



# Diplomacy Desktop App - Project Plan

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Group E

CECS 475

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February 28, 2019

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# 1 Overview

The motivation for this project is to develop a digital version of the Diplomacy board game. Users will be able to play the game with most of its original rules enforced along with additional features that will enhance the game. This system will be implemented as a desktop app which creates the game on a server and which allows for digital features such as synchronous gameplay, a clickable game map, ingame chat functionality, background music, and animation. Our system will enable the convenience of remote game play, eliminating the need for players to physically meet in one place. This project will not cost anything, although it will take some time to develop and implement. We will be spending less than a month on documentation and planning, two weeks on implementing a prototype, and about two months on implementing the complete system. In total, this project will take about 3 months to complete.

## 2 Goals and Scope

### 2.1 Project Goals

Project Goal	Priority	Comment/Description/Reference
<b>Functional Goals:</b>	1	
Clickable Game Map		Map from original board game that allows users to pick countries they want to interact with.
User Interface		Allows users to create or join a game and view the user manual.
Game Rule Implementation		Board game rules from the game have been implemented, allowing users to make decisions based on the rules. Only seven players can play, no more no less.
Ingame Chat		Allowing users to communicate with each other with regards to making ingame decision.
<b>Organizational Goals:</b>	2	
Documentation		Elaboration of how the software will be developed. Documents include vision document, project plan, use cases, test plan, test cases, and user manual.
<b>Technological Goals:</b>	3	
Functionality on PC		The entire game is functional on a computer as a desktop app.

Server is able to host a game		The game can be hosted on a server and played by our users.
<b>Quality Goals:</b>	4	
Background Music		Playing music in the background during an ongoing game.
Animation		Displaying movement of pieces in an animated fashion.
<b>Constraints:</b>	5	
Network Capability		Users will need to be connected to the internet in order to communicate with the game server and play the game.

## 2.2 Project Scope

### 2.2.1 Included

The deliverables of this project and their receivers are listed in detail in the delivery plan in chapter 7, subsection 1.

### 2.2.2 Excluded

The functionality to have less than seven players play the game.

## 3 Organization

The project development is organized through several segments. Over the course of three months, the project will transition from initial planning, documentation, software development, and finalizations of all the previous items. The project team is split into pieces for efficiency: documents are written part by part by different team members as will the software itself. The portions of the program, the interface, server, implementation, etc. will be split up based on the familiarity each person has with the necessary tools.

Expected organizational issues include deadline crunching, skewing the expected work schedule, and the time required for team members to learn the technology we will be working with.

### 3.1 Organizational Boundaries and Interfaces

The software has a few external stakeholders or organizations to take into account. The primary stakeholder is the course professor who has set the requirements and boundaries of the project. Likewise, the project's development is a largely independent process that can branch into its own path.

### 3.1.2 Receivers

The receiver of all documentation and software is the course professor.

## 3.2 Project Organization

As written above, the development of the program is evenly split between the team members, based on expertise when able. *The exact breakdown of tasks is not yet decided.* The team leader is decided to be Vishant Khunti who will oversee the rest of the team members in addition to their own work, including keeping the project on schedule. The professor is both the project manager and assuming the role of the steering committee, being the one to set requirements and deadlines.

### 3.2.1 Project Manager

<b>Project Manager:</b>	Prof. Anthony Giacalone
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### 3.2.2 Project-Internal Functions

Function	Name	Comment
Quality Assurance	Chelsea Marfil & Sadiq Sarwar	
Source Code	Vishant Khunti & Jessica Hilario & Ellen Burger & Jason Nguyen & Sovathana Heng	
Interface Design	Sophanna Ek & Sadiq Sarwar	
Framework Implementation	Jason Nguyen & Sovathana Heng	
Documentation	All team members	

### 3.2.3 Project Team

Name	Availability	Comment
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Jason Nguyen	Tue, Thu 2PM-4PM	
Ellen Burger	Tue, Thu 2PM-4PM	
Sadiq Sarwar	Tue, Thu 2PM-4PM	
Sovathana Heng	Tue, Thu 2PM-4PM	
Sophanna Ek	Tue, Thu 2PM-4PM	
Vishant Khunti	Tue, Thu 2PM-4PM	
Chelsea Marfil	Tue, Thu 2PM-4PM	
Jessica Hilario	Tue, Thu 2PM-6PM	

### 3.2.4 Steering Committee

<b>Steering:</b>	Prof. Anthony Giacalone
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## 4 Schedule

### 4.1 Work Breakdown Structure

The project is organized into three main phases: The Documentation phase, The prototype phase, and the release phase.

### 4.2 Schedule and Milestones

Milestone	Description	Milestone Criteria	Planned Date
M0	Project Start	Project teams formed And Repository created	2019-01-29
M1	Documentation and Planning	All required documentation has been implemented: vision document,	2019-03-07

		project plan, user stories, test plan, flow chart, and user manual	
M2	Prototype and Presentation	Completed a working minimal model of the final product	2019-03-21
M3	Completed project	All documentation accurately reflects the final product and all user stories have been implemented and test	2019-05-09

### 4.3 Development Process

The software engineering methodology that is used will be Scrum. This process was chosen due to the time constraints and the size of our groups. Scrum was also chosen to help facilitate the group's ability to react and respond to the inevitable changes to the project.

