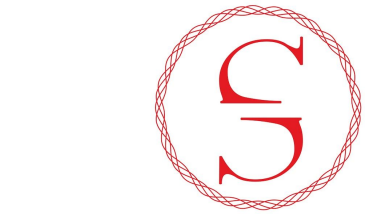

SUPER HEROES IN TRAINING

My Academic Pyramid

Project Plan

CECS 491B Sec 05

February 18, 2019

Team Leader: Krystal Leon, 013986607

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Revision History

Date	Version	Description
11/1/18	1.0	First draft.
12/13/18	1.1	Post Sprint 3 Revision.
2/18/19	1.2	SSO Scope Creep Inclusion.

Table of Contents

1. Introduction

The purpose of this document is to get an understanding of how the project will be completed. This document will give an estimation of costs, time, and deadlines for the project. It will allow our team to plan the schedule and resource needs for the project and to track progress. The team will have a plan for what needs to be done and the deadlines for milestones.

2. Overview

2.1 Project Overview

My Academic Pyramid is a social media web application where students can communicate with their peers and ask questions on a discussion board. The application will also provide an online tutoring service, allowing students to converse with tutors and seek assistance online without the need to travel to campus. The goal for the project is to help students build relationships among each other and include features which can assist students with their assignments. Our team will have the web application delivered by the deadline along with its functioning features.

2.2 Assumptions and Constraints

Our project team will be limited on budget and time. We are current CSULB students in the 491 Senior Project class and our time is limited by each team member's schedules throughout the scope of the class. As students, our budget is limited as well.

2.3 Project Deliverables

1. Business Requirements Document
2. Technical Specification Document
3. Project Plan
4. Design Document

These deliverables will be turned in to our client at their specific due dates, which are explained in more detail in further sections of this document.

2.4 Evolution of the Project Plan

This project plan will be updated as our project progresses. The table at the beginning of the document illustrates the document's current version and the date it was updated.

3. Resources

3.1 Team Roles

Name	**Role**
Krystal Leon	Project Manager/Full Stack Developer
Arturo Peña Contreras	Full Stack Developer
Hyunwoo Kim	Full Stack Developer
Luis Julian	Full Stack Developer
Trong Nguyen	Full Stack Developer
Victor Kim	Full Stack Developer

3.2 Cost and Time Estimations

Category	Description	Resource	Salary	Hours	Estimate
Developers	The wages for the developers based on a developers salary. Rates were calculated based on a developers salary per year and hours were calculated based on the total amount of hours the project will take to finish.	Krystal Leon	$30.00	675	$20,250.00
		Arturo Pena	$30.00	675	$20,250.00
		Luis Julian	$30.00	692	$20,760.00
		Victor Kim	$30.00	650	$19,500.00
		Hyunwoo Kim	$30.00	760	$22,800.00
		Trong Nguyen	$30.00	660	$19,800.00
				Total Estimate	$123,360.00
				Total Hours of Project	4112

Salaries are based on average junior developer salary divided into hours under a 40 hour weekly shift. https://www.indeed.com/salaries/Junior-Developer-Salaries

Category	Description	Web Services	Types of Web Services	Cost (Per Year)
Website Deployment	The cost to maintain and purchase a website address for our program	Domains	Brand New Domains	$10.00
		Web hosting	Shared	$48.00
		SSL Certificate	Let's Encrypt	$0.00

