King of Tokyo: Vision Document

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Development Team

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Revision History

Date	Version	Description	Author
20-09-19	1.0	Initial Draft	Kevin Cruz, Daniel Mendez, Ranjit John
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1. Introduction

1.1 Purpose

The purpose of this vision document is to show the process in the creation and implementation of the board game, *King of Tokyo*, from physical to digital form.

1.2 Scope

This vision document will outline the structure and planned goals of the *King of Tokyo* project. The main language for this project will be Java, with a heavy reliance on the Abstract Window Toolkit and Swing libraries which will be used for the graphical user interface.

1.3 Definitions, acronyms, abbreviations

Game Terms	**Definition**
Victory Points	The determining factor of who wins the game
Energy Cubes	The currency needed to buy power cards
Power Card	Special power ups that require energy points to use, have various effects that impact the game
Heal	Restores one health point to your respective monster
Smash	A face on the dice that allows the monster to perform an attack to all monsters that are not in the same area
Yield	Allows monster to lose possession of Tokyo only after losing a health point

1.4 References

1.4.1. King of Tokyo Wikipedia
1.4.2. King of Tokyo game

1.5 Overview

With the base concepts and definitions established, this document will initially discuss the positioning and problems regarding the development of our *King of Tokyo* project. Following the business statements, the project's market demographics and stakeholders are outlined. Next, the functions and features of the project will be listed, alongside the ideal development requirements needed for production. Then, documentation requirements will be defined for the purpose of project organization. Lastly, the document will be wrapped up with estimated group efforts and time of completion.

2. Positioning

2.1 Business opportunity

This game aims to attract players who enjoy traditional board games and those who enjoy playing strategy games on their personal computers. This game captures both of these essential aspects and combines it to form a portable gaming application that each of these demographics enjoy. Board game players will enjoy it because the game captures the traditional layout of a classic game, *King of Tokyo* and PC gamers will surely enjoy it not because of its strategic aspect but also for its sheer availability on any device running Java. The overall cost for this project is very low since the implementation of this game is done with an open source IDE using Java. The main focus is to make this game as widely available for any PC.

2.2 Problem statement

Recently board games have been on the rise in popularity. Families, kids and young adults want new ways to socialize with one another rather than do it in the traditional sense. Even though board games provide great interpersonal communication, it still counts out the single person. A board game is played with either two or more people and sometimes that can just be the problem. Board games require one to purchase a set and hope people make time to play balancing their busy schedules. Even when that isn't the case, after a night of heated play, the age-old problem of losing or damaging game pieces make the game almost unplayable.

Now in the digital era, traditional games are copied into applications that are playable in any electronic smart device. This eliminates players to wait on others to play with them and also makes losing game pieces impossible. Now, classic games are transformed into lightweight, portable versions of themselves allowing players to play by themselves or whenever they want.

2.3 Product position statement

Therefore, by digitizing, *King of Tokyo* into a PC game, the company can increase player count by attracting other player demographics. For players wanting to play a board game, with their group numbering between two to six in total, the *King of Tokyo* PC game would provide them with just that. Unlike traditional board games, our product doesn't require special maintenance or care. Just download and play!

3. Stakeholder and user descriptions

3.1 Market demographics

The target demographic for our digitized version of *King of Tokyo* are people of all ages. The game will be made available to all users, our players, with the recommended age being 8 years or older. Users are anticipated to already own a personal computer running Java and have variable access to the internet.

Seeing as tabletop games have been continuously bringing together family and friends over the course of time, it is estimated that users interested in digital board games will give attention to our product. Thus, there will be a potential increase within the board game market. Because this product is being completed without any form of funding, all we expect is to provide a free, substantial experience for those interested in board games. We also aim to improve our product through user gameplay and feedback.