### 4.4 Development Environment

Item	Applied for	Availability
User stories	Document possible actions in our project	2019-02-28
Test plan	Details how to verify the accuracy and completeness of user stories	2019-02-28
Electron	Framework	2019-02-29
Javascript	Program logic	2019-02-29

### 4.5 Measurements Program

Types of data	Purpose	Responsibility
User stories defects	Make accurate correction to system actions	Group

## 5 Risk Management

Major risks we have determined for this software are as follows:

- Equipment failure
- Late delivery of software
- Technology will not meet expectations
- End users resist system
- Changes in requirements
- Deviation from software engineering standards
- Less reuse than planned
- Poor commenting of source code

Risks	Category	Probability	Impact
Equipment failure	TI	70%	1
Late Delivery	RF	30%	1
Technology will not meet expectations	TE	25%	1
End users resist system	RF	20%	1
Changes in requirements	TM	20%	2
Deviation from software engineering standards	ES	10%	3
Less reuse than planned	TM	60%	3
Poor comments in code	TI	20%	4



## 5.1 Necessity of Risk Mitigation, Monitoring, and Management

Risk mitigation, monitoring, and management helps us pre-determine any possible major risks that may occur during development of this software. The Requirements Specification and the System Specification will be reviewed and analyzed to determine the major risks of developing this software. Each major risk found will be further analyzed to determine its overall impact upon the system. These risks will be recorded and a method will be devised to determine the best course of action if the risks should occur. Certain risks will have preventative measures devised for them. This is to reduce the possibility of more severe risks from occurring. All risks that could occur will have a specified method to handle the risk. This is to ensure that if a risk does occur, there is a predetermined path to follow when attempting to manage the risk.

## 6 Communication and Reporting

Type of Communication	Method/Tool	Frequency/Schedule	Information	Participants/Responsibilities
<b>Internal:</b>				
Team Meeting	In Person	Twice a week	- What did you do? - What are you going to do?	Project Team
Project code/files sharing	GitHub	After documentation phase	- Documents - Code	Project Manager/ Project Team
Milestone meetings	In Person	Before each Milestone deadline	Milestone accomplishment	Project Manager/ Project Team
Final Project Meeting	In Person	M3	Final Deliverable	Project Manager/ Project Team
<b>External:</b>				
Project Report	Github Documents/ Waffle.io	Monthly	Project Status: - Progress - Problems - Solutions	Project Manager/ Project Team

## 7 Delivery Plan

### 7.1 Deliverables and Receivers

Ident.	Deliverable	Planned Date	Receiver
D1	Documentation and Planning	03/07/19	Project Manager
D2	Prototype	03/21/19	Project Manager and Stakeholders
D3	Completed Product	05/09/19	Project Manager, Stakeholders and end users

### 7.2 Schedule/Timeline

Ident.	Deliverable	Planned Date	Receiver
F1	Documentation and Planning	03/07/19	Project Manager
F2	Fundamental UI	03/21/19	Project Manager and Stakeholders
F3	SVG Map Implementation	03/21/19	Project Manager and Stakeholders
F4	Game Logic	05/09/2019	Project Manager, Stakeholders and end users
F5	Chat Functionality	05/09/2019	Project Manager, Stakeholders and end users
F6	Completed Product	05/09/19	Project Manager, Stakeholders and end users

## 8 Quality Assurance

To assure our application does work, we will build our application based off of the use cases that we will construct later on in our document process first. We will test the use cases based on what we want it to do by trying both the success and failure case. Depending on the importance that the failed case can do for the project, we will implement that case to avoid less loopholes in our application. On the next level of testing for quality, we will play a game using all the features to assure that it meets not only the use cases we implemented but also play the game that we intended for it to play.

## 9 Configuration and Change Management

Weekly reports will be made on the changes that will be taking place in the app and documents. To keep track of changes, we will be using GitHub to track who has committed what and waffle.io to see which team member is in charge of doing a specific task to complete this project. All changes will be discussed during the biweekly team meeting.

## 10 Security Aspects

Users can play the Diplomacy game and interact in the chat room without having to log in. Therefore, the user's information is collected at the very minimum. In most cases, the app collects almost no information from users. Confidential aspect of security will not be violated. In the unusual case, the program might be successfully manipulated by hackers or other party to change the behaviour of the game, this leads to users' unsatisfaction and game interruption. In this case, the software engineer team of the desktop app will notify users about this incident and work closely to all the relevant parties to resolve this issue as soon as possible.

## 11 Abbreviations and Definitions

RF	Release failure
D	Deliverable
M	Milestone
TE	Technical Expectation
TI	Technical Issue
TM	Task Modification
QA	Quality Assurance
ES	Engineering Standards

## 12 References

- [1] 01 Vision Document for Diplomacy
- [2] 03 Use Case Diagram for Diplomacy

## 13 Revision

Rev. ind.	Page (P) Chapt. (C)	Description	Date
1.0		Original Version	2/12/2019
2.0		Updated with roles and timeline	5/7/2019