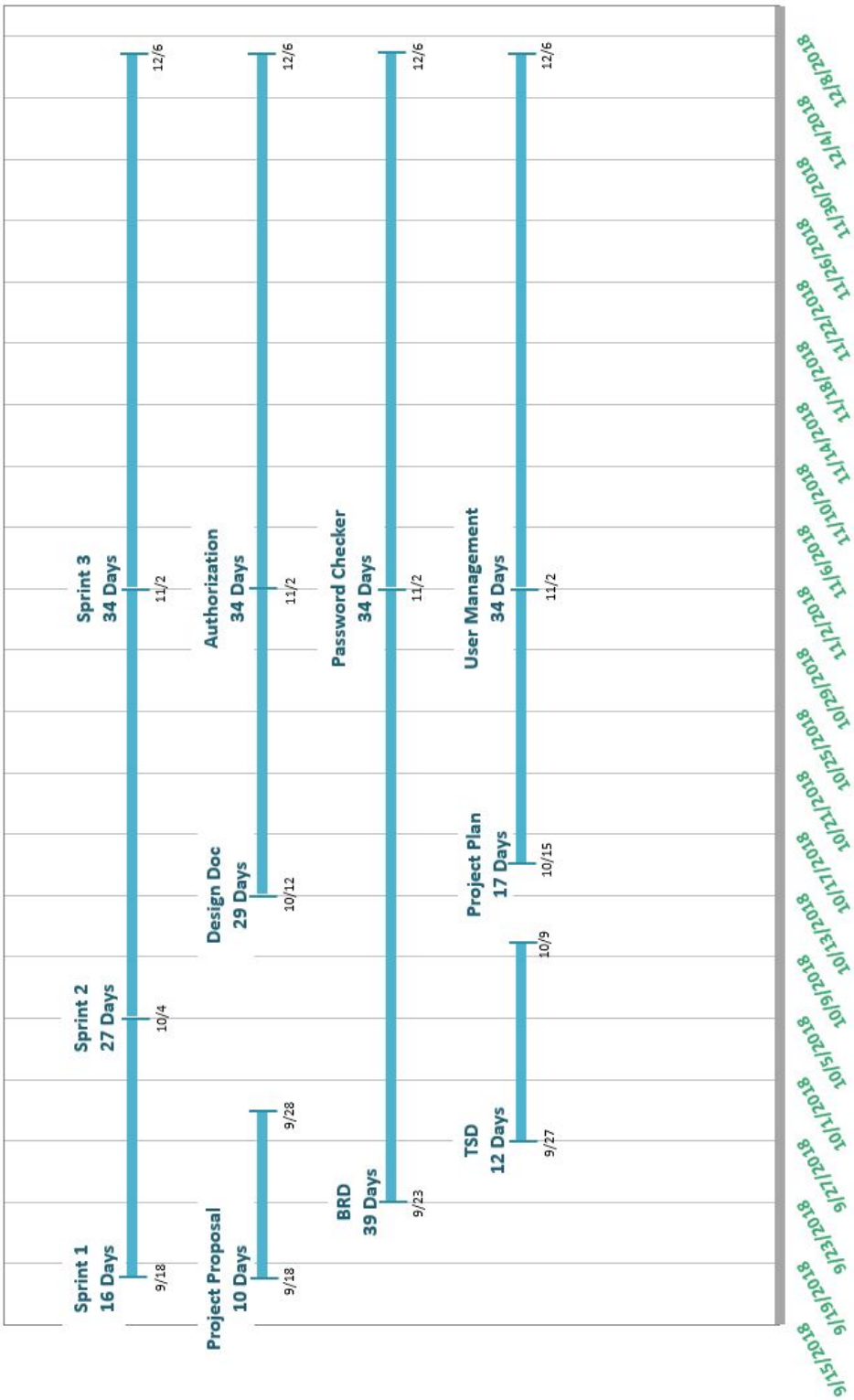
Category	Technology	What we used	Quantity	Cost	Total
	Browser	Chrome	1	$0.00	$0.00
	IDE	Visual Studio Community 15.8.2	1	$0.00	$0.00
	JavaScript Front End Framework	AngularJS 1.7.4 (VueJS)	1	$0.00	$0.00
	Server-Side Programming	.NET Framework (C#) 4.7.2	1	$0.00	$0.00
	Database	Microsoft SQL Server 13.0	1	$0.00	$0.00
	SQL Management	SQL Server Management Studio 2017	1	$0.00	$0.00
	Microsoft SQL Server 2016 Edition	Microsoft SQL Server 2016 Edition Developer	1	$0.00	$0.00
	Caching System	Redis 4.0.11	1	$0.00	$0.00
	Server	IIS 10	1	$0.00	$0.00
	Messaging (Library)	Discord (Library)	1	$0.00	$0.00
	Messaging (Personal)	Discord (Personal)	1	$0.00	$0.00
	Automated Testing	Fiddler 5.0.20182	1	$0.00	$0.00
	UI Design Software	Adobe XD 12.0.12.0	1	$0.00	$0.00
	Version Control System	Git v2.19.1	1	$0.00	$0.00
	Project Code Hosting Platform	GitHub	1	$0.00	$0.00
	Cloud Service for Development	Microsoft Azure (web Servers)	1	$0.00	$0.00
	Calendar Service API	Google API v3	1	$0.00	$0.00
	Calendar Service API 2	Full Calendar	1	$0.00	$0.00
	Usage Analysis Dashboard Graphing	Google Analytic	1	$0.00	$0.00
	Framework of CSS	Semantic UI 2.4	1	$0.00	$0.00
	Framework of CSS 2	Bulma 0.7.1	1	$0.00	$0.00
	Command-Line Shell (For GIT)	Git Bash 2.17	1	$0.00	$0.00
Technologies	Encryption Standard	.NET .Cryptography	1	$0.00	$0.00
				Total Cost	$0.00

