Vision Document Project Phase 1 Team 4 Star

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# **REVISION HISTORY**

| Date    | Versio<br>n | Description                                   | Author                                   |
|---------|-------------|---|--|
| 5/30/19 | <1.0>       | Initial draft                                 | Lead: Joseph Freedman<br>Supporting: All |
| 6/4/19  | <1.1>       | Re-evaluated stakeholders                     | Lead: Ryen Castillo<br>Supporting: All   |
| 6/28/29 | <1.2>       | Re-evaluation of game without online features | Ryen Castillo                            |

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### 1 Introduction

#### 1.1 Purpose

The purpose of this document is to recreate an old game called Illuminati and porting it into a digital platform. The program focuses on the accessibility of the game eliminating the use of a physical board game. The details in which the game will meet those goals are listed below.

### 1.2 Scope

This Vision Document applies to the illuminati game, which will be developed by Team 4 Star. Team 4 Star will implement the code necessary to create the game to work on Windows or Mac OS running the Java Runtime Environment. The game will serve as a fun and challenging board game focusing on social interaction and turn based strategy, including an element of luck to level the playing field for all players of different skill levels.

### 1.3 Definitions, Acronyms, and Abbreviations

- Windows: Windows is a series of operating systems developed by Microsoft.
   Each version of Windows includes a graphical user interface, with a desktop that allows users to view files and folders in Windows.
- MacOS: MacOS is a series of graphical operating systems developed and marketed by Apple Inc.
- JAVA IDE: It is a software application which enables users to more easily write and debug Java programs.
- Java Runtime Environment (JRE): The JRE is a set of software tools for development of Java applications.
- IGBA: The Illuminati Board Game Application

#### 1.4 References

- 1. Illuminati Game Rules
- 2. Vision Document Template

# 2 Positioning

## 2.1 Business Opportunity

As technology process forward, the demand for a physical board game diminish. Currently, the only way to play the game Illuminati is to purchase the physical form of the game which are rarely available at your local supermarket. An online market may serve as an alternative but with the cost of shipping added to the game itself, the effective cost of obtaining the game can deter most common consumer away. The digital platform can reduce the cost for the physical board game while expanding its popularity by opening the game to a wider audience.

Many game developers are eager to publish their game online due to its convivence. An online platform would vastly reduce the overhead cost of a physical game while opening their game to a bigger market. In this case, Team 4 star aims to bring back an old game unavailable to most who may be eager to try. This product will serve as a digital platform for local play amongst friends without the need for physical pieces and mechanics. The program will be a Java executable that is able to be run on any system with the appropriate version of Java installed.

#### 2.2 Problem Statement

| The problem of         | Illuminati game currently only exist in a physical platform.                            |
|------------------------|---|
| affects                | A market of consumers in which cost can deter some players from playing the board game. |
| the impact of which is | Difficulty in obtaining the game.   |

| a successful solution would<br>be | A simple board game that can be played up to 8 players via LAN connection.  Minimal effort for each player to get the game running. |
|-----------------------------------|---|
|                                   |   |

# 2.3 Product Position Statement

| For                         | Any consumer who wants to educe in an old classic board game   |
|-----------------------------|--|
| Who                         | Find enjoyment in strategy board game  |
| Java Runtime<br>Environment | A platform in which the game can be run  |
| That                        | provides the ability to play the board game via Lan connection   |
| Unlike                      | The unviability of the physical board game   |
| Our product                 | Provides the users with a simple solution to their struggle at obtaining the game. The is accomplished by making the game more accessible via an online platform. The product also supports co-op-based LAN connection of up of 8 players. |

### 3 Stakeholder and User Descriptions

#### 3.1 Market Demographics

Development of the IBGA was requested by Mr. Anthony Giacalone to demonstrate applied learning of concepts covered in his *Introduction to Software Engineering* course. Due to the educational nature of the project, the application is being designed solely for evaluation by Mr. Giacalone. The target market includes the aforementioned evaluator and one to seven additional players to test multiplayer features. All users are expected to have a thorough understanding of the board game variant of *Illuminati*. Recommended ages 8+.

