

Dining Hall 411



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Project Charter

Dining Hall 411

Prepared 2/8/2022

Customer: UCSC Students / Dining Hall Services
Project Sponsor: UCSC Dining
Project Start/End (projected): Feb 5, 2022 - March 20, 2022

Project Overview:

Dining Hall 411 will seek to provide easily accessible dining hall menu information through an SMS messaging system to students. Users will be able to receive the menu of any dining hall on campus on the fly, with the ability to track favorite meals, as well as sort by allergens and other dietary restrictions.

Objective:

- Provide on the fly dining hall information
- Store user data to provide dietary tracking
- Use a low cost and overhead solution

Key Assumptions:

- SMS/Text Based Interface
- In-house System
- Accesses data from Dining Hall Services

Stakeholder	Role	Responsibility	Signatures
Morgan Foster	Project Management	Budget, Keep the project on track	Morgan Foster
Nils Brown	Chief Technology Officer	Database Management, SMS	Nils Brown
Ralph Miller	Chief Programming Officer	Data Collection and Handling, SMS	Ralph Miller
Reem Alam	VP Marketing, Outreach	Scribe, HR Relations, User Experience	Reem Alam
Qiujie Wang	VP Design	Risk Assessment Growth Analysis	Qiujie Wang

Baseline Project Plan Report

1.0 Introduction

A. Project Overview

In this section, we will provide an executive summary that specifies the project's scope, feasibility, justification, resource requirements and schedules.

Statement of the Problem: The UCSC dining halls need to implement a system that helps students access their menus easily, and be notified of their favorite meals. This would increase student satisfaction and encourage more students (and others) to use the dining hall more often. Also, by solving this problem, it will help students to save more time as they'll know whether they should spend time walking to a specific dining hall or not.

Summary: Dining Hall 411 will seek to provide easily accessible dining hall menu information through an SMS messaging system to students. Users will be able to receive the menu of any dining hall on campus on the fly, with the ability to track favorite meals, as well as sort by allergens and other dietary restrictions.

Feasibility Justification: The tools and techniques needed to complete this project were discussed with all stakeholders. Our team is comfortable with the tools and techniques chosen. The team also made sure to agree that this project idea is feasible and manageable before initiating the solution.

Dining Hall 411 Project Scope Statement

Scope Description	Our scope is just the active UCSC dining halls, not any of the cafes or restaurants on campus. In addition, we are targeting on campus students as opposed to off campus students.
Deliverables	A text service which will relay dining hall menus to students.
Acceptance Criteria	-Menu descriptions are accurate to the day that the text is received -Restrictions such as which food is included/excluded are properly communicated -Response time from service is fast
Constraints	-Our budget is low -The time to develop to completion is short
Assumptions	-The UCSC web service for menus is accurate and up to date.

B. Recommendation

In this section, we will provide a summary of important findings from the planning process and recommendations for subsequent activities.

Summary of Important Findings

Our project will be an SMS service that provides users with what's being served in specific dining halls live. The team found that this project is feasible and manageable. The success of the service will be measured in continuous user interactions, as well as our production of a working application.

Recommendations

Testing the service should be an ongoing process as it is vital to our success that our service is functioning properly. Tracking our progress and regularly updating our baseline plan should also be a priority.

2.0 System Description

A. Alternatives

In this section, we will briefly present the alternative system configurations.

Alternative system configurations to an SMS service could be: building a stand alone application, email subscription service, or student specific mail flyers.

B. System Description

In this section, will provide a description of the selected configuration and a narrative of input information, tasks performed and resultant information

Selected Configuration: SMS Service

- Users will have access menus without needing to connect to the Internet; this is useful because the Internet signal on campus is really weak (also emphasizes easy accessibility)

Input Information: Student Preferences, Allergen Information, Dining Hall Weekly Menu.

Tasks Performed: Web Scraping, Data Handling and Sanitizing, Collecting Student Preferences, Sending SMS messages.

Resultant Information: Student Preferences Database

3.0 Feasibility Assessment

A. Economic Analysis

In this section, we create a preliminary budget that outlines the planned expenses and revenues associated with your project.

Assuming that there are 9,000 students currently enrolled and living on campus at the moment they would more than likely be using the dining hall as a way to eat if every student is likely to be using the SMS text message system that we would be creating, these would be roughly the price range on how much it would cost if using AWS SMS Pricing.