4. Schedule and Milestones

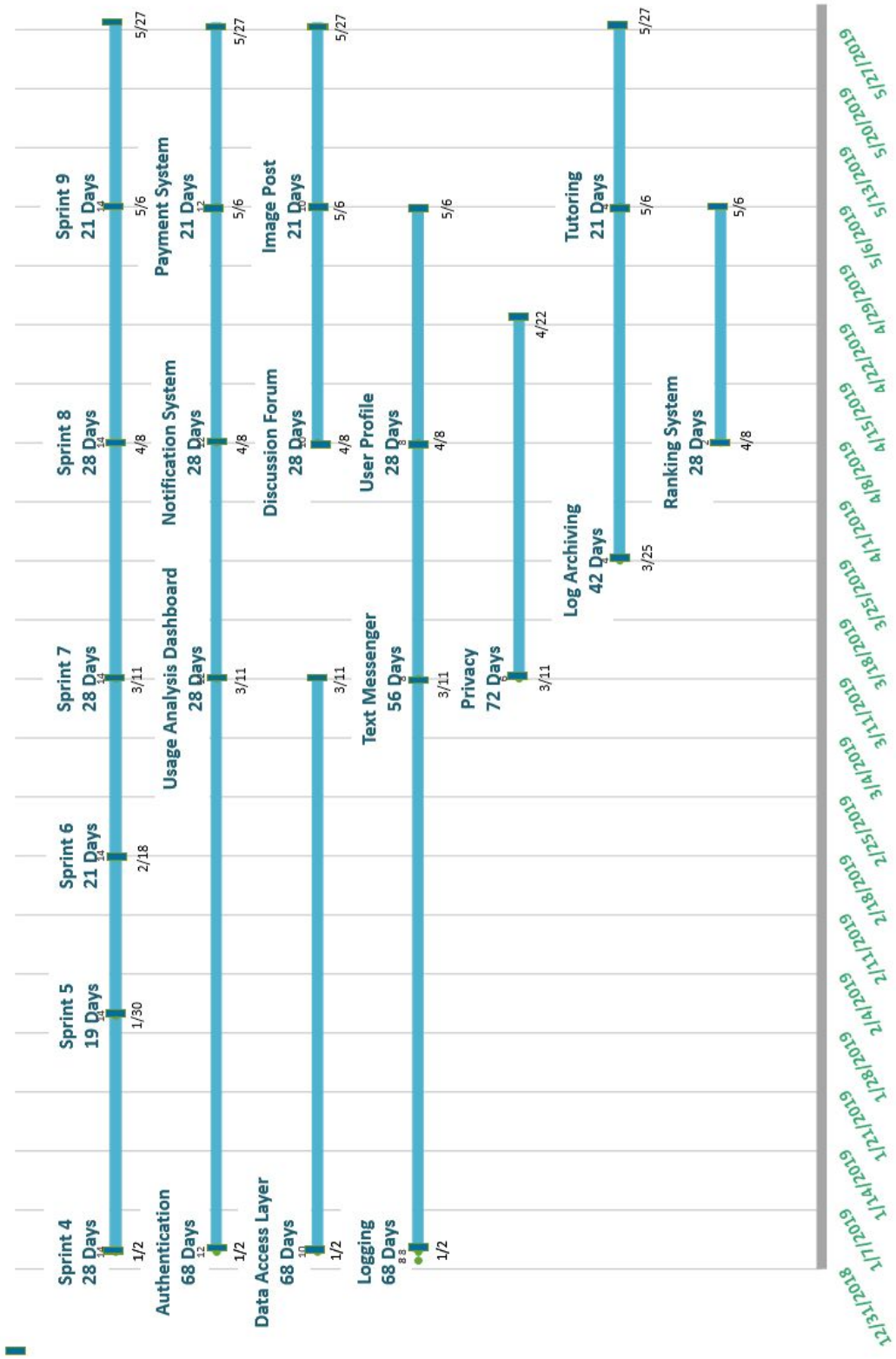
Our team will work using the Scrum method of project management. We will work in eight sprints throughout the length of our schedule. We will communicate with the client at the beginning and end of every sprint, and have something to demo to the client at the end of each sprint in order to get feedback for the project. This will help our team adjust to changes in scope and allow the client and our team to have a better understanding of how the project is progressing.

