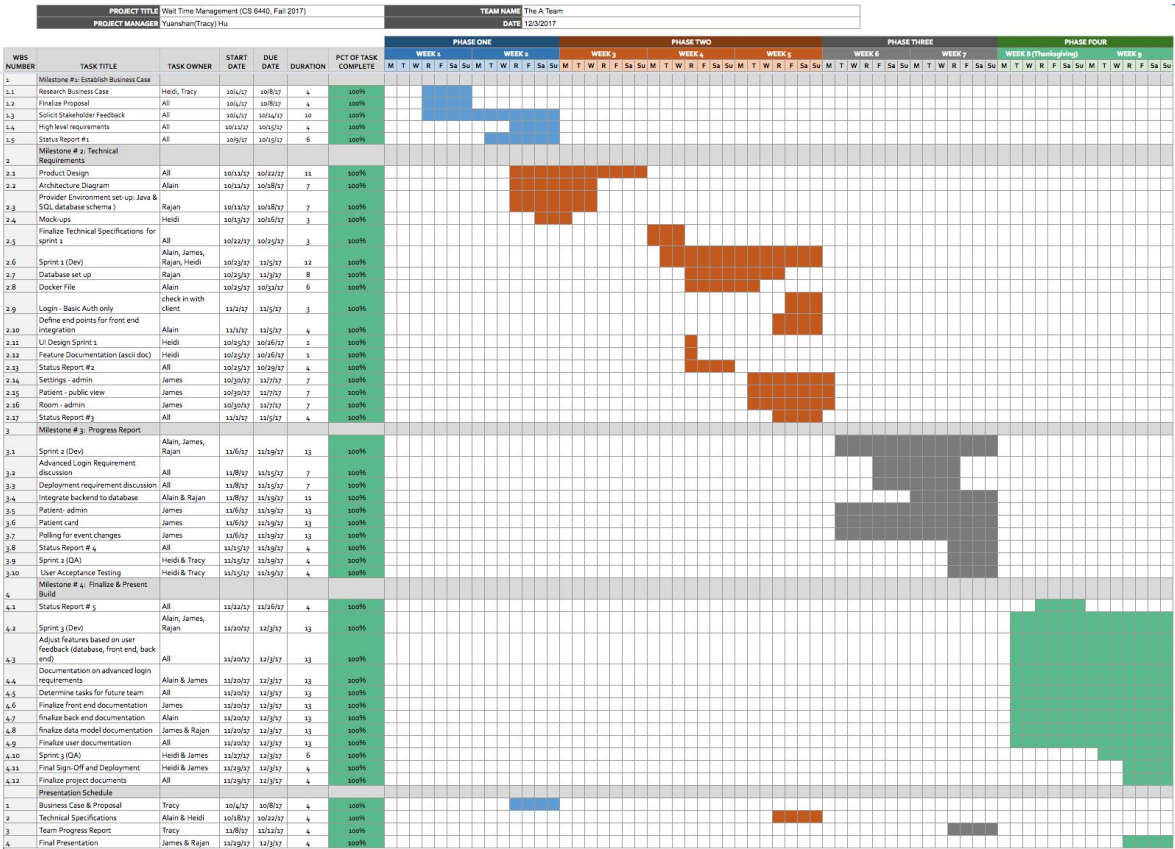
Plan of Action

Image from: [Wait Time Management Project Gantt Chart](#)

Phase I Details

WBS NUMBER	TASK TITLE	TASK OWNER	START DATE	DUE DATE	DURATION	PCT OF TASK COMPLETE
1	Milestone #1: Establish Business Case					
1.1	Research Business Case	Heidi, Tracy	10/4/17	10/8/17	4	100%
1.2	FInalize Proposal	All	10/4/17	10/8/17	4	100%
1.3	Solicit Stakeholder Feedback	All	10/4/17	10/14/17	10	100%
1.4	High level requirements	All	10/11/17	10/15/17	4	100%
1.5	Status Report #1	All	10/9/17	10/15/17	6	100%
	Presentation Schedule					
1	Business Case & Proposal	Tracy	10/4/17	10/8/17	4	100%
2	Technical Specifications	Alain & Heidi	10/18/17	10/22/17	4	100%
3	Team Progress Report	Tracy	11/8/17	11/12/17	4	100%
4	Final Presentation	James & Rajan	11/29/17	12/3/17	4	100%

Phase II (Technical Requirements)

WBS NUMBER	TASK TITLE	TASK OWNER	START DATE	DUE DATE	DURATION	PCT OF TASK COMPLETE
2	Milestone # 2: Technical Requirements					
2.1	Product Design	All	10/11/17	10/22/17	11	100%
2.2	Architecture Diagram	Alain	10/11/17	10/18/17	7	100%
2.3	Provider Environment set-up: Java & SQL database schema)	Rajan	10/11/17	10/18/17	7	100%
2.4	Mock-ups	Heidi	10/13/17	10/16/17	3	100%
2.5	Finalize Technical Specifications for sprint 1	All	10/22/17	10/25/17	3	100%

