

# Project Structure Document

## Part 1 - Formal Game Proposal

Computer Games Laboratory

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# 1. Game Description

*“Halt! What business have you in our glorious city of Kota?”*

*“Sir, kind sir, please let us in! Our small village of Dharti was plundered by the giants not two days past. Flee we did, but they come behind us! Won’t you take us in?”*

*“Dharti you say? Hmm, you provide us much grain. Our liege lord perchance might let you in. But you must show us your papers. Queue up! Our glorious knights can fend off the giants.”*

Welcome to **Flee Fi Fo From**, where players take on the role of medieval guilds attempting to protect villagers from rampaging giants by bringing them to safety within their city walls. Altruism is not the primary motive though – Guilds are trying to complete hidden objectives and look as good as possible during this crisis management, in order to earn goodwill influence points in the city. Guilds must maintain the illusion of fairness and order in the midst of the chaos or risk the displeasure of the city population. Stakes are high, morals are low, and no one is above some skullduggery. Do you have what it takes to effectively manage this chaotic environment and out maneuver your opponents?

## 1.1. Gameplay Details

### 1.1.1. Goal

The goal of the game is to earn the most Influence Points (IP) within the city during the crisis management process. Players earn IP by saving villagers, completing hidden objectives, maintaining a high rating and earning inner castle rewards. The player with the highest IP total is the winner.

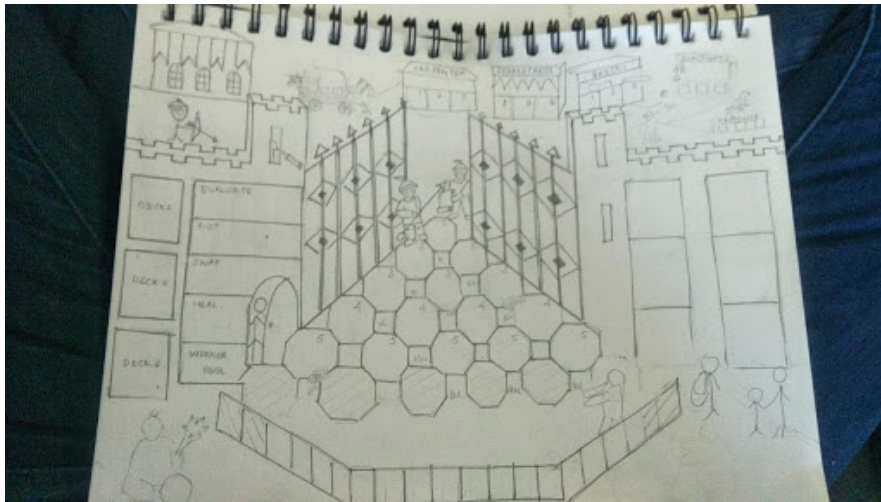


Figure 1: Game Board

### 1.1.2. Game Flow

The game is played over a series of Action and Reset turns. The player with the Action marker starts the game and plays their Action turn. Immediately after, the player with the Reset marker plays their Reset turn. After both players complete their Action and Reset turns respectively, they move each marker clockwise.

### **Action Turn:**

The purpose of the action turn is primarily to save people. Players may choose to do so in an orderly fashion, or they may even create additional **chaos** to save more people and meet secret objectives. Players play actions by moving workers from their available pool to the action mat.

A player may use up to 2 workers on their Action turn, by placing their workers on the corresponding location on the Action mat. A player may choose from the following 5 actions:

- Authorize: Permit someone into the city, different types of villagers have restrictions.
- Swap: Interchange the position of two people.
- Riot: Create chaos with a Guild Knight and run into the city. Commoners may follow, receive Disgrace based on injuries caused.
- Revive: Assist an injured villager up and gain Honor.
- Objective: Draw a new objective card.

### **Reset Turn:**

The purpose of the reset turn is to restore **order** by:

- Maintaining the flow in the evacuation board by moving villagers forward while maintaining queuing priority and refilling the empty spaces with new villagers.
- Relieving used workers from the action mat back to make them available in the players' pool again.
- Maintaining knight formation against the giants or retreating.

The Reset player chooses one ability from each side of the Reset mat (Guild Orders and Relief Orders). The player may use these chosen abilities in any sequence during their turn.

### **Move Turn Markers:**

Once the two players have taken an Action and Reset turn respectively, each marker is moved one step clockwise to the next player. Play then continues with the player with the Action marker taking their Action turn and the player with the Reset marker following with their Reset turn, until the Game End is triggered.