The following timeline includes the dates for sprints along with what will be implemented during those sprints. The time estimation table takes research, implementation, and testing into consideration, along with the best, average, and worst case scenarios for each. Time estimations were done individually for every feature taking into consideration feature complexities set by Professor Vatanak Vong. We plan on having these estimations be at least 85% accurate during the project timeline.

4.1 Timeline (Semester 1)



4.2 Timeline (Semester 2)



4.3 Hour Distribution

	Sprint 1 212 Hours 9/18/2018 - 10/4/2018			**Sprint 2** 320 Hours 10/4/2018 - 11/1/2018	
9/18/2018 - 9/28/2018	**Project Proposal** 76 Hours	**Writing** 32 Hours	10/4/2018 - 11/1/2018	**Business Requirements Document** 60 Hours	**Writing** 24 Hours
		Revising 44 Hours			**Revising** 36 Hours
9/23/2018 - 10/4/2018	**Business Requirement Document** 105 Hours	**Writing** 42 Hours	10/4/2018 - 10/9/2018	**Technical Specifications Document** 45 Hours	**Writing** 18 Hours
		Revising 63 Hours			**Revising** 27 Hours
9/27/2018 - 10/4/2018	**Technical Specifications Document** 31 Hours	**Writing** 12 Hours	10/13/2018 - 11/1/2018	**Design Document** 125 Hours	**Writing** 50 Hours
		Revising 19 Hours			**Revising** 75 Hours
			10/15/2018 - 11/1/2018	**Project Plan** 90 Hours	**Writing** 36 Hours
					Revising 54 Hours

	Sprint 3 268 Hours 11/1/2018 - 12/11/2018				**Sprint 4** 724 Hours 1/2/2019 - 1/30/2019		
11/1/2018 - 12/11/2018	**Authorization** 90 Hours	**Research** 40 Hours	11/1/2018	1/2/2019 - 1/30/2019	**Authentication** 124 Hours Luis *Continued in Sprint 5-6	**Research** 26 Hours	1/2/2019
		Design & Development 28 Hours	11/4/2018			**Design & Development** 62 Hours	1/9/2019
		Error Handling 12 Hours				**Error Handling** 10 Hours	
		Testing 10 Hours	11/21/2018			**Testing** 26 Hours	1/23/2019
11/1/2018 - 12/11/2018	**Scope Creep: Password Checker** 79 Hours	**Research** 26 Hours	11/1/2018	1/2/2019 - 1/30/2019	**Data Access Layer** 120 Hours Krystal *Continued in Sprint 5	**Research** 25 Hours	1/2/2019
		Design & Development 20 Hours	11/4/2018			**Design & Development** 60 Hours	1/9/2019
		Error Handling 8 Hours				**Error Handling** 10 Hours	
		Testing 25 Hours	11/21/2018			**Testing** 25 Hours	1/23/2019
11/1/2018 - 12/11/2018	**User Management** 99 Hours	**Research** 28 Hours	11/1/2018	1/2/2019 - 1/30/2019	**Privacy** 120 Hours Trong *Continued in Sprint 5	**Research** 80 Hours	1/2/2019
		Design & Development 36 Hours	11/4/2018			**Design & Development** 25 Hours	1/9/2019
		Error Handling 13 Hours				**Error Handling** 5 Hours	
		Testing 22 Hours	11/21/2018			**Testing** 10 Hours	1/23/2019
				1/2/2019 - 1/30/2019	**Usage Analysis Dashboard** 120 Hours Hyunwoo *Continued in Sprint 5	**Research** 25 Hours	1/2/2019
						Design & Development 60 Hours	1/9/2019
						Error Handling 10 Hours	
						Testing 25 Hours	1/23/2019
				1/2/2019 - 1/30/2019	**Logging** 120 Hours Arturo *Continued in Sprint 5	**Research** 24 Hours	1/2/2019
						Design & Development 62 Hours	1/9/2019
						Error Handling 10 Hours	
						Testing 24 Hours	1/23/2019
				1/2/2019 - 1/30/2019	**Log Archiving** 120 Hours Victor *Continued in Sprint 5	**Research** 24 Hours	1/2/2019
						Design & Development 62 Hours	1/9/2019
						Error Handling 10 Hours	
						Testing 24 Hours	1/23/2019