#### 3.2 Stakeholder Summary

| Name            | ame Description   |   |
|-----------------|---|---|
| Instructor      | This stakeholder dictates product requirements to the development team and evaluates the finished product.    | Clearly specifies project requirements to allow game developers to plan accordingly. Analyzes the product to determine if requirements are met.           |
| UI Architects   | These stakeholders design<br>the user interface and<br>visual representation of the<br>IBGA.                  | Responsible for the architecture of the user interface that reflects a clear, easy to follow representation of game elements and player specific objects. |
| Game Developers | These stakeholders develop the Illuminati board game into software.   | Responsible for implementing the existing game design into the IBGA. May adapt the game logic to ensure smooth operation as a software product.           |
| Product Testers | These stakeholders test all elements of the product to ensure the application runs smoothly and consistently. | Work with game developers and the network engineer to test all features and outcomes that   |

|       |   | may be encountered by a user to ensure a functional application.            |
|-------|---|---|
| Users | This stakeholder is the general public that will use the application and play the game. | Play the game and experience the application implementation and experience. |

# 3.3 User Summary

| Name            | Description   | Responsibilities  | Stakeholder |
|-----------------|---|---|-------------|
| The Instructor  | Primary end user of the application   | Tests the application to determine if software engineering concepts have been implemented adequately.   | Self        |
| Product Testers | Internal team<br>users of<br>application  | Helps UI architects, game developers, and network engineers find bugs and errors that hamper functionality of application.                                | Self        |
| Users: Age 8-14 | This stakeholder is the lower threshold of the recommended age range to play the basic game | Play the basic rules of<br>the game with low<br>strategic expectations<br>and guarantee of<br>playing game to<br>completion                               | Users       |
| Users: Ages 15+ | This stakeholder is the older range of users that will desire additional features.          | Play the basic rules of<br>the game to a more<br>strategic level, with an<br>expectation of complete<br>games and future desire<br>for advanced rulesets. | Users       |

#### 3.4 User Environment

1. The IBGA will be demonstrated to the instructor and additional testers to display functionality and sufficient implementation of software engineering methods.

- 2. The length of an IBGA session is largely dependent on the amount of concurrent players.
- 3. Users will be constrained to devices running Windows or MacOS with the Java Runtime Environment.
- 4. Since the IBGA is written in Java, other platforms running the Java Runtime Environment may be implemented in the future.

#### 3.5 Stakeholder Profiles

#### The Instructor

| Description      | The course instructor for <i>Introduction to Software Engineering</i> at California State University Long Beach.                                    |
|------------------|---|
| Туре             | A knowledgeable user familiar with the board game <i>Illuminati</i> and software engineering design concepts.                                       |
| Responsibilities | Judge the development team's understanding of software engineering principles by testing the IBGA.  |
| Success Criteria | The success is defined by instructor approval of a fully functional IBGA that follows the documented design.  |
| Involvement      | The instructor should define baseline requirements for the project and be available for consultation throughout the development of the application. |
| Deliverables     | Grade and feedback for development team.  |
| Comments/Issues  | None  |

## **UI Architects**

| Description      | Creators of the visual interface for the IBGA.   |
|------------------|--|
| Туре             | A programmer familiar with the game <i>Illuminati</i> and can work in tandem with game developers.                                 |
| Responsibilities | Responsible for creating a clear, accurate, and functional representation of game elements that should be displayed to the player. |
| Success Criteria | UI should accurately display aspects of the game meant to be known to the user in a simple, comprehensible manner.                 |
| Involvement      | UI architects design and implement a user interface to display the program created by game developers.                             |
| Deliverables     | Functional user interface for inclusion in final application.  |
| Comments/Issues  | None   |

# **Game Developers**

| -                |   |  |
|------------------|---|--|
| Description      | Developers that will develop the Illuminati board game into software.   |  |
| Туре             | A software or game developer with experience in the field.  |  |
| Responsibilities | Responsible for implementing the existing game design into the IBGA. May adapt the game logic to ensure smooth operation as a software product. |  |
| Success Criteria | The game design is correctly implemented into the IBGA and the game logic flows smoothly.   |  |
| Involvement      | They implement the Illuminati board game design into the IBGA.  |  |
| Deliverables     | A software application that represents the Illuminati board game in digital format.   |  |

| Comments/Issues | None |
|-----------------|------|
|                 |      |

## **Product Testers**

|                  | 1   |
|------------------|---|
| Description      | Person assisting the instructor in testing.   |
| Туре             | The user is likely a student or lab assistant that is familiar with the <i>Illuminati</i> card game   |
| Responsibilities | Assist the instructor in demonstrating the multiplayer features of the IBGA.                          |
| Success Criteria | The success is defined by the instructor's confirmation that all desired features have been examined. |
| Involvement      | Additional testers should assist the instructor in specified tasks to test the IBGA.                  |
| Deliverables     | Bug and error reports for UI architects, game developers, and network engineer                        |
| Comments/Issues  | None  |

