

SANTA CLARA UNIVERSITY
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Date: November 19, 2015

I HEREBY RECOMMEND THAT THE THESIS PREPARED UNDER MY SUPERVISION BY

Alberto Diaz-Tostado
Amy Nguyen Tran

ENTITLED

Project Management Application

BE ACCEPTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREES OF

BACHELOR OF SCIENCE IN COMPUTER SCIENCE AND ENGINEERING
BACHELOR OF SCIENCE IN WEB DESIGN AND ENGINEERING

Thesis Advisor

Department Chair

Project Management Application

by

Alberto Diaz-Tostado
Amy Nguyen Tran

Submitted in partial fulfillment of the requirements
for the degrees of
Bachelor of Science in Computer Science and Engineering
Bachelor of Science in Web Design and Engineering
School of Engineering
Santa Clara University

Santa Clara, California
November 19, 2015

Project Management Application

Alberto Diaz-Tostado
Amy Nguyen Tran

Department of Computer Science and Engineering
Santa Clara University
November 19, 2015

ABSTRACT

Individuals currently live in a society that revolves around productivity. People from managers to students are bombarded with numerous tasks and daunting deadlines, making it extremely difficult to stay organized. In addition, people have multiple commitments in their lives, adding to the stress of keeping up with their already busy schedules. Currently, people are faced with a variety of organization methods. However, the two tools most people resort to, e-mail and notepad, become a burden to organize over time. In addition, current project management solutions are targeted towards large enterprises and not accessible for the general public. We propose a simple and user-friendly web-based solution that will be accessible to all. With the creation of a project management application, we will allow users to host a collaborative environment by providing them with a web based interface where they can easily communicate with their team members, find an organized list of their tasks and keep track of their schedules. In addition, we want individuals will use our project management application to plan personal projects, such as weddings or birthday parties, thus allowing them to enjoy their lives doing the things that make life memorable.

Table of Contents

1	Introduction	1
1.1	Motivation	1
1.2	Current Solutions	1
1.3	Proposed Solution	2
1.4	Use Cases	3
1.5	Activity Diagrams	6

List of Figures

1.1	Use Case Diagram	3
1.2	Activity Diagram: Adding a project.	6

Chapter 1

Introduction

1.1 Motivation

Individuals currently live in a society that revolves around productivity. People from managers to students are bombarded with numerous tasks and daunting deadlines, making it extremely difficult to stay organized. In addition, people have multiple commitments in their lives, adding to the stress of keeping up with their already busy schedules. Currently, individuals are faced with a variety of organization methods. However, the two tools most people resort to are e-mail and notepads. Without a doubt, people are often drawn to the simplicity of typing out a quick note or sending an e-mail. However, it becomes extremely difficult to keep track of all these notes and e-mails. Before you know it, lines of communication become broken and trains of thought are lost forever. Older conventions are becoming outdated as e-mail searches often yield innumerable results, and text files are never where they need to be. Team members need a way arrange their tasks and project managers require a solution to view the process of projects and ensure that every member is on track.

1.2 Current Solutions

Previous solutions have failed to provide an accessible and simple project management tool. One crucial issue is that most workflow management solutions, such as Asana and Basecamp, are often marketed and catered to large enterprises rather students and small groups. These solutions are exceedingly expensive, thus community organizations and students tend to avoid these applications. Another issue with current solutions is their steep learning curves that often require additional training. In addition, present solutions, such as Pivotal Tracker and Microsoft Outlook, are not straightforward and can make it difficult to setup a meeting or look up a contact. Furthermore, present project management applications are visually unappealing and not user-friendly. Most applications follow the conventional three panel layout, as seen in Outlook, pushing your tasks into some sidebar crevice where these tasks can easily be overlooked. These applications are not designed for students or small groups with minimal project management experience.