3.2 Stakeholder summary

3.2.1 Ranjit John - Project Manager/Software Engineer/Test Engineer (33%)
3.2.2 Daniel Mendez - Project Manager/Software Engineer/Test Engineer (33%)
3.2.3 Kevin Cruz - Project Manager/Software Engineer/Test Engineer (33%)
3.2.4 Anthony Giacalone - Professor/Advisor (1%)

3.3 User summary

Name	Description	Responsibilities	Stakeholder
Player (8+ years of age and older)	Primary user of the digital board game	Uses King of Tokyo for general entertainment purposes	Self
Player (Under 8 years)	Primary user of the digital board game	Uses King of Tokyo for general entertainment purposes, with the assistance of a guardian	Self

3.4 User environment

3.4.1 Users will be given access to a download of our digitized version of King of Tokyo. The download will include the following:

User manual
Base game/source files
King of Tokyo game executable
Readme file

3.4.2 Upon opening the program, users will be presented with a graphical user interface to access the features of King of Tokyo.

3.4.3 Play time per gameplay session is expected to range between 30 minutes to an hour, based on the number of users playing.

3.4.4 Users are required to have a personal computer and access to the internet (for the initial download)

3.4.5 The primary platform for product usage is any personal computer with Java. As of now, there will be no support for other computing platforms, such as a cellular device or tablet.

3.5 Stakeholder profiles

Players

Description	User that interacts and plays King of Tokyo
Type	Digital board game user
Responsibilities	Casual usage
Success criteria	The game is intuitive, easy to understand, and able to be played with minimal to no difficulties
Involvement	Consumer, play tester
Deliverables	King of Tokyo game executable, source files, and manual documentation
Comments/Issues	N/A

3.6 User profiles

See previous section.

3.7 Key stakeholder, user needs

Need	Priority	Concerns	Current solution	Proposed solutions
Easy to use/Intuitive	High	The ability for users to understand and utilize the game for personal entertainment purposes	See proposed solution	Simplify the game's user interface so users are able to navigate menus easily
Accessibility	Low	The ability for users to obtain and use the product on their own machines	See proposed solution	Develop and thoroughly test the game through various operating systems

3.8 Alternatives and competition

3.8.1 Alternative digital board games

4. Product Overview

4.1 Product perspective

King of Tokyo is a game designed for up to 6 players. Each player represents a different monster that is trying to become the king of Tokyo. This will be a multiplayer experience in which the user can select how many players they wish to go up against, up to a max. of 5.

4.2 Summary capabilities

4.2.1. The game will be a downloadable .exe file that the user can run whenever they want to play.

4.2.2. The game can be customized in which monster the user wants to play as, how many bots will be at play, and the difficulty of each bot.

4.2.3. The game is based off an existing board game

4.3 Assumptions and dependencies

4.3.1 Mouse, keyboard, or touch interface.

4.3.2 Display Monitor

4.3.3 User has Java installed on their machine.

4.4 Cost and pricing

4.4.1 Low cost since the user is downloading it to their machine

4.4.2 The game is free to download for anyone that wants to play

4.4.3 The expansion is already added to the base game in this version, so no additional cost is needed

4.5 Licensing and installation

The user downloads the KingOfTokyo.exe file and starts playing the game.

5. Product Features

5.1 Features

The game will include original rules and original game board layout. The original map and gameplay will be left untouched. There will be eight virtual dice (six regular and two specials used with cards). The cards in this game will stay the same maintaining the integrity of the game. Energy cubes and tokens will also remain unaltered.

5.2 Game Assets

The game will generate the map of Tokyo depending on how many people are playing. Game pieces will also be loaded according to the player count. Each piece (dice, tokens, cards, etc.) will be loaded as well and placed at certain positions of the board. There will be victory, life, and energy point counters for each character card. The player can interact with the cards to find out the corresponding point values of each player.

5.3 Players

This game is intended for play between 2 or more individuals, upwards to a maximum of 6 players per game session.

6. Constraints

6.1 With *King of Tokyo* being multiplayer, the user might find the gameplay to be repetitive with small group numbers. The best way to play would be having all players filled at the maximum capacity; the number of players will make the game more challenging, fun, and allow for extended features past a player count of 4.

7. Quality ranges

7.1 This game will have a low system requirement. It should run on most PCs as long as they have Java downloaded on them. Apple Macintosh computers vary because some have Java pre-installed on them while others do not.

7.2 This game will not have online capabilities, so an internet connection is not required after installation. Since this game is intended for multiplayer, there will not be any single player mode with computer-controlled bots. This game is strictly offline thus ensuring no slow downs or interruptions in the server.