Dining Hall SMS Project Budget AWS SMS Pricings:				
All Networks:	10DLC:	Long Code	Short Code	Toll-Free
Base Price:	\$52.29	\$52.29	\$52.29	\$52.29
Carrier Fee:	\$23.94	\$23.94	\$24.84	\$22.50

Cost-Benefit Analysis: The Cost-Benefit for the SMS Budget would be the idea that it is cheap and reliable, Amazon is a giant trusting tech company that when using most texting service codes they provide one of the cheapest alternatives than other SMS systems.

B. Technical Analysis

In this section, we will discuss relevant technical risk factors and an overall risk rating of the project.

Identifying and Assessing Risk

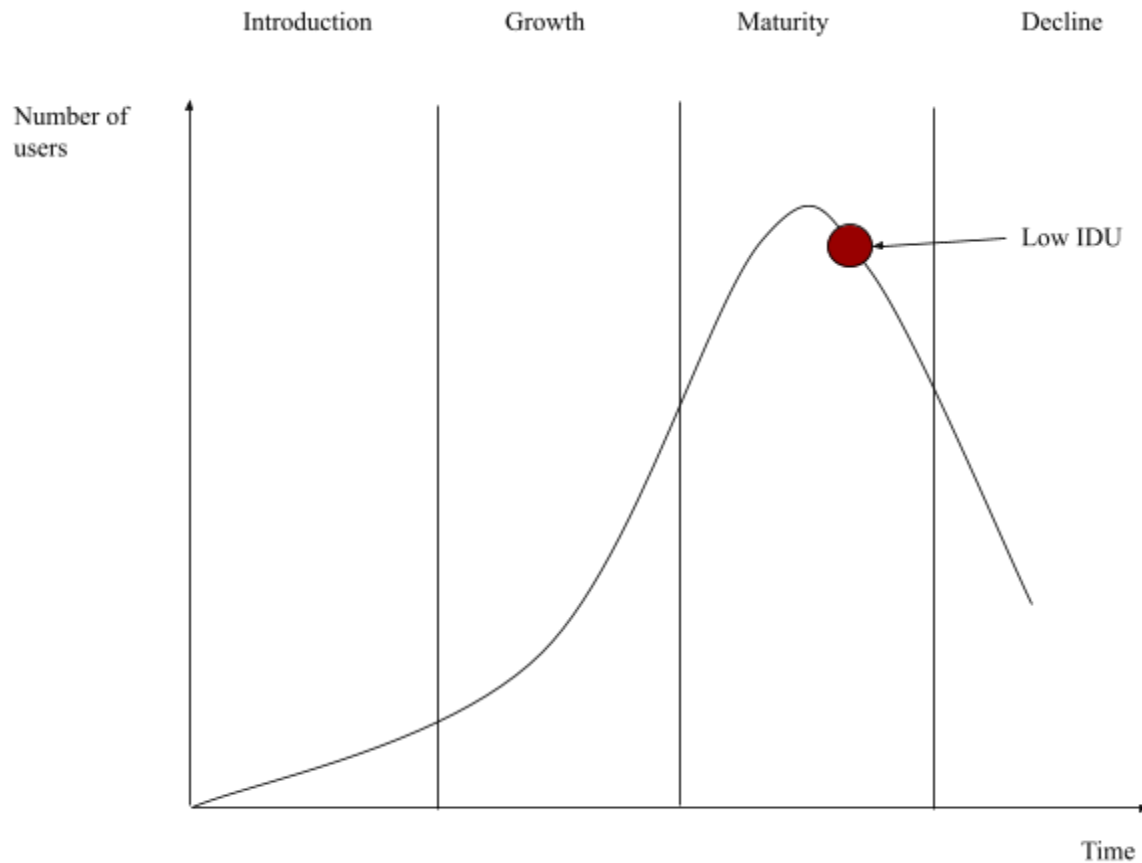
The main goal of our project is to provide easily accessible information about the dining hall menu, with the ability to filter for special allergies, favorite meals, etc. It's important to analyze the potential risk we might be going to confront in the future. We are going to list all the risks at the inception of our product.

Resistance from Users

The dining hall plays a very important role in people's school life. It helps students to cook and clean up, which means it can help students to save time. However, there are a lot of students who are vegan, Muslim, or allergic to some food. It might cost them a lot of time to check which dining hall provides the food they can/want to eat. This is also the potential goal of our product, that is, to save MORE time for the student. The resistance from users might not be a challenge to us since we are using a messaging API that will deliver messages to users without downloading any softwares. One potential risk for this part could be how to make our text credible, in other words, how can we avoid people pretending to be us then sending a spamming message to our customers?

