Project Plan for

King of Tokyo

#### Distribution:

##### <California State University Long Beach , Group D>

#### Appendices:

##### <Appendix 1>

**Contents**

1. [**Overview 3**](#_heading=h.2et92p0)
2. [**Goals and Scope 3**](#_heading=h.2et92p0)
   1. [**Project Goals 3**](#_heading=h.2et92p0)
   2. [**Project Scope 4**](#_heading=h.1t3h5sf)
      1. [Included 4](#_heading=h.1t3h5sf)
      2. [Excluded 4](#_heading=h.1t3h5sf)
3. [**Organization 4**](#_heading=h.1t3h5sf)
   1. [**Organizational Boundaries and Interfaces 4**](#_heading=h.1t3h5sf)
      1. [Resource Owners 4](#_heading=h.1t3h5sf)
      2. [Receivers 4](#_heading=h.1t3h5sf)
      3. [Sub-contractors](#_heading=h.1t3h5sf) 4
      4. [Suppliers 5](#_heading=h.44sinio)
      5. [Cross Functions 5](#_heading=h.44sinio)
      6. [Other Projects 5](#_heading=h.44sinio)
   2. [**Project Organization 5**](#_heading=h.44sinio)
      1. [Project Manager](#_heading=h.4i7ojhp) 7
      2. [Project-internal Functions](#_heading=h.4i7ojhp) 7
      3. [Project Team](#_heading=h.4i7ojhp) 7
      4. [Steering Committee](#_heading=h.qsh70q) 8
4. [**Schedule and Budget**](#_heading=h.qsh70q) **8**
   1. [**Work Breakdown Structure**](#_heading=h.qsh70q) **8**
   2. [**Schedule and Milestones**](#_heading=h.qsh70q) **9**
   3. [**Budget**](#_heading=h.2p2csry) **10**
   4. [**Development Process**](#_heading=h.2p2csry) **10**
   5. [**Development Environment**](#_heading=h.ihv636) **10**
   6. [**Measurements Program**](#_heading=h.ihv636) **11**
5. [**Risk Management**](#_heading=h.ihv636) **11**
6. [**Sub-contract Management 1**](#_heading=h.41mghml)**2**
7. [**Communication and Reporting 1**](#_heading=h.41mghml)**2**
8. [**Delivery Plan 1**](#_heading=h.3fwokq0)**3**
   1. [**Deliverables and Receivers 1**](#_heading=h.3fwokq0)**3**
9. [**Quality Assurance 1**](#_heading=h.3fwokq0)**3**
10. [**Configuration and Change Management 1**](#_heading=h.3fwokq0)**3**
11. [**Security Aspects 1**](#_heading=h.3fwokq0)**4**
12. [**Abbreviations and Definitions 1**](#_heading=h.nmf14n)**5**
13. [**References 1**](#_heading=h.nmf14n)**5**
14. [**Revision 1**](#_heading=h.nmf14n)**6**

# Overview

King of Tokyo is a board game for 2 to 6 players. This project aims to bring the game to the digital marketplace and to open more opportunities for King of Tokyo to reach new audiences. The game will be designed and developed with the help of the tool Unity. With Unity, our team would have a much easier time creating the game-board representation, and possibilities adding features that are not part of the minimum viable product.

# Goals and Scope

## Project Goals

|  |  |  |
| --- | --- | --- |
| **Project Goal** | **Priority** | **Comment/Description/Reference** |
| **Functional Goals:** | 2 | For details see the Project Requirements Specification [[2]](#_heading=h.46r0co2) |
| Unity Engine | 1 | This tool will be used to complete a majority of the game, and will allow the game making process to continue smoothly and efficiently |
| C# Language | 1 | In conjunction with Unity, this project will utilize C# to translate the game rule logic to code. |
|  |  |  |
|  |  |  |
| **Business Goals:** |  |  |
| Mid December Release | 1 | Aiming to reach a December 10th release date, in accordance with project manager deadlines. |
| Budget: 0$ | 1 | This project will strictly utilize free, open source software, as to comply with project budget |
| **Technological Goals:** |  |  |
|  |  |  |
|  |  |  |

|  |  |  |
| --- | --- | --- |
| **Project Goal** | **Priority** | **Comment/Description/Reference** |
|  |  |  |
| **Quality Goals:** | 2 |  |
| Base game | 1 | To complete only the game logic, and minimal graphics. |
| Animated graphics | 2 | To have an animated visual representation of the board game and all of its parts. |
| **Constraints:** |  |  |
| Minimum System Requirements | 1 | The application must be able to run on what general computers can handle. Windows 7 or later, ryzen 3/intel I 3, 8GB RAM, Intel Integrated Graphics or any comparable graphics card |

## Project Scope

### Included

This project will include solely the base game with local multiplayer, from 2 to 6 players. This will meet all of our priority 1 goals set above.

