RISK ASSESSMENT AND MITIGATION

Cohort 1 group 11

Freddie Aberdeen
Mutaz Ghandour
James Given
Jasper Owen
Jungwan Park
Joe Reece
Ivan Shestakov

Risk Management Process

The team followed a four-stage risk management process to ensure risks were identified early and effectively controlled throughout the project lifecycle.

1. Identification:
    - Potential risks were identified across key areas: technology, requirements, management, and people.
    - Collaborative brainstorming sessions and experiences from previous projects were used to capture a comprehensive list of risks.
2. Analysis:
    - Each risk was assessed for likelihood and impact.
    - This analysis helps in deciding which risks require the most attention and resources
3. Planning:
    - For each significant risk, the team defined:
        - Avoidance / mitigation strategies: Attuned to each risk to reduce it's likelihood or impact
        - Contingency plans: to provide clear responses if the risk occurred.
4. Monitoring:
    - Risks were reviewed at weekly project meetings and a risk register was developed to aid reviewing / monitoring
    - The team maintained re-assessment to track new or changing risks.

Risk Register Format:

The format of the risk register has been selected by the team in order to optimise the efficiency of the risk management plan by clearly categorising each risk with it's description, likelihood, impact, mitigation and ownership.

The likelihood and impact categories allowed the team to efficiently address the risks that actually may occur, and also risks that would have severe consequences to the project. In addition, the likelihood and impact have been clearly colour coded so everyone in the team is aware of them.

The ownership and mitigation categories allowed the team to have transparency on who will be responsible for dealing with each risk and executing the corresponding mitigation strategies, thereby ensuring clear accountability and prompt action when required. For some risks, multiple people or everyone has been assigned ownership because they are important issues that require multiple people in the group to work on them, or because everyone is affected by the risk.

To ensure consistency in risk assessment, the terms Low, Medium, and High are defined as follows:

1) Low indicates that the risk is unlikely to occur or would have only a minor impact if it does.
2) Medium indicates that the risk could occur occasionally and may cause moderate delays or require some rework.
3) High indicates that the risk will probably happen and could seriously impact the project's schedule,results, or quality.

Risk Register:

Risk ID	Risk	Description	Likelihood	Impact	Mitigation	Ownership
Risk 1	Software	Technical issues such as game freezing, performance drops, or compatibility problems with different systems.	Medium	High	Test the game on multiple devices early; optimize performance and use version control for backups	Ivan, Joe
Risk 2	Software	Player gets stuck or movement doesn't work properly because of bugs	Medium	High	Add debug mode and visual collision checks; test with edge cases	James
Risk 3	Software	Performance drops as maze complexity or number of objects increases	Medium	Medium	Simplify maze structure and optimize loops	Mutaz
Risk 4	Software	The final game fails to meet key project requirements	Low	High	Review requirements checklist regularly and test all features against specifications	Jasper

Risk 5	Software	Scoring or hidden events don't feel fair or rewarding to players	Medium	Medium	Define a clear scoring system and add small hints or effects to make hidden events feel worthwhile	Freddie
Risk 5	Software	Some hindering events may be too complex to implement within available time	Low	Medium	Simplify ideas early, focus on basic versions that work reliably	All
Risk 6	Software	Maze lacks clear objectives or direction, confusing players	Low	Medium	Add visual cues and a minimap or timer. Give tutorial	Joe
Risk 7	Management	adding unnecessary features that delay project completion	Low	Medium	Define "must-have" and "optional" features	Jungwan
Risk 8	People	Unequal contribution or low motivation within the team	Low	High	Set clear roles and deadlines, monitor progress and support each other	All
Risk 9	People	Lack of technical knowledge or experience delays development progress	Low	High	Identify skill gaps early, use tutorials and consult instructors when needed	All
Risk 10	People	Miscommunication among team members or misunderstanding project requirements	Low	Medium	Hold regular check-ins, document design decisions clearly and share updates	All
Risk 11	Management	Inadequate documentation or unclear versioning leads to confusion during development or submission	Low	Medium	Keep documentation updated, label all versions clearly	Jasper, Jungwan, Freddie

Risk 13	Estimation	Development takes longer than expected, delaying submission	Low	High	Split the project into small steps and finish the main game first.	All
Risk 14	People	A team member falls ill and cannot perform their role	Medium	Low	Reassess the current workload and reassign the team member's tasks to different people until they get better	All
Risk 15	Documentation	We could waste time editing documentation that needs to be spent developing the game or vice versa.	Low	Medium	Regularly review the work done for both documentation and coding to make sure they are both balanced.	Jasper, Jungwan
Risk 16	Software	The code we have been given could be hard to understand and update	Medium	High	Use the previous team's documentation to understand the code and read each section carefully	Ivan, Joe, Mutaz
Risk 17	Software/ Documentation	There could be inconsistencies between the code and the documentation	Medium	Medium	Read the code and documentation regularly and make sure they are both consistent	All
Risk 18	Software/ Usability	The people who play our game may not find it enjoyable	Low	Medium	Carry out User Evaluation during development where users get to play our game and give us their opinions	James Freddie
Risk 19	Software/ Usability	The people who play our game may find it too hard or easy	Low	Medium	Playtest our game regularly to make sure it is not too easy and let other users try our prototype in User Evaluation to make sure it is not too hard	James Freddie