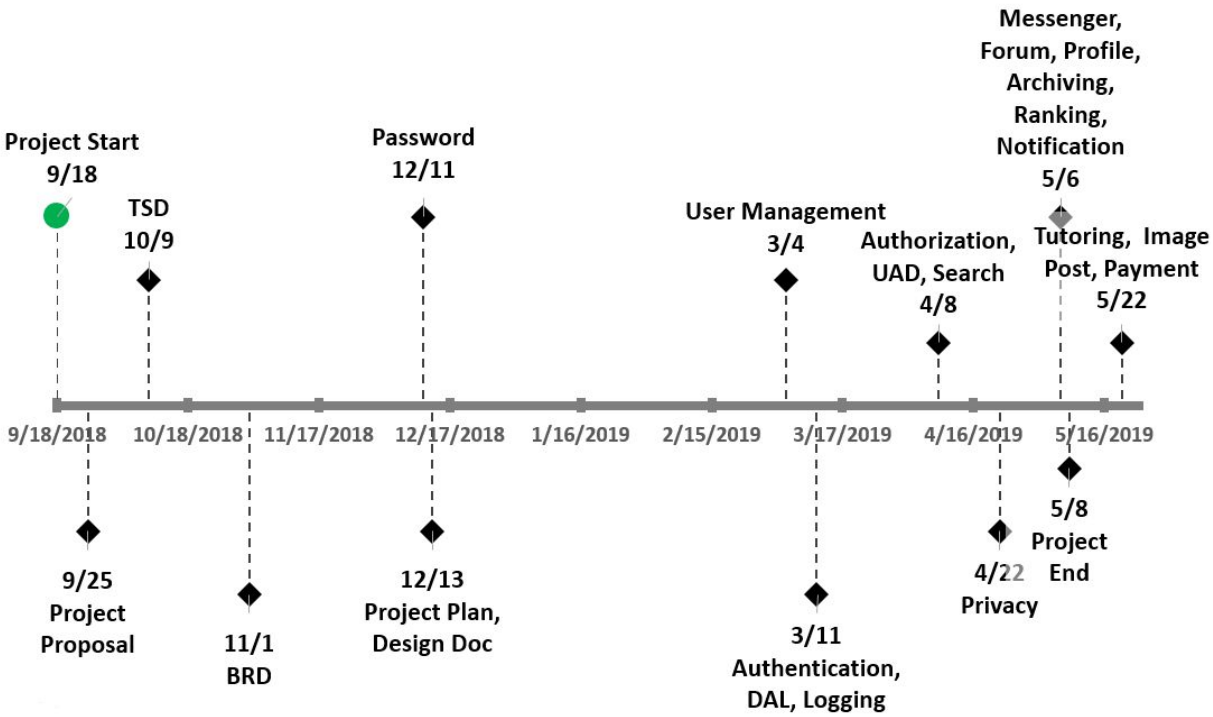
	Sprint 5 649 Hours 1/30/2019 - 2/18/2019				**Sprint 6** 312 Hours 2/18/2019 - 3/11/2019		
1/30/2019 - 2/18/2019	**Authentication** 124 Hours Luis *Continued in Sprint 6	**Research** 26 Hours	1/30/2019	2/18/2019 - 3/11/2019	**Authentication** 62 Hours Luis *Continued from Sprint 5	**Research** 13 Hours	2/18/2019
		Design & Development 62 Hours	2/6/2019			**Design & Development** 31 Hours	2/25/2019
		Error Handling 10 Hours				**Error Handling** 5 Hours	
		Testing 26 Hours	2/13/2019			**Testing** 13 Hours	3/4/2019
1/30/2019 - 2/18/2019	**Data Access Layer** 120 Hours Krystal *Continued from Sprint 4	**Research** 25 Hours	1/30/2019	2/18/2019 - 3/11/2019	**SSO: Automated App Sync** 40 Hours Krystal	**Research** 10 Hours	2/18/2019
		Design & Development 60 Hours	2/6/2019			**Design & Development** 15 Hours	2/25/2019
		Error Handling 10 Hours				**Error Handling** 5 Hours	
		Testing 25 Hours	2/13/2019			**Testing** 10 Hours	3/4/2019
1/30/2019 - 2/18/2019	**Privacy** 120 Hours Trong *Continued from Sprint 4	**Research** 15 Hours	1/30/2019	2/18/2019 - 3/11/2019	**Data Access Layer** 80 Hours Trong *Continued from Sprint 4	**Research** 15 Hours	2/18/2019
		Design & Development 60 Hours	2/6/2019			**Design & Development** 40 Hours	2/25/2019
		Error Handling 20 Hours				**Error Handling** 10 Hours	
		Testing 25 Hours	2/13/2019			**Testing** 15 Hours	3/4/2019
1/30/2019 - 2/18/2019	**Usage Analysis Dashboard** 120 Hours Hyunwoo *Continued from Sprint 4	**Research** 25 Hours	1/30/2019	2/18/2019 - 3/4/2019	**User Management** 30 Hours Hyunwoo *Continued from Sprint 3	**Research** 10 Hours	2/18/2019
		Design & Development 60 Hours	2/6/2019			**Design & Development** 12 Hours	2/25/2019
		Error Handling 10 Hours				**Error Handling** 4 Hours	
		Testing 25 Hours	2/13/2019			**Testing** 4 Hours	2/28/2019
1/30/2019 - 2/18/2019	**Logging** 55 Hours Arturo *Continued from Sprint 4	**Research** 11 Hours	1/30/2019	2/18/2019 - 3/11/2019	**Logging** 55 Hours Arturo *Continued from Sprint 5	**Research** 11 Hours	2/18/2019
		Design & Development 28 Hours	2/6/2019			**Design & Development** 28 Hours	2/25/2019
		Error Handling 5 Hours				**Error Handling** 5 Hours	
		Testing 11 Hours	2/13/2019			**Testing** 11 Hours	3/4/2019
1/30/2019 - 2/18/2019	**Log Archiving** 110 Hours Victor *Continued from Sprint 4	**Research** 22 Hours	1/30/2019	2/18/2019 - 3/11/2019	**SSO: Logout** 45 Hours Victor	**Research** 15 Hours	2/18/2019
		Design & Development 56 Hours	2/6/2019			**Design & Development** 15 Hours	2/25/2019
		Error Handling 10 Hours				**Error Handling** 5 Hours	
		Testing 22 Hours	2/13/2019			**Testing** 10 Hours	3/4/2019