### Excluded

This project will exclude multiple language packs.. There are also no plans to complete an online multiplayer mode currently.

# Organization

The project will be organized using an online tool, Trello, that allows for tasks to be given

to different developers and grouped together based on given characteristics. Files that

are being developed will use GitHub as a repository to keep the program build stable.

## 3.1 Organizational Boundaries and Interfaces

King of Tokyo will be developed in the Unity game engine. C# will be the primary language used for writing scripts to be used for player actions. Project will be engineered in coordination with project manager and project team. The project team will have all authority over developmental decisions. At the deadline, project will be delivered to the project manager through GitHub.

### Resource Owners

Resource Owners are defined in the Resource Plan in section 5.1.

### Receivers

Receivers are defined in the Delivery Plan in section 10.

### Sub-contractors

Sub-contractors are defined in the sub-contract management in section 8.

### Suppliers

|  |  |  |
| --- | --- | --- |
| **Company: Contact** | **Deliverable** | **Comment** |
| Unity | Unity game engine |  |
| Microsoft | Visual Studio IDE |  |
|  |  |  |
|  |  |  |

### Cross Functions

|  |  |  |
| --- | --- | --- |
| **Function** | **Dept.: Contact** | **Responsibility/Comment** |
| Product Mgmt | Andres Aguilar | Managing the deadline |
| Service | Dimithri Perera | Allocating jobs to other workers |
| Training | Andres Aguilar | Compiling a list of resources to use for development |
| Quality | Nathan Gardner | Testing each build |
| Technology | Dimithri Perera | Write unit tests |
| Supply Mgmt | Nathan Gardner | Creating resources (Sprites, animations, etc…) |

### Other Projects

|  |  |  |  |
| --- | --- | --- | --- |
| **Project** | **Org.: Project Mgr** | **Dependency** | **Comment** |
| King of Tokyo board game | N/A | Game rules |  |

## 3.2 Project Organization

The project will be organized through Trello by the tasks that need to be completed. Initial focus for the project will be on creating an early game build that can be fully tested and built upon.

*Andres Aguilar*

**Project lead**: Andres will be the lead developer for the project. He will distribute tasks to all other developers.

**Interface designer:** Andres also will design and make all user interfaces for

the game.

**Documentation:** Andres is responsible for much of the required documentation

*Nathan Gardner*

**Game designer:** Nathan is a part of the game designer team.

**Documentation:** Nathan is responsible for much of the required documentation

*Dimithri Perera*

**Game designer:** Dimithri is a part of the game designer team

**Documentation:** Dimithri is responsible for much of the required

documentation



### Project Manager

|  |  |
| --- | --- |
| **Role** | **Organization: Name** |
| Project Manager | Anthony Giacalone |

### Project-internal Functions

|  |  |  |
| --- | --- | --- |
| **Function** | **Organization: Name** | **Comment** |
| Quality Assurance | Andres Aguilar |  |
| System Test Lead | Nathan Gardner |  |
| Validation Lead | Andres Aguilar |  |
| Configuration Mgmt | Dimithri Perera |  |
| Change Mgmt | Nathan Gardner |  |
|  |  |  |
|  |  |  |
|  |  |  |

### Project Team

|  |  |  |
| --- | --- | --- |
| **Organization: Name** | **Availability** | **Comment** |
| Nathan Gardner | 8 hrs/wk |  |
| Andres Aguilar | 8 hrs/wk |  |
| Dimithri Perera | 8 hrs/wk |  |

### Steering Committee

The Steering Committee (SteCo) of the project is responsible for determining the direction of development with regards to the creative and software portions.