### **Game End:**

The end of the game is triggered when:

1. All villagers have been brought to safety OR
2. The total guild knight strength in the battlefront is lower than the strength of the giants



(a) Actions Possible



(b) Reset Abilities

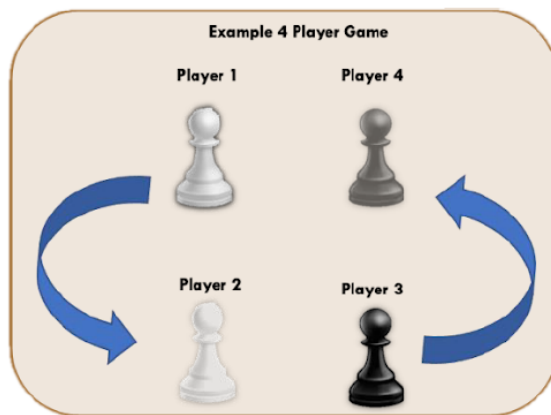


Figure 3: Move Turn Markers

### 1.1.3. Additional Rules and Content

Further rules and envisioned content are listed as follows:

#### Objectives:

Objective cards are hidden goals that each player is trying to complete. Objectives may be completed by a player at any point during their Action or Reset turn. There is no limit to the number of objectives that a player may hold in their hand, or the number that they may complete on a single turn.

Objective cards will be of three types: Rescue (set collection of villagers), Observe (pattern formation in the crisis area), and Admin (miscellaneous logistics activities). A set of standard game objectives is present inside the city, which may be claimed once by each player with the use of a Guild Knight.

#### Movement Rules:

Pieces may only move forwards towards the city gate. Backwards and lateral movement is not allowed.

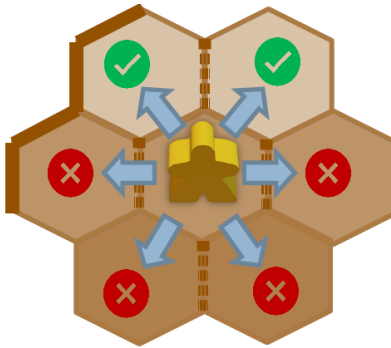


Figure 4: Movement Rules

#### Queuing Order:

As upholders of justice and equality, the city of Kota prides itself on its adherence to order at all times, even in the midst of a crisis. The movement of people into the city is tightly regulated by a FIFO (First In First Out) system, to ensure that there is no discrimination of any kind. FIFO is maintained on the basis of priority levels, and is tracked via rows (distance to the city gate).

- Untapped and injured pieces are considered high priority, tapped pieces are lower priority.
- Within a row, all high priority pieces must be moved first. If this order is violated, the player receives a Disgrace for each piece that breaks FIFO. (5b)
- An adult moved forward must tap. (5a)
  - Children never tap and are always high priority.
  - An adult moving forward to an empty row does not tap.
  - Tapped pieces remain tapped while moving forward.
- If an entirely filled row contains only tapped pieces, then all of the pieces in the row must be immediately untapped. (5c)

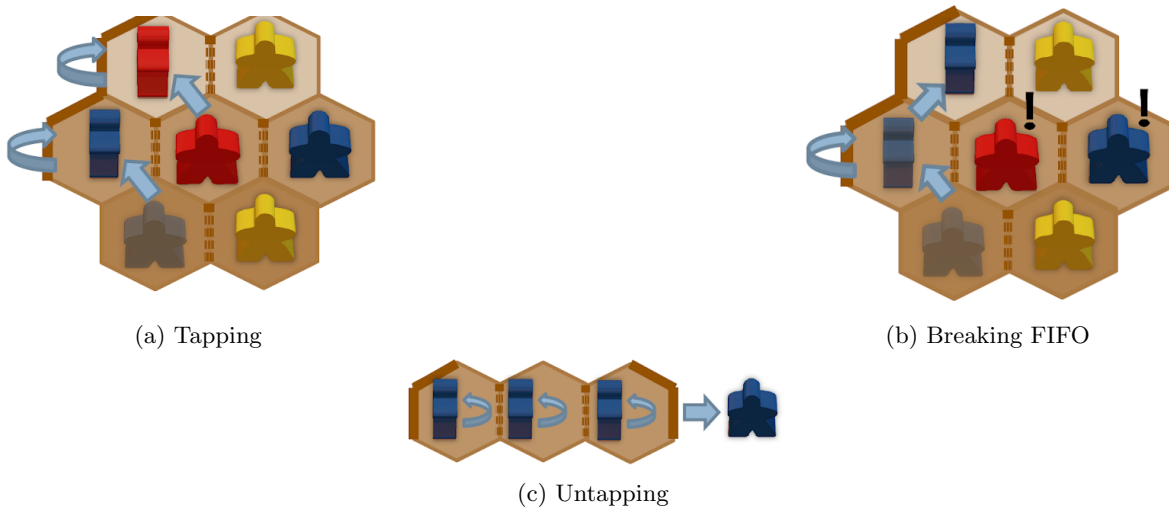


Figure 5: Queuing Rules

**Types of Pieces:**

The pieces involved in the crisis are of four types:

- Children: Possess mobility in the queue and are always high priority. But they must be accompanied by an adult, as the city does not take kindly to negligence.
- Commoners: Run of the mill villagers. They possess herd mentality, which allows them to become followers in Riots.
- Elderly: They are slow moving, but the city expects special care to be given to accommodate them, in which case they provide Honor. Failure to do so leads to Disgrace.
- Guild Knights: Player specific pieces, which participate in the defence against the giants. They may be used to start Riots in the queue, as well as to secure additional influence in the castle.

**Glory Tracker:**

The city of Kota takes special pride in the glory of its guilds. Good deeds (maintaining order, going above and beyond) are rewarded with Honor. Misdemeanors (creating chaos or breaking rules) will be deemed a Disgrace.



Figure 6: Glory Tracker for Disgrace and Honor

## 2. Technical Achievement

Our technical innovation revolves around the networking capabilities of our game, and aims to enhance the game system that we build to make it enjoyable by as many players as possible. We believe that board games are meant to be a social experience, and we hope to achieve this goal by making it possible for groups of individuals to partake in our game at the same time. Our goal is to facilitate the simultaneous participation of up to 4 players within the same game.

In order to establish a multiplayer board game session, we plan a network model composed of a dedicated server, which would host the session for the clients and act as the main authoritative component within the model. The server will be the hub for remote procedure calls from/to clients and the sole channel of communication among multiple devices. While we initially aim for a networked multiplayer session using a local area network (LAN), we also want to allow sessions over the internet as we progress through our project milestones, likely by employing a relay server or performing NAT punch-through. Furthermore, we envision extra features in relation with our technical achievement such as game lobbies, rank system & matchmaking and text/voice chat throughout the game session to further enhance the traditional board game experience.

## 3. Big Idea Bullseye

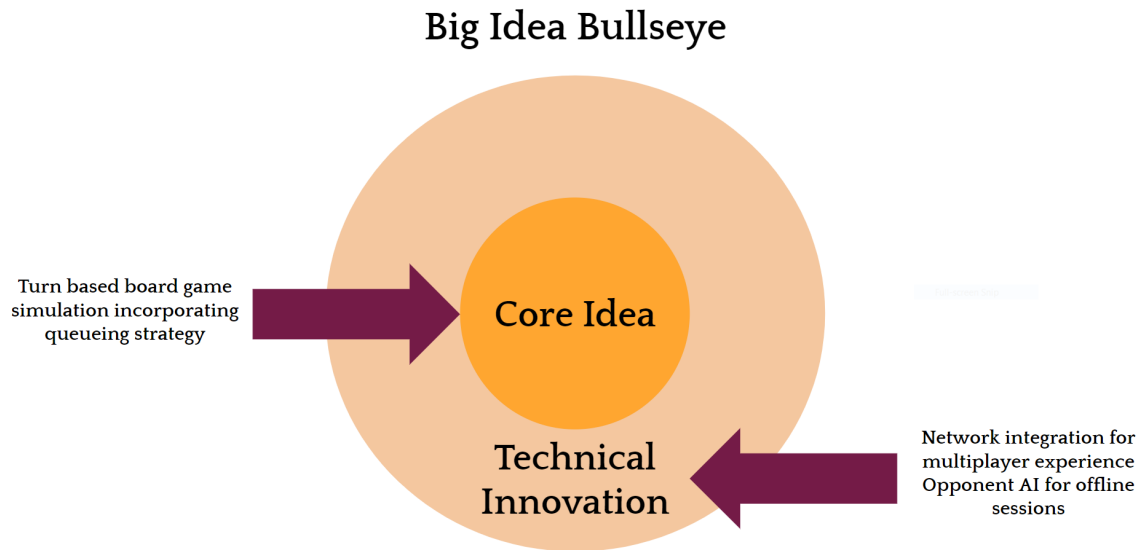


Figure 7: Big Idea Bullseye



## 4. Development Schedule

### 4.1. Layered Task Breakdown

We have divided our game elements and goals into five layers as shown below, in a manner that we believe is most crucial to the game and best sets us up to achieve incremental success at each layer:

#### **Functional Minimum:**

- Game logic
- Simple UI, fixed input (mouse or touch)
- Playable on single device

Our functional minimum is aligned with our core idea of building a board game simulation. The game logic involved is fairly complex due to the rules of the game, and our goal is to make sure that our fundamental game structure is capable of handling this.