	Sprint 7 547 Hours 3/11/2019 - 4/8/2019				**Sprint 8** 560 Hours 4/8/2019 - 5/6/2019		
3/11/2019 - 4/8/2019	**Authorization** 62 Hours Luis *Continued from Sprint 3	**Research** 13 Hours	3/11/2019	4/8/2019 - 5/6/2019	**Notification System** 100 Hours Luis	**Research** 20 Hours	4/8/2019
		Design & Development 31 Hours	3/18/2019			**Design & Development** 50 Hours	4/15/2019
		Error Handling 5 Hours				**Error Handling** 10 Hours	
		Testing 13 Hours	4/1/2019			**Testing** 20 Hours	4/29/2019
3/11/2019 - 4/8/2019	**Text Messenger** 100 Hours Krystal *Continued in Sprint 8	**Research** 20 Hours	3/11/2019	4/8/2019 - 5/6/2019	**Text Messenger** 75 Hours Krystal *Continued from Sprint 7	**Research** 14 Hours	4/8/2019
		Design & Development 50 Hours	3/18/2019			**Design & Development** 45 Hours	4/15/2019
		Error Handling 10 Hours				**Error Handling** 10 Hours	
		Testing 20 Hours	4/1/2019			**Testing** 11 Hours	4/29/2019
3/11/2019 - 4/8/2019	**Privacy** 80 Hours Trong *Continued from Sprint 5	**Research** 15 Hours	3/11/2019	4/8/2019 - 5/22/2019	**Privacy** 40 Hours Trong *Continued from Sprint 5	**Research** 10 Hours	4/8/2019
		Design & Development 40 Hours	3/18/2019			**Design & Development** 20 Hours	4/15/2019
		Error Handling 15 Hours				**Error Handling** 5 Hours	
		Testing 10 Hours	4/1/2019			**Testing** 5 Hours	4/18/2019
3/11/2019 - 4/8/2019	**Usage Analysis Dashboard** 120 Hours Hyunwoo *Continued from Sprint 4	**Research** 25 Hours	3/11/2019	4/8/2019 - 5/6/2019	**Discussion Forum** 75 Hours Hyunwoo	**Research** 14 Hours	4/8/2019
		Design & Development 60 Hours	3/18/2019			**Design & Development** 45 Hours	4/15/2019
		Error Handling 10 Hours				**Error Handling** 10 Hours	
		Testing 25 Hours	4/1/2019			**Testing** 11 Hours	4/29/2019
3/11/2019 - 4/8/2019	**Search Feature** 120 Hours Arturo	**Research** 24 Hours	3/11/2019	4/8/2019 - 5/6/2019	**User Profile** 105 Hours Arturo	**Research** 21 Hours	4/8/2019
		Design & Development 62 Hours	3/18/2019			**Design & Development** 53 Hours	4/15/2019
		Error Handling 10 Hours				**Error Handling** 10 Hours	
		Testing 24 Hours	4/1/2019			**Testing** 21 Hours	4/29/2019
3/11/2019 - 3/25/2019	**SSO: Logout** 45 Hours Victor	**Research** 15 Hours	3/11/2019	4/8/2019 - 5/6/2019	**Log Archiving** 90 Hours Victor *Continued from Sprint 7	**Research** 17 Hours	4/8/2019
		Design & Development 15 Hours	3/13/2019			**Design & Development** 46 Hours	4/15/2019
		Error Handling 5 Hours				**Error Handling** 10 Hours	
		Testing 10 Hours	3/20/2019			**Testing** 17 Hours	4/29/2019
3/25/2019 - 4/8/2019	**Log Archiving** 20 Hours Victor *Continued from Sprint 5	**Research** 4 Hours	3/25/2019	4/8/2019 - 5/6/2019	**Ranking System** 75 Hours Hyunwoo	**Research** 14 Hours	4/8/2019
		Design & Development 10 Hours	4/1/2019			**Design & Development** 45 Hours	4/15/2019
		Error Handling 2 Hours				**Error Handling** 10 Hours	
		Testing 4 Hours	4/4/2019			**Testing** 11 Hours	4/29/2019