The SteCo consists of the following members:

|  |  |  |
| --- | --- | --- |
| **Organization** | **Name** | **Comment** |
| CECS 343 | Nathan Gardner |  |
| CECS 343 | Andres Aguilar |  |
| CECS 343 | Dimithri Perera |  |

# Schedule and Budget

## Work Breakdown Structure

|  |  |  |
| --- | --- | --- |
| **Level 1** | **Level 2** | **Level 3** |
| 1 King of Tokyo | 1.1 Initiation | 1.1.1 Evaluation & Recommendation  1.1.2 Develop & submit project charter  1.1.3 Project charter review  1.1.4 Project charter approved |
| 1.2 Planning | 1.2.1 Project initial scope statement  1.2.2 Confirm project team  1.2.3 Commencement of Team meeting  1.2.4 Develop a plan for the project  1.2.5 Submit plan |
| 1.3 Execution | 1.3.1 First Project meeting  1.3.2 Gather user requirements  1.3.3 Design System  1.3.4 Hardware/software needs  1.3.5 Install development system  1.3.6 Testing phase |
| 1.4 Control | 1.4.1 Project management  1.4.2 Project status meetings  1.4.3 Assessment of Risk  1.4.4 Update project plan |
| 1.5 Finish | 1.5.1 Successful completion  1.5.2 Plan for continuous updating  1.5.3 Documentation for the future |

## Schedule and Milestones

|  |  |  |  |
| --- | --- | --- | --- |
| **Milestones** | **Description** | **Milestone Criteria** | **Planned Date** |
| M0 | Start Project | Budget Release | 09-26-2019 |
|  | Stakeholders are aware | Project Stakeholders identified and Proposal reviewed | 09-27-2019 |
| M1 | Start Planning |  | 09-26-2019 |
|  | Purpose defined clearly | Scope and concept described | 09-28-2019 |
| M2 | Start Execution |  | 09-29-2019 |
|  | A quarter completed | Requirements agreed, project plan reviewed, resources committed  Coding started, with functionalities | 10-05-2019 |

|  |  |  |  |
| --- | --- | --- | --- |
| **Milestones** | **Description** | **Milestone Criteria** | **Planned Date** |
| M3 | Release Product |  | 11-30-2019 |
|  | Project is working and the users a satisfied and gathering feedback | Product system tested, documentation reviewed | 12-02-2019 |
| M4 | Close Project |  | 12-09-2019 |
|  | Project is successful | Users are satisfied | 12-12-2019 |

* A detailed Project Schedule is available in [[4].](#_heading=h.2lwamvv) The Project Schedule is either weekly updated or every 2 days by the Project Manager.

## Budget

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Category** | **Budget for Period in US$’000** | | | |
| **M0- M1** | **M1- M2** | **M2- M3** | **M3- M4** |
| Equipment | 1 |  |  |  |
| Premises |  | 1 | 1 | 1 |
| Tools |  | 1 |  |  |
| Travel costs | 2 | 1 | 1 | 2 |
| Training |  |  |  |  |
| Review activities | 2 | 2 | 3 | 3 |
| Other |  | 1 | 1 | 2 |
| Total | 5 | 6 | 6 | 8 |
| **Total accumulated** | **5** | **11** | **17** | **25** |

## Development Process

The game development will initially follow the “The Waterfall Model” process model. This model consist of the following steps.

1. Communication
2. Planning
3. Modeling
4. Construction
5. Deployment

The above process methodology will guide in developing the game and making sure we are on track in meeting our milestones above. Similar gaming projects will be taken into consideration when designing this game since it has to meet all the needs of the aforementioned stakeholders in the vision document. It is mapped from start to finish, of course there would be hiccups along the way but there will always be someone working on the completion of the final product, King of Tokyo user interface and functionalities.

## Development Environment

|  |  |  |
| --- | --- | --- |
| **Item** | **Applied for** | **Availability by** |
| **Methods** | | |
| Use Case | Requirements capturing | M0 |
|  |  |  |
|  |  |  |
| **Tools** | | |
| Unity framework | Design | M2 |
|  |  |  |
|  |  |  |
| **Languages** | | |
| UML | Design | M2 |
| Java | User interface | M2 |
| C++ | Coding of functions | M3 |
|  |  |  |

## Measurements Program

|  |  |  |
| --- | --- | --- |
| **Type of data** | **Purpose** | **Responsible** |
| Number of changed requirements | For effective implementation | Quality Analyst |
| Number of defects found before M3 | Offering the best product | Quality Analyst |
| Performance data obtained using PC based hardware | to assess the achievement of project requirements since most users will have a PC | Test lead |
| User Feedback | For improvement | Expert lead |

# Risk Management

All identified risks are documented, assessed and prioritized in the Risk Management Plan [5] by the Project manager. The plan also defines the mitigation and contingency measures and who is responsible for. The Risk Management Plan is updated monthly

or on event and communicated to all affected stakeholders by the Project Manager. The risk status is reported to the line management in the monthly Project Report.

