

Risk Assessment and Mitigation

Team 1:

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Risk management process

In order to guarantee risk-free game development, our team decided to dedicate a meeting to evaluate our requirements to identify potential threats we could face during our project. When doing this, we went through each member's role to make sure we covered a broad range of possible risks relating to each person's job - this helped to simplify the process, as we were able to identify risks we may not have thought of if we didn't break it down.

In order to make a risk register, we needed to analyse our risks against a range of different factors. Our thought process as to how we arrived at concluding said factors and went about evaluating our risks is explained below.

Once we had compiled a range of different risks we could face, we needed to group these into categories for our register. The types we decided on were product, project, technology and team and they are briefly described below:

1. Product - this consists of risks to the product itself that may hinder gameplay for the user
2. Project - this consists of risks to do with our overall structure of the project, including factors such as our organisation and overall teamworking ability
3. Technology - these risks are to do with technical difficulties we could face and include things such as software glitches, coding bugs, performance issues etc
4. Team - this includes internal risks to do with our team's performance

The other headers we included in the register were:

- ID. By assigning each risk an identification number, this header will create an ordered list of our risks, so they're easier to identify and manage.
- Type. Each risk will be grouped into one of the types described previously so we know what area the risk relates to.
- Description. This will be a brief explanation of what the risk entails to make it clear what each one involves.
- Likelihood. By assigning 'low', 'medium' or 'high' to each risk, we are able to see which risks we should be particularly aware of in comparison to the others. Although we will be cautious of all of the risks on our final list, some may be more likely to cause damage than others, so we felt it necessary to include this header.
- Severity. Like the 'likelihood' header, we are also using the 'low', 'medium' and 'high' groupings for this header too; this will help us understand how serious damage to our project would be if this risk were to occur.
- Mitigation. This header describes how we could go about preventing the risk.
- Owner. By including this header, the risks are easier to manage, as each one is assigned a member to oversee it and make sure it's prevented.

Risk register

| ID | Type | Description | Likelihood | Severity | Mitigation | Owner |
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| R1 | Team | Communication issues can lead to delays and poor execution of the project | Medium | High | By using multiple methods of online communication, there will be at least one way we can convey information to each other when not in person. We will also have regular meetings two times a week to make sure everything is on track. | Kiran |
| R2 | Technology | Using software that isn't complementary | Medium | Medium | We will make sure to research and decide on our software before beginning the project to make sure they're compatible. | Ben |
| R3 | Product | Poor maintenance of code | Medium | High | All of our members will be involved in coding, some more than others. Due to this, all members will be able to assist each other and can conduct regular reviewing of the code. We will also make sure to add comments throughout our code so we can keep track of progress. | Dash |

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| R4 | Technology | Bugs in unfamiliar libraries can cause us to fall behind schedule | Low | High | We will be sure to look into the external resources we use prior to using them to make sure they're safe and we're familiar with them. | Charles |
| R5 | Team | Lack of meeting attendance can affect decisions made by the team | Low | Medium | Within our documents on GitHub, we will be tracking attendance of members during our meetings to | Abualhasan |

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| | | | | | make sure expectations are met. If members cannot make it, we will be sure to share information that was discussed online. | |
| R6 | Technology | Struggling to use game engines can delay progress | Medium | Medium | We will use game engines that have a broad range of information about them online so we can use these resources to assist us. | Ben |
| R7 | Project | Not keeping documentation up to date | Medium | Medium | We will update our documentation to summarise the outcome of each meeting, as well as making sure to keep track of progress of tasks each person has been assigned. | Hannah |

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| R8 | Team | Difference in member strengths can cause imbalances in workload | Low | Medium | Prior to starting, we will identify strengths of members so we can assign everyone tasks they're confident with. | Harley |
| R9 | Project | Poor organisation | Medium | High | Our team has set up GitHub repositories to make sure we are organised with the tasks that everyone has to complete - our meetings involve updating these with what we have achieved and what is next to do. Two meetings a week will make sure targets are being met. | Kiran |