#### **Low Target:**

- Playable on LAN
- Keyboard shortcuts & improved UI
- Higher quality visual feedback

Our low target aims to build further on our gameplay simulation by focusing a bit more on the UI available to the player. We also want to start providing the integration points to incorporate multiple players in the game environment.

#### **Desired Target:**

- Playable over internet
- High fidelity piece models
- Castle reward system

Our desired target aims to primarily further our technical achievement by making the game available to players at different locations via the Internet. At this stage we would also want to incorporate our castle reward system, which is a more complex piece of game logic meant to improve the end game experience, although not required for the fundamental functioning of the game.

#### **High Target:**

- 3D asset animation & shader integration
- Objective card system
- Friend system
- Tutorials
- Haptic feedback (platform dependent)

Time permitting, we want to add in quality-of-life improvements to the game such as tutorials and asset animation, as well as improve the strategic gameplay even further by adding in the complex objective card system. This would build further from the castle reward system added earlier. At this stage, based on our degree of satisfaction with our original technical goal of networking, we may embark on a secondary technical achievement, namely the addition of AI opponents into the game to improve the single player experience.

**Extras:**

- AI opponents
- Game lobbies
- Rank system & matchmaking
- In-game text/voice chat
- Cross platform

This section includes aspects that we do not expect to reach during the course. We would aim to improve our features even further to bring them to a highly polished and professional standard where they could support a formal game release.

**4.2. Timeline**

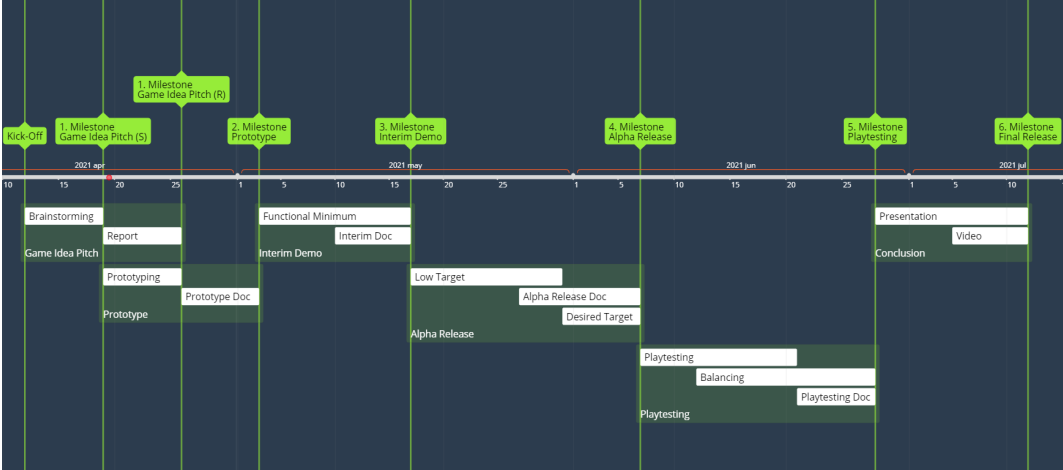


Figure 8: Development Timeline

<b>Week</b>	<b>Goal</b>	<b>High Level Tasks</b>	<b>Assigned To</b>	<b>Estimated Hours</b>
<b>Week 1:</b> 12.4 - 18.4	Game idea	Game idea	All	10 each
		Game idea pitch presentation	All	5 each
<b>Week 2:</b> 19.4 - 25.4	Document idea	Further work out gameplay mechanics	All	10 each
		Start working on prototype	All	5 each
		Write report	All	5 each
<b>Week 3:</b> 26.4 - 2.5	Prototype and research	Finish prototype	Shyam, Eugene	10
		Research technologies and fitting code patterns	Anas, Mert	5
		Prototype doc	All	5 each