Risk of New Technology

Nowadays, more and more top companies are using SMS APIs to send messages to their users. This means that the technology is under the maturity phase of its product life-cycle, our product is going to have a low implied demand uncertainty because of that. Unlike other new technologies (electric cars, auto-pilot cars, etc), the technology our product uses is being used by many companies, and it benefits many people nowadays as well.



Availability of Critical Resources

This might be the biggest challenge to our project. In order to deliver the correct and accurate message to our customers in time, we need a strong database to provide information to our product. We might need to figure out which database we are going to use and how to use it in the future.

Overall Risk Rating: Medium

C. Operational Analysis

In this section, we will provide an analysis of how the proposed system solves business problems or takes advantage of business opportunities in addition to an assessment of how current day-to-day activities will be changed by the system.

Day-to-day activities will change the system and how people interact with the application would be that they first have the idea of waking up and wondering what they would like to eat at the dining hall so they check the app or what's being served at the dining hall. This takes a while to pull up the website, load and check.

Sometimes it could take a couple minutes that people wouldn't want to even check and just go to what's close to them. With the application that we would be creating it would text them weeks ahead and alert them the morning of to let them know where and what food will be served and where their favorite foods will be located.

D. Legal and Contractual Analysis

In this section, we will provide a description of any legal or contractual risks related to the project.

Some risk that arises from this related project would be time constraint. There's only 10 weeks for the quarter which wouldn't be enough time to fully test and make sure that the application is running properly or smoothly

as to what we would like. Considering that we take into account other classes and classwork we have, this would mostly be our obstacle as a business group in creating this application.

E. Political Analysis

In this section, we will provide a description of how key stakeholders within the organization view the proposed system.

From the first meeting the stakeholders within the organization seem to enjoy and have a lot of creative ideas and thoughts on the project and app itself and have a lot of passion and drive into building the dining Hall 411 app in order to make the lives of the students on campus easier.

F. Schedules, TimeLine and Resource Availability

In this section, we will provide a description of potential time frame and completion date scenarios using various resource allocation schemes.

We divided the entire project into manageable tasks and then logically ordered them to ensure a smooth evolution between tasks. The following is a list consisting of our tasks:

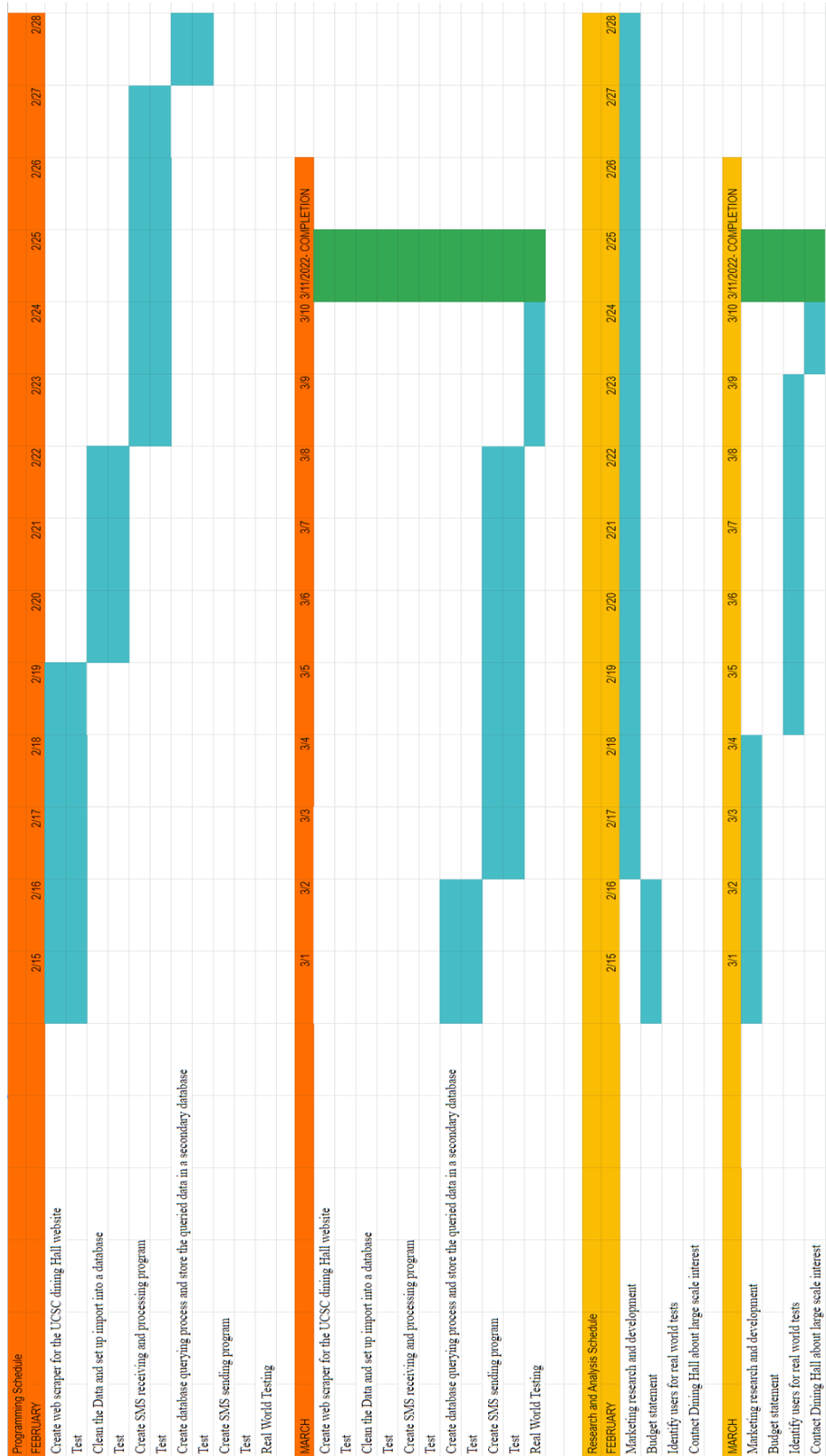
- a. Create web scraper for the UCSC dining Hall website
- b. Test
- c. Clean the Data and set up import into a database
- d. Test
- e. Create SMS receiving and processing program
- f. Test
- g. Create database querying process and store the queried data in a secondary database
- h. Test
- i. Create SMS sending program
- j. Test
- k. Real world testing
- l. Marketing research and development
- m. Budget statement
- n. Identify users for real world tests
- o. Contact dining hall about large scale interest

Next, we estimated resource requirements for each project activity and to use this information to create a project resource plan.

Due to the class's constraints with time all the roles have a small amount of days that it will take in order to make sure that the project is released at the end of the class time.

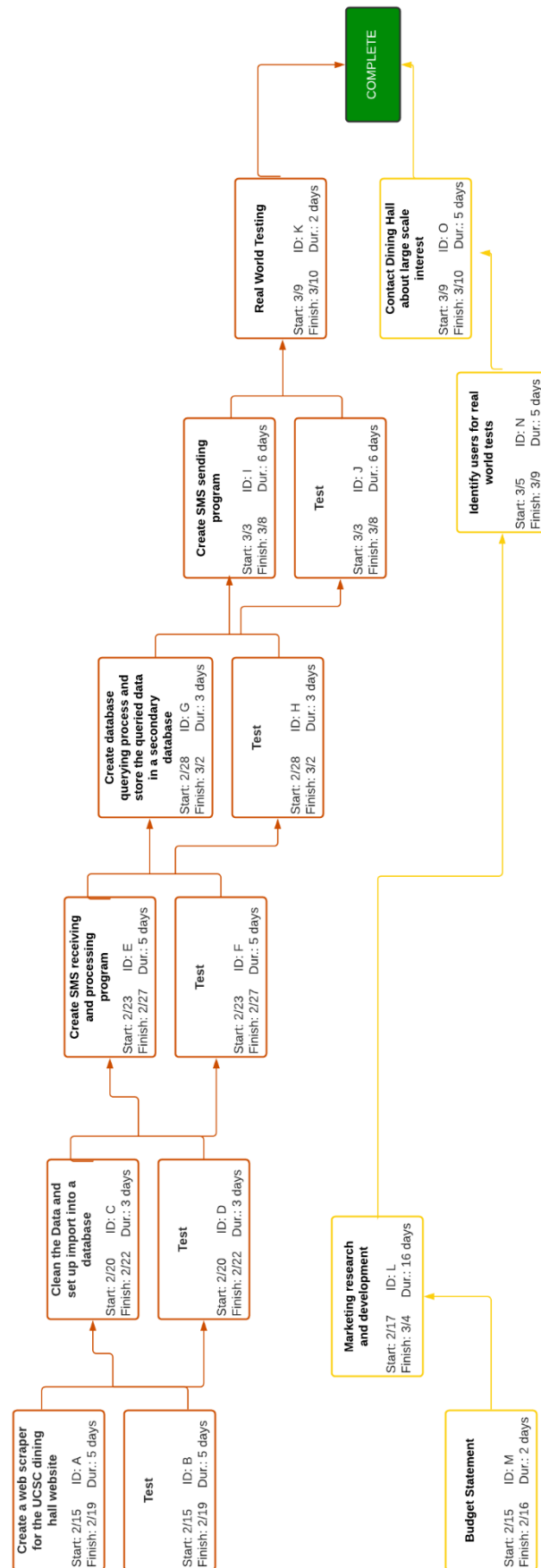
Resource	Task	Effort (Days)	Resource Type	Deliverable
All Phases				
Design	Created detailed design and a document with high level design implementation of the application	4	Designer	Design Documentation
Programmers	Build and test basic application framework	~15	Chief Technology Officer/Chief Programming Officer	Software Relations
Testing	To test the applications for minimal bugs	~10	User Experience	To Test cases and defect reports on a regular basis
Marketing	Marketing Campaigns to get the word out	~5	Marketing	To showcase the applications use and benefits to the users