8. Precedence and priority

8.1 Developers will prioritize the functionality of the game during the first release. Only after the game is deemed functional will the developers work on additional features. The first release will focus on strictly digitizing every simple aspect of the game (including rules, characters, map, etc.). Afterwards, developers can alter character, board, and card designs depending on preference.

8.2 Priority Feature Table

Priority	Required Functional Features	Non-Functional Features
High	● Func-01 to Func-14	● Non-01 to Non-03 ● Non-05 & Non-08
Medium	● Func-15 & Func-16	● Non-04, Non-06 & Non-07
Low	● Func-17 & Func-18	

9. Other product requirements

9.1 Functional Requirements

ID	Name	Description
Func-01	Start game	● User must be able to start the game
Func-02	Select monster	● User must be able to select what monster they want to play as
Func-03	Roll dice	● User must be able to roll all the dice
Func-04	Roll again depending on outcome	● User must be able to re roll certain dice depending on the outcome
Func-05	Select a power card	● User must be able to select a power card
Func-06	Collect energy	● User must be able to collect energy should the dice land on that face

Func-07	Restore health	● User should be able to restore health should the dice land on that face
Func-08	Move out of Tokyo City	● User should be able to leave Tokyo City under certain conditions
Func-09	Move into Tokyo City	● User should be able to enter Tokyo City under certain conditions
Func-10	Move out of Tokyo Bay	● User should be able to leave Tokyo Bay under certain conditions
Func-11	Move into Tokyo Bay	● User should be able to enter Tokyo Bay under certain conditions
Func-12	Attack other monsters	● User should be able to attack other monsters
Func-13	Acquire Victory Points	● User should be able to acquire victory points should the dice land on that face
Func-14	Lose Victory Points	● User should be able to lose victory points under certain conditions
Func-15	Lose the game	● User should be able to lose the game and exit
Func-16	Win the game	● User should be able to exit the game when a victory occurs
Func-17	Save the game	● User should be able to save state the current game (limited to one save state)
Func-18	Load the game	● User should be able to load if they have an available save state

9.2 Non-Functional Requirements

ID	Name	Description
Non-01	Development Requirements	● Game is developed using Java while utilizing AWT and Swing as the GUI's main source
Non-02	Platform	● The game is developed as an executable file

		• System can work on Windows 10 and MacOS
Non-03	Hardware	• User must have the ability to exit the game
Non-04	User Interface	• The UI should be simple yet intuitive • Common resolutions should be supported
Non-05	Players	• The game must support between 2 to 6 players at a time
Non-06	Response Time	• The system should respond to user's actions with little to no delay
Non-07	Error Handling	• The system should be able to catch and resolve common errors
Non-08	Documentation	• Documentation shall be updated for the duration of the project.

10. Documentation requirements

10.1 Release notes, read me file

10.1.1 Readme: Contains brief information that pertains to the product and development team and includes system requirements needed to play King of Tokyo

10.1.2 Release notes: Contains version and update information

10.2 Online help

10.2.1 See King of Tokyo player manual

10.3 Installation guide

10.3.1 Users are required to own a personal computer and internet access

10.4 Labeling and packaging

10.4.1 Menu screen, presenting basic menu options such as starting a game, adjusting options, or exiting the game itself

10.4.2 An interactive graphical user interface for the gameplay itself, allowing users to interact and play the game

10.4.3 Visual elements, to aid in entertainment and gameplay immersion

11. Feature attributes

11.1 Status

Proposed	Complete basic project requirements in planning stage
Approved	Vision Statement Project Plan Use Cases Test Cases User Manual
Incorporation	N/A

11.2 Effort

11.2.1 Estimate required time, code, functions

a) Plan overall direction & strategy to develop King of Tokyo
(Est. time: 4-6 weeks, completion by mid-late September)

b) Begin use case definitions and functions
(Est. time: 1 week, completion by mid October)

c) Begin test case definitions and functions
(Est. time: 1 week, completion by end October)

d) Begin user manual documentation
(Est. time: 1 week, completion by end October)

c) Begin code structuring and implementation
(Est. time: 4-6 weeks, completion by early December)

11.3 Risk

Uncertainties: Completion time per section of development

11.4 Target release

Estimated date of release: 03-05 December 2019