<b>Week 4:</b> 3.5 - 9.5	Functional Minimum: Setup game logic	Handling basic player input	Anas, Mert	5
		Game field representation	Eugene	10
		Logic checks - E.g. FIFO	Shyam	5
		Mockup UI	Eugene	5
		Representation for all game pieces with placeholder methods	Anas, Mert	10
		Commands & game states	Anas, Shyam	10
		Research networking models/APIs	Mert	5
<b>Week 5:</b> 10.5 - 16.5	Functional Minimum: Implement game logic	Implement placeholder methods from last week	Anas, Mert	15
		Game Manager & turn mechanic	Shyam, Eugene	10
		Logic for action functions like Riot, Swap, ..	Shyam, Anas	10
		Connect UI to game logic	Eugene	5
		Prepare Game Manager for networking integration	Mert	5
		Interim doc	All	5 each

<b>Week 6:</b> 17.5 - 23.5	Alpha Release: Local player-game interaction	Collect player commands to perform action functions	Anas, Shyam	20
		Improve player-game interaction	Eugene	10
		Model network abstraction	Mert	10
<b>Week 7:</b> 24.5 - 30.5	Alpha Release: Network player-game interaction	Implement server/client architecture	Mert, Eugene	20
		Higher goal mechanics	Anas, Shyam	20
<b>Week 8:</b> 31.5 - 6.6	Alpha Release: Polish what we have	Implement network communication manager	Mert	20
		Testing & bug fixing	Anas, Shyam	20
		Polishing & visual improvements	Eugene	10
		Test local area network connection	All	2 each
		Alpha Doc	All	10
<b>Week 9:</b> 7.6 - 13.6	Playtesting	Prepare questionnaire for evaluation	All	5 each
		First playtesting session	All	5 each
		Identify possible issues	All	10
		Set up and utilize relay server to support connection over internet	Mert	10
<b>Week 10:</b> 14.6 - 20.6	Playtesting	Balancing & tweaking values (no new mechanics)	Shyam	15
		Bug fixing	Anas, Mert	15
		Second playtesting session	All	5 each
		Record video material during playtesting	Eugene	5
<b>Week 11:</b> 21.6 - 27.6	Playtesting	Evaluation	Anas, Mert	10
		Playtesting doc	Shyam, Eugene	10
		Look through current video material	All	2
<b>Week 12:</b> 28.6 - 4.7	Final Release	Final doc	All	15 each
		Presentation	All	5 each
		Record more video material if necessary	All	4 each
<b>Week 13:</b> 5.7 - 11.7	Final Release	Finish wiki page	All	5 each
		Cut trailer video	All	10 each

## 5. Assessment

We believe that the strongest features about our game will be the thematic binding and the deep strategic gameplay. Our target audience will be individuals who are comfortable with a long sit down gaming session of about 90 minutes, and enjoy strategic considerations and negotiations before each move.

### 5.1. Thematic Binding

Our game not only links strongly to the Order and Chaos theme of the course, but also uses this opportunity to present a satirical depiction of real-world scenarios. The presentation of moral choices in the game (maintaining order) is complemented by the ability to break ethical rules (create chaos) and perform ‘disgraceful’ actions in the game in the pursuit of self-interest. We want our game to stay true to its setting even outside of the course, such that players feel immersed in the world that we create and are engaged in the gameplay experience from start to end.

### 5.2. Strategic Gameplay

The turn-based nature of board games typically allows for careful strategic thought before each turn, rather than rewarding dexterity and motor skills. Our game would present the opportunity for multiple paths to victory and several contrasting options to the player at each turn, such that every decision made in the game would have a meaningful impact on the final result. As believers in the concept of board games being a social experience, our game would also include several avenues for interaction between players, both positive and negative.

### 5.3. Our Definition of Success

We want to evaluate our success in terms of the gameplay opportunities as well as technical accomplishment. From a gameplay experience we want the rules governing the gameplay system to feel challenging to just the right degree, such that players are constrained by the decisions that they can make, and rewarded for maximizing their gains from their limited pool of resources. Expressions such as ‘If only I had one more turn’, or ‘I wish I had one more action’ would fit in line with the tightly balanced nature of our gameplay. Our intention is to make the game easy to play mechanically but hard to master. We expect the final scores of our game to be extremely tight depending on player skill levels.

With regards to our technical accomplishment, the primary aim of digitizing board games is to make it feasible for individuals in different locations to play together. We thus want to provide a seamless experience with regards to UI and networking such that players can interpret the feeling of playing a physical board game. We expect that the digitization of a physical medium would create certain challenges. For instance, some aspects such as the tactile nature of board games would be difficult to replicate. However, we could compensate for this by making the less engaging aspects of typical board games such as rules enforcement, setup and cleanup much easier in a digital form. Our criteria of success would be if players are able to have a seamless gameplay experience with their friends, and feel mildly exasperated when they lose such that they are itching to play again.