END OF PROJECT		**Sprint 9** 520 Hours 5/6/2019 - 5/27/2019		
	5/6/2019 - 5/27/2019	**Tutoring** 240 Hours	**Research** 50 Hours	5/6/2019
			Design & Development 120 Hours	5/13/2019
			Error Handling 20 Hours	
			Testing 50 Hours	5/20/2019
	5/6/2019 - 5/27/2019	**Payment System** 105 Hours	**Research** 21 Hours	5/6/2019
			Design & Development 53 Hours	5/13/2019
			Error Handling 10 Hours	
			Testing 21 Hours	5/20/2019
	5/6/2019 - 5/27/2019	**Image Type Post (Discussion Forum, Text Messenger)** 175 Hours	**Research** 35 Hours	5/6/2019
			Design & Development 90 Hours	5/13/2019
			Error Handling 15 Hours	
			Testing 35 Hours	5/20/2019
		Sprint 8 is planned for after the end of the project. All Sprint 8 features are considered out of scope and will be dropped.		

5. Roadmap

5.1 Graph



5.2 Milestones

Milestones	Description	Deliverables	Planned Date
Project Start	First day of Sprint #1		9/18/2018
Project Proposal	Project Proposal is complete and submitted.	- Project Proposal Document	9/25/2018
TSD	Technical Specifications Document is complete and submitted.	- Technical Specifications Document	10/9/2018
BRD	Business Requirements Document is complete and submitted.	- Business Requirements Document	11/1/2018

Scope Creep: Password Checking	The first scope creep, Password Checking, is implemented, tested and fully functional. All the deliverables are submitted into the Github.	- Password Checking Implementation code, testing code, low level design document, and documentation	12/11/2018
Project Plan, Design Doc	Project Plan and Design document are completed and submitted. All the deliverables are submitted into the Github.	- Project Plan Document - Design Document	12/13/2018
User Management	User Management is implemented, tested and fully functional. All the deliverables are submitted into the Github.	- User Management Implementation code, testing code, low level design document, and documentation	3/4/2019
Authentication, DAL, Logging	Authentication, DAL, and Logging are implemented, tested and fully functional. All the deliverables are submitted into the Github.	- Authentication - Data Access Layer - Logging Implementation code, testing code, low level design document, and documentation for each feature	3/11/2019
Authorization, UAD, Search	Authorization, UAD, and Search are implemented, tested, and fully functional. All the deliverables are submitted into the Github.	- Authorization - Usage Analysis Dashboard - Search Implementation code, testing code, low level design document, and documentation for each feature	4/8/2019
Privacy	Privacy is implemented, tested and fully functional. All the deliverables are submitted into the Github.	- Privacy Implementation code, testing code, low level design document, and documentation for each feature	4/22/2019

