Date: __/__/__

UniSim

RISK ASSESSMENT

TEAM6 Game Studios

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RISK ASSESSMENT AND MITIGATION REPORT

When developing this project, there are a few different types of risk, such as technical, business and operational risk. During development, there are a few ways which we can use to mitigate challenges.

RISK IDENTIFICATION

We began by identifying potential risks across different categories: technology, people, requirements and estimation. This involved stakeholder analysis, technology assessment, and analysis of external dependencies. We also eliminated risks with either a very low likelihood or very low damage to the project.

RISK ANALYSIS AND PRIORITISATION

Each risk must be assessed based on likelihood of occurrence and impact on project. Risks are then ranked so we can prioritise those with the highest potential damage.

RISK REGISTER

Maintained throughout the project. Serves as a dynamic document for recording the likelihood of the risk, impact and strategies for mitigation. Frequently updated to reflect new risks or changes to the project.

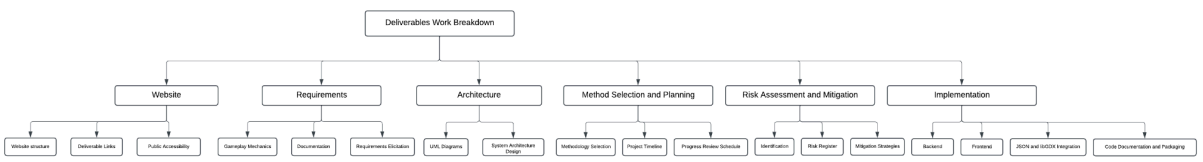
MITIGATION AND MONITORING

For every risk, we will develop appropriate mitigation strategies. We will also ensure regular monitoring of risks and effective communication with the team. Redundancy is also important, we will make sure there is no single point of failure within the team for each critical task, and no important file exists on one machine only. Owners of risks will need to update their likelihood and impact regularly.

AGILE APPROACH

The project is broken down into smaller iterations, which allow us to check for risks at each phase. By doing this, we can address challenges in smaller, more manageable pieces.

WORK BREAKDOWN



RISK REGISTER

The risk register's format consists of columns for:

- Risk Description
- Likelihood
- Impact
- Mitigation Strategy
- Owner
- Current Status

Likelihood and Impact Measured using simple terms:

- High
- Medium
- Low

Risk ID	Risk Description	Likelihood	Impact	Mitigation	Ownership
1	Delayed software development due to team skill gaps in game engine usage	Medium	High	Provide training resources or pair programming sessions for team members	Project Manager
2	Bad integration between buildings affecting gameplay and satisfaction	High	High	Test integration early on to avoid bigger problems later	Lead Developer
3	Misunderstanding client requirements	Medium	High	Schedule regular meetings and maintain clear documentation of customer requirements	Project Manager
4	External dependencies of third-party tools	Low	High	Identify backup tools and libraries in case the main tool fails	TechnicalLead
5	User dissatisfaction due to unbalanced event responses	High	Medium	Balance event triggers based on playtesting feedback to improve user experience	Game Designer
6	Insufficient time for proper user testing before launch	Medium	Medium	Allocate additional time and the end of each iteration for user testing	Testing Lead

7	Unstructured branch management in GitHub	Medium	High	Implement a structured branching strategy and enforce code reviews before merging	Project Manager
8	Difficulty integrating JSON files into libGDX for texture instantiation	High	Medium	Conduct preliminary testing of JSON imports and find solutions for compatibility issues	Lead Developer
9	Package clashes between JFrame and libGDX	Medium	High	Ensure clear separation of UI elements managed by JFrame and libGDX, testing for integration	Technical Lead
10	Insufficient testing of third-party libraries	High	Medium	Schedule thorough testing for each external library or tool used	Testing Lead
11	Performance bottlenecks during event-triggered actions	Medium	High	Optimise event handling code and test performance	Lead Developer
12	Hardware compatibility issues	Low	Medium	Test on a range of devices to identify and address compatibility issues	Testing Lead
13	Lack of user feedback mechanisms	Medium	Medium	Integrate user feedback systems, such as indicators for student satisfaction	UI Designer
14	Complexity in balancing multiple game events	High	Medium	Test different scenarios to adjust frequency and impact of events	Game Designer
15	Issues with real-time data synchronisation in game state	Medium	High	Implement robust data structures and ensure synchronisation during game updates	Lead Developer

16	libGDX performance issues on lower-end hardware	Medium	Medium	Optimise graphics and use efficient data structures	Lead Developer
17	Loss of project history or accidental deletion in GitHub	Low	High	Regularly back up the project and protect branches with permissions	Project Manager
18	Incorrect handling of texture atlases in libGDX	Medium	High	Use libGDX's TexturePacker and test atlases to prevent issues with texture loading and performance	Graphics Developer
19	Memory issues in libGDX due to improper asset management	Medium	High	Ensure proper disposal of assets when no longer needed	Lead Developer
20	Team member unavailability due to unforeseen circumstances	Medium	High	Cross-train team members on critical tasks to maintain a backup plan for key roles	Project Manager