We used the information on tasks and resource availability to assign time estimates to each activity in the work breakdown structure and created the following Gantt chart:



Finally, we created the following network diagram:

Network Diagram



4.0 Management Issues

A. Team Configuration and Management

In this section, we will provide a description of the team member roles and reporting relationships

The following table provides a description of each team member roles and reporting relationships:

Stakeholder	Role	Responsibility	Signatures
Morgan Foster	Project Management	Budget, Keep the project on track	Morgan Foster
Nils Brown	Chief Technology Officer	Database Management, SMS	Nils Brown
Ralph Miller	Chief Programming Officer	Data Collection and Handling, SMS	Ralph Miller
Reem Alam	VP Marketing, Outreach	Scribe, HR Relations, User Experience	Reem Alam
Qiujie Wang	VP Design	Risk Assessment Growth Analysis	Qiujie Wang

B. Communication Plan

In this section, we will outline the communication procedures among management, project team members, and the customer.

The following table consists of the stakeholders and what information they need to complete their roles and responsibility; and when, and at what interval, does this information need to be produced. It will also discuss what sources will be used to gather and generate this information, who will collect, store and verify this information, and each stakeholder will be assigned a contact person should any questions arise:

Stakeholder	Information Required	Due Date	Verified By	Contact
Morgan Foster	Financial analysis and budget information	10 March 2022	Qiujie Wang	Any of the Stakeholders, TAs, Professor
Nils Brown	Data storage preferences, Prototyping requirements	10 March 2022	Ralph Miller	Any of the Stakeholders, TAs, Professor
Ralph Miller	Data Collection from dining hall services, Agile prototyping	10 March 2022	Nils Brown	Any of the Stakeholders, TAs, Professor

Reem Alam	Business goals, marketing goals, market research, customer profiles	10 March 2022	Morgan Foster	Any of the Stakeholders, TAs, Professor
Qiujie Wang	Demand data, market research	10 March 2022	Reem Alam	Any of the Stakeholders, TAs, Professor

C. Project Standards and Procedures

In this section, we will provide a description of how deliverables will be evaluated and accepted by the customer.

We will be using a modified Agile SDLC with simultaneous development and testing sequences.. Our primary tools consist of Google Docs, Sheets, Python, SQLite3, AWS services. Utilizing Google sheets, we will be establishing a ‘checklist’ of the different parts of the project and their components: The sms receiving, data handling, and sms sending. We will be storing dining hall data in a small database and accessing it based on user’s queries. Our main goal is to have the service function well enough to act as an easily accessible and more customizable alternative to the dining hall website.

- ❖ What needs to be done?
 - Advertisement of the service
 - Build the back and front end programming, get data, handle data, send information to SMS pings or subscribers
 - ❖ How will success be measured?
 - Success will be measured in continuous user interactions, as well as our production of a working application
 - ❖ How will we know when we are finished?
 - When the application is functional and useable by the students, reaching the point only maintaining the project is required
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