Messenger, Forum, Profile, Archiving, Ranking, Notification,	Messenger, Discussion Forum, Profile, Archiving, Ranking System and Notification system are implemented, tested, and fully functional. All the deliverables are submitted into the Github.	- Messenger - Discussion Forum - User Profile - Archiving - Ranking System - Notification System Implementation code, testing code, low level design document, and documentation for each feature	5/6/2019
Project End	All code is ready to be deployed.	- Final Web Application	5/8/2019
Tutoring, Image post, Payment	Out of scope features implemented are complete, tested, and fully functional.	- Tutoring - Image Type Post - Payment System (Discussion Forum, Text Messenger)	5/22/2019

6. Project Monitoring & Control

Our team works using the SCRUM methodology and that is how we will track our progress.

6.1 Requirements Management

We will meet with our client at the start of each sprint and on other occasions if necessary. At the start of each sprint will will show the client what we have planned to work on to make sure the client is content with the progress we are making on the project. At these meetings we will determine whether the client wants any changes in requirements for the project.

6.2 Schedule and Budget Control

We have the schedule and expected dates for each milestone. Each milestone has its work items that will be assigned to individual members of our team each sprint. At the start of each sprint we will see how we are advancing on the project and whether we will have to make any changes to the scope to preserve completion dates.

7. Risk Management

This section has the risks associated with our web application “My Academic Pyramid.” It will explain how each risk will be identified, analyzed, and managed during our sprints based on the project and the team itself.

7.1 Process

Our team will ensure that risks are actively identified, analyzed, and managed throughout the life of the project. Risks will be identified early to minimize their impact.

7.2 Risk Identification

Risk identification will involve the project team and the client.

7.3 Risk Analysis

Risks will be assessed to identify possible outcomes. Qualification will be used to determine which risks are of highest priority.

The probability and impact for each risk will be assessed using the following approach.

Probability

- High - the probability of risk is over 70%
- Medium - the probability of risk is between 30% and 70%
- Low - the probability of risk is less than 30%

Impact

- High - risk that has the potential to greatly impact project cost, schedule or performance
- Medium - risk that has the potential to have moderate impact on project cost, schedule or performance
- Low - risk that has lowest possible impact on project cost, schedule or performance

Risks are ordered by priority along with what we will do to minimize the risk and what is the point at which we would not be able to recover if the risk reaches a specific limit.

Risk	**Description**	**Impact**	**Probability**	**Mitigation Strategy**	**Risk Limit**
Insufficient time	During our sprints, there is a possibly that our team will not have enough time to complete all system features.	High	High	We will continue to update our project plan as our project progresses to make sure we know how much time we have to complete a certain feature. We will communicate with the client to make sure we complete the highest priority features first.	We cannot allow for our project to fall behind to the point in which we fall a complete sprint behind schedule. If this ever occurs, we would not be able to complete a separate sprint along with what we haven't finished. It would be too much work and our project would fail.

Requirement changes	There could be changes in requirements that can affect our schedule. These changes are based on the client and his decision in what the feature should do.	High	High	The team will meet with the client at the end of every sprint to minimize the impact from a change in requirements. Staying on schedule will also assures us that a change in requirements won't push us back too much. Our team is also keeping in mind that a change in requirements is very likely to happen.	Changes in requirements should not reach the point of adding more than 500 hours of work to our project. We are limited in time and a big enough change in requirements would cause our project to fall to far behind schedule.
Team member availability	This is the limited availability of our team members during our regular planned sprints and during school breaks. This is also based on the chance that at least one of our team members may transfer to another project.	Medium	Low	Team meetings and good team communicatio n minimize the impact of a team member being absent for a period of time. Online meetings and check ups are also great in case they are not able to show up to the meetings.	Having a team member absent for over a week will impact the completion of work for that sprint. This results in our team unable to have the planned work delivered by the due date as our timeline was split based on the hours of all the team members.

Natural Disaster	Having an unforeseen disaster that prevents our team from working on the project. This can include but is not limited to earthquakes.	Low	Low	There is nothing we can do to prevent this. Chances are very low that it would happen.	A disaster that prevents the team from doing work for over a week or more would cause the project to fall behind or fail.

7.4 Risk Monitoring

Risks on the project will be tracked, monitored and reported throughout the length of the project. All changes to the project will be analyzed for their possible impact to the project risks. If there are multiple risks involved, each will be given a priority based on its' impact to the project.