1.3 Proposed Solution

We propose a simple, yet powerful, web-based solution that lives entirely within a browser. The goal is to have an easily accessible place for not only small groups of students or professionals to host a collaborative environment, but, we also want individuals to use our system for personal projects. Our accessibility will be achieved through a simple sign-on system without the hassle of painful payment systems and complex learning curves. Instead of struggling to learn the software, the user will be guided through a quick, interactive tutorial where he or she will establish goals, deadlines, and other project management tasks. The user will then be able to begin collaborating by creating groups and inviting other team members. Here, the user has the ability to add deadlines as well as assign internal tasks for him/herself or external tasks for others to view. The application will include a progress bar showing where the project is, where it was, and most importantly, where it needs to go. Current solutions provide users with a static page of checklists. In our application, when progress is made, the interface will reflect those changes. The timeline will expand into greater detail, time sensitive reports will become available, and completed tasks and files will be, literally, lost in time. We will allow the user to travel through their project timeline, revealing a snapshot of previous or future tasks. Lastly, to further promote organization, we plan to allow teams to store files within their project portals, eliminating time spent searching for important documents. Our product will be tested in live working environments, showing how teams use our solution to better organize their projects in an effort to help us help them achieve their organizational goals.

1.4 Use Cases

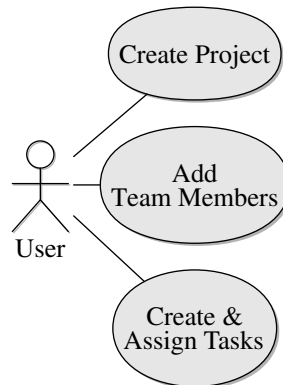


Figure 1.1: Use Case Diagram

Use Case 1	Create Project
Goal:	Initialize project objectives, tasks, and deadlines
Actor:	User
Preconditions:	Account is set up
Postconditions:	Project is initialized
Steps:	
1. Name the project	
2. Define project goals and deadlines	
3. Add people to the project	
4. Save the project	
Exceptions:	
A. Invalid login data:	
1. System shows failure message	
2. User returns to step 1	
B. Invalid subscriber data:	
1. System shows failure message	
2. User returns to step 2 and corrects the errors	

Use Case 1	Template test
<i>Goal:</i>	System-wide
<i>Actor:</i>	End-User
<i>Preconditions:</i>	
<i>Postconditions:</i>	
<i>Steps:</i> <ol style="list-style-type: none"> 1. The first action 2. The second action 	
<i>Exceptions:</i> <ol style="list-style-type: none"> 2.a Invalid login data: <ol style="list-style-type: none"> 1. System shows failure message 2. User returns to step 1 5.a Invalid subscriber data: <ol style="list-style-type: none"> 1. System shows failure message 2. User returns to step 2 and corrects the errors 	

Use Case 1	Template test
<i>Goal:</i>	System-wide
<i>Actor:</i>	End-User
<i>Preconditions:</i>	
<i>Postconditions:</i>	
<i>Steps:</i> <ol style="list-style-type: none"> 1. The first action 2. The second action 	
<i>Exceptions:</i> <ol style="list-style-type: none"> 2.a Invalid login data: <ol style="list-style-type: none"> 1. System shows failure message 2. User returns to step 1 5.a Invalid subscriber data: <ol style="list-style-type: none"> 1. System shows failure message 2. User returns to step 2 and corrects the errors 	

1.5 Activity Diagrams

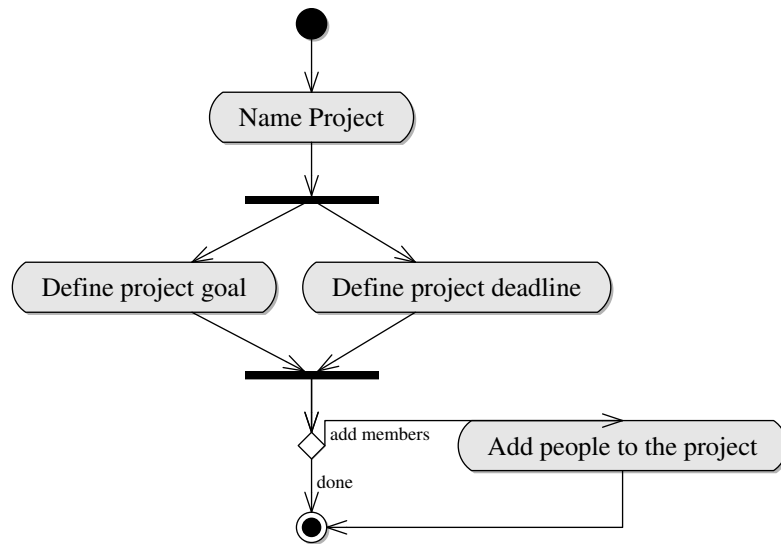


Figure 1.2: Activity Diagram: Adding a project.