### Users

| Description      | General public that will use application and play games.  |
|------------------|---|
| Туре             | Any user of the application outside the development team.   |
| Responsibilities | Use the application and play the game.  |
| Success Criteria | The success is defined by their ability to use the application and play the game without errors or otherwise poor experience. |

| Involvement     | None  |
|-----------------|---|
| Deliverables    | Public reviews and opinions of finished application |
| Comments/Issues | None  |

## 3.6 User Profiles

Users: Age 8- 14

| Description      | Lower age range of general public users   |
|------------------|---|
| Туре             | Casual users  |
| Responsibilities | Use the application and play the basic ruleset of the game, even if not to completion of game.  |
| Success Criteria | The success is defined by their ability to use the application and play the game without errors or otherwise poor experience for the duration of their usage. |
| Involvement      | None  |
| Deliverables     | None  |
| Comments/Issues  | Might provide deliverables in the form of public reviews and opinions though not expected due to age range.   |

Users: Age 15+

| Description      | Majority age group of general public that will use application and play games.                     |
|------------------|--|
| Туре             | Mature and advanced users  |
| Responsibilities | Use the application and play the games to completion, possibly with advanced rulesets and features |

| Success Criteria | The success is defined by their ability to use the application and play the game without errors or otherwise poor experience. Additionally, their satisfaction with additional and advanced features and rulesets. |
|------------------|--|
| Involvement      | None   |
| Deliverables     | Public reviews and opinions of finished application  |
| Comments/Issues  | None   |

# 3.7 Key Stakeholder or User Needs

| Need          | Priority | Concerns   | Current<br>Solution | Proposed Solutions  |
|---------------|----------|--|---------------------|---|
| Accuracy      | High     | The IBGA should establish a base game that is consistent with and reminiscent of the original Illuminati game. | See<br>proposed     | Use the provided Illuminati material as a rigid guideline for rules, cards, and multiplayer interactions. |
| Customization | Low      | Ability to create user profiles, custom cards, and add/remove players from games.                              | See<br>proposed     | Special permissions should be granted to the host to edit features of the game and lobby.                 |

## 3.8 Alternatives and Competition

- 3.8.1 The original *Illuminati* by Steve Jackson Games
- 3.8.2 Other *Illuminati* software developers

### **4 Product Overview**

### 4.1 Product Perspective

This program is an independent product and is completely self-sustained. The IGBA is not a component of a larger system. However, it is dependent on the Java Runtime Environment and a Windows or Mac operating system.

### 4.2 Summary of Capabilities

| Customer Benefit | Supporting Features   |
|------------------|---|
| User Interface   | The user interface is simpler, cleaner, and easier to use than its physical counterpart.                              |
| Convenience      | A virtual program of the Illuminati Board Game allows users to play the game without needing the physical board game. |

# 4.3 Assumptions and Dependencies

- 1. When dealing with cards in the IBGA, it is assumed that the player is literate and can understand the purpose of the card.
- 2. The language used in the IGBA is US English. It is assumed that users who cannot speak, read, or understand English will not be able to play the game.
- 3. It is assumed that players understand the concept of money and its purpose for the exchange of goods and services.
- 4. It is assumed that players know how to play in turns and proceed in an orderly fashion.

## **5 Product Features**

### 5.1 System Features

- 1 Start application
- 2 Exit application
- 3 Accept mouse input
- 4 Accept keyboard input

### 5.2 Game Features

- 5 Host a game
- 6 Change game win conditions
- 7 Apply custom rules
- 8 Add custom cards
- 9 Message game lobby/all participants
- 10 Leave a unfinished game
- 11 Sound Effects for actions

# **6 Precedence and Priority**

| Priority | Feature (By Number Above) |
|----------|---------------------------|
| High     | 1, 2, 3, 4, 5, 9, 10      |
| Medium   | 6, 11                     |
| Low      | 7, 8                      |

### **7 Constraints**

#### 7.1 Usability

Rules help system

Cards are distinct and distinguishable

#### 7.2 Performance

Game supports 6-8 players
Minimize clicks/maximize turn automation
Messages to game lobby/players is timely to allow proper game flow
Minimize interruptions for other players if one leaves game early

### **8 Other Product Requirements**

#### 8.1 Applicable Standards

This Illuminati implementation conforms to industry standards in the video game development field(ESRB rating)

#### 8.2 System Requirements

Game runs on Windows and Mac OS 10.4 or better systems that have Java installed.

#### 8.2.1 Performance Requirements

None specified.

#### 8.2.2 Environmental Requirements

None specified.

# 9 Documentation Requirements

#### 9.1 User Manual

This version of illuminati follows the rules of the original board game. A user manual will be provided along with the original rules manual.