# Sub-contract Management

|  |  |  |  |
| --- | --- | --- | --- |
| **Sub-contractor** | | **Sub-contracted Work** | **Ref. to sub-contract** |
| **Company** | **Contact** |
| N/A |  |  |  |
|  |  |  |  |
|  |  |  |  |

# Communication and Reporting

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Type of Communication** | **Method / Tool** | **Frequency**  **/Schedule** | **Information** | **Participants/ Respon.** |
| **Internal/External Communication: Texting, Trello, emails** | | | | |
| Project Meetings | Teleconference  (Trello, Google Doc) | Weekly or every 2 days | Project status, problems, risks, changed requirements | Project Mgr(Lead) Project Team |
| Sharing of project data | Shared Project Server (Github) | When available | All project documentation and reports | Project Mgr Project Team |
| Milestone Meetings | Teleconference | Before milestones | Project status (progress) | Project Mgr Quality Analyst |
| Final Project Meeting | Teleconference | M4 | Wrap-up Experiences | Project Mgr Project Team |

# Delivery Plan

## 8.1 Deliverables and Receivers

|  |  |  |  |
| --- | --- | --- | --- |
| **Ident.** | **Deliverable** | **Planned Date** | **Receiver** |
| D1 | King of Tokyo full build | 12/09/19 | Project manager |
| D2 | King of Tokyo user manual and materials | 12/09/19 | Project manager |

# Quality Assurance

The entire project team are well versed with multiple coding languages and will be doing their best to break the game or in turn looking for bugs in the code. No one wants a half done game. Unhappy customers is bad for business. So we will be:

* Playing the game ourselves so that we can interact with the objects, characters (monsters), and the environment (Tokyo)
* Creating all kinds of combinations to ensure everything functions in the game
* Interacting with the world in a way that the original developers didn’t expect or anticipate the game to be played. In this case, we will be using our competitors input in the game
* testing for all kinds of unlimited item glitches and level-breaking glitches throughout the game

# Configuration and Change Management

The approach to configuration and change management of the game may be either formal or informal and we will be establishing mechanisms to manage the way changes are requested,

assessed, approved and implemented. Change is inevitable but we will be keeping tabs on each other and we will be testing the game’s effect on different hardware platforms and gathering more information on how to make the game better for the potential customers, at least to the sample customers.

Furthermore we will be following up with the stakeholders and some of the other gaming industries on how they are performing in the gaming world. Our project will undergo various build models in a way that makes them amenable to change. In other words, the King of Tokyo will be compared against other similar games that are available. We will be querying these questions, when in the build was code reviewed? Did design documents go through the review process? Who can make changes to reviewed and approved files on Github? We will have cross-team collaboration and real-time visibility to avoid risky decisions made on the fly.

# Security Aspects

Our goal with the development of the game is to create an environment where no personal data

is required to be held in the cloud or sent over the internet. By not having any data go over a network to

servers, the company will not be responsible for any security issues while the user plays the game. Focus

will be geared towards protecting payment information when a customer decides to purchase the game.

Customer information will be stored in a secure database for advertisements when DLC is released for the

board game

# Abbreviations and Definitions

**Abbreviation Definition**

BPC Buy Power Cards

DC DISCARD Card

DLC Downloadable Content

ET Enter Tokyo

EoT End of Turn

GE Gain Energy

KC KEEP Card

KOT King of Tokyo

LP Life Points

M1-M6 Milestone 1 to Milestone 6

MT Mimic Token

PT Poison Token

QA Quality Assurance

ResD Resolve Dice

RD Roll Dice

SM Smash Monsters

SteCo Steering Committee

ST Smoke Token

ShkT Shrink Token

TB Tokyo Bay

TC Tokyo City

VP Victory Points

Y Yield

# References

1. <1> Vision Document for King of Tokyo
2. <2> Project Requirements Specification for King of Tokyo

# Revision

|  |  |  |  |
| --- | --- | --- | --- |
| **Rev. ind.** | **Page (P) Chapt. (C)** | **Description** | **Date Dept./Init.** |
| - | --- | original version | 10/01/2019 |
|  |  |  |  |
|  |  |  |  |