Phase II (Sprint 1)

WBS NUMBER	TASK TITLE	TASK OWNER	START DATE	DUE DATE	DURATION	PCT OF TASK COMPLETE
2.6	Sprint 1 (Dev)	Alain, James, Rajan, Heidi	10/23/17	11/5/17	12	100%
2.7	Database set up	Rajan	10/25/17	11/3/17	8	100%
2.8	Docker File	Alain	10/25/17	10/31/17	6	100%
2.9	Login - Basic Auth only	Alain	11/2/17	11/5/17	3	100%
2.10	Define end points for front end integration	Alain	11/1/17	11/5/17	4	100%
2.11	UI Design Sprint 1	Heidi	10/25/17	10/26/17	1	100%
2.12	Feature Documentation (ascii doc)	Heidi	10/25/17	10/26/17	1	100%
2.13	Status Report #2	All	10/25/17	10/29/17	4	100%
2.14	Settings - admin	James	10/30/17	11/7/17	7	100%
2.15	Patient - public view	James	10/30/17	11/7/17	7	100%
2.16	Room - admin	James	10/30/17	11/7/17	7	100%
2.17	Status Report #3	All	11/1/17	11/5/17	4	100%

Phase III Details

WBS NUMBER	TASK TITLE	TASK OWNER	START DATE	DUE DATE	DURATION	PCT OF TASK COMPLETE
3	Milestone # 3: Progress Report					
3.1	Sprint 2 (Dev)	Alain, James, Rajan	11/6/17	11/19/17	13	100%
3.2	Advanced Login Requirement discussion	All	11/8/17	11/15/17	7	100%
3.3	Deployment requirement discussion	All	11/8/17	11/15/17	7	100%
3.4	Integrate backend to database	Alain	11/8/17	11/19/17	11	100%
3.5	Patient- admin	James	11/6/17	11/19/17	13	100%
3.6	Patient card	James	11/6/17	11/19/17	13	100%
3.7	Polling for event changes	James	11/6/17	11/19/17	13	100%
3.8	Status Report # 4	All	11/15/17	11/19/17	4	100%
3.9	Sprint 2 (QA)	Heidi & Tracy	11/15/17	11/19/17	4	100%
3.10	User Acceptance Testing	Heidi & Tracy	11/15/17	11/19/17	4	100%

Phase IV Details

WBS NUMBER	TASK TITLE	TASK OWNER	START DATE	DUE DATE	DURATION	PCT OF TASK COMPLETE
4	Milestone # 4: Finalize & Present Build					
4.1	Status Report # 5	All	11/22/17	11/26/17	4	100%
4.2	Sprint 3 (Dev)	Alain, James, Rajan	11/20/17	12/3/17	13	100%
4.3	Adjust features based on user feedback (database, front end, back end)	Alain, James, Rajan	11/20/17	12/3/17	13	100%
4.4	Documentation on advanced login requirements	Alain & James	11/20/17	12/3/17	13	100%
4.5	Determine tasks for future team	All	11/20/17	12/3/17	13	100%
4.6	Finalize front end documentation	James	11/20/17	12/3/17	13	100%
4.7	finalize back end documentation	Alain	11/20/17	12/3/17	13	100%
4.8	finalize data model documentation	Rajan	11/20/17	12/3/17	13	100%
4.9	Finalize user documentation	Heidi, Tracy & Rajan	11/20/17	12/3/17	13	100%
4.10	Sprint 3 (QA)	Heidi & Tracy	11/27/17	12/3/17	6	100%
4.11	Final Sign-Off and Implementation	All	11/29/17	12/3/17	4	100%
4.12	Finalize Write-Up	All	11/29/17	12/3/17	4	100%

Project Goals

1

Provide greater transparency within the system.

2

Reduce patient anxiety due to unexpected wait time.

3

Improve overall patient satisfaction, which increases hospital revenue through increased reimbursement rates and referrals.

4

Increase efficiency in clinical workflow by enabling staff to rapidly assess which patients have been waiting longer than anticipated, and may need additional status updates.

Docker Deployment

README.md

Wait Time Management

Delivery to Emory (These instructions to be shared via email)

Download public repo

Download: https://github.com/cs6440-the-a-team/Wait-Time-Management/archive/master.zip

or check out with git

```
git clone https://github.com/cs6440-the-a-team/Wait-Time-Management.git
```

Install Docker

Instructions for your operating system can be found here: https://docs.docker.com/engine/installation/

Build and run docker containers

This will launch 3 docker containers, one for the database, one for the frontend, and one for the backend. The front end will serve on port 80 for http and 443 for https SSL. You may test succesful deployment by navigating in your web browser to the hostname where this has been installed. If testing from the same server simply open http://localhost in your browser.

```
docker-compose up
```

Next Steps

Advanced login integration

Patient and family engagement

Cerner and Airflow integration

Real-time client-side updates instead of data polling at fixed intervals