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| R10 | Technology | Code errors may cause crashes | High | High | As we will be using new software, it may be more difficult to get the gameplay working, so we will be sure to use resources to help, as well as regularly reviewing where we're up to as a team. | Abualhassan |
| R11 | Product | Requirements being too tricky to meet | Medium | High | Although we have an initial list of requirements, through using an iterative approach, we will be able to go back and check throughout making the game, so that we can manage and keep up to date with | Hannah |

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| | | | | | them. | |
| R12 | Product | User interface that's too difficult to navigate | Medium | Medium | We will review our interface after creation to see if it's user friendly, whilst also meeting our requirements. | Cassie |
| R13 | Technology | Insufficient code testing | High | High | Test plans will allow us to check our code thoroughly against a criteria; regular debugging will help this process go smoothly. | Dash |
| R14 | Project | Lack of client meetings | Low | High | We value that feedback is important so by scheduling regular client meetings, we will be able to see if we are on the right track and are meeting the requirements necessary. | Cassie |

Assessment 2 risk management

Risk management process

In order to guarantee risk-free game development, we assessed the risks the previous

team identified and worked out how we could mitigate these risks as a team. We also considered if there were other risks for this part of our assessment that we would have to consider. We used the same system as the previous team to write our risk register which is shown above.

Updated risk register

| ID | Type | Description | Likelihood | Severity | Assessment 2 Mitigation | Assessment 2 Owner |
|-----------|-------------|---|-------------------|-----------------|--|---------------------------|
| R1 | Team | Communication issues can lead to delays and poor execution of the project | Medium | High | We have a groupchat and each others emails so we can communicate in between sessions. We have 2 sessions a week so we can discuss the project. | Megan |
| R2 | Technology | Using software that isn't complementary | Low | Medium | We will ensure we fully understand the previous teams software so if we want to add any more software we can make sure its compatible. | Jonathan |
| R3 | Product | Poor maintenance of code | Medium | High | We will make sure the code is well commented and has java docs to ensure that when multiple people are writing the code it is consistent. | Jonathan |

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| R4 | Technology | Bugs in unfamiliar libraries can cause us to fall behind schedule | Low | High | We will be sure to look into the external resources we use prior to using them to make sure they're safe and we're familiar with them. | Jonathan |
| R5 | Team | Lack of meeting attendance can affect decisions made by the team | Low | Medium | In our meeting minutes we are tracking attendance to make sure that we have good attendance. We make members who aren't present at meetings aware of any decisions made by messaging them after the meeting. | Megan |

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| R6 | Technology | Struggling to use game engines can delay progress | Medium | Medium | We will research the game engine used by the other team by reading documentation online so that we can understand it. | Jonathan |
| R7 | Project | Not keeping documentation up to date | Medium | Medium | We have a team member managing the documentation and checking that it is up to date. We also have issues for each section of documentation on the github so we | Sophie |

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| | | | | | can not shut an issue until we know it is finished and up to date. | |
| R8 | Team | Difference in member strengths can cause imbalances in workload | Low | Medium | At the beginning of assessment 1 we assessed each team members strengths, both technical and soft skills. We have then assigned tasks to cater to these strengths to make sure the workload is balanced. | Sophie |
| R9 | Project | Poor organisation | Medium | High | We have github issues set up for all the tasks we need to do throughout the assessment that we have put into milestones to make sure all the tasks are done each week. These tasks are split between team members, with 2 team members on most tasks to make sure that tasks are done. | Sophie |

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| R10 | Technology | Code errors may cause crashes | High | High | We are using code that another team has written so when we change code we may cause crashes. To help mitigate this we will review the code and complete thorough testing on our game. | Luiz and Alastair |
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| R11 | Product | Requirements being too tricky to meet | Medium | High | We have a list of requirements that we split into smaller tasks so that we can ensure all the events get added to the game for the second assessment. | Alina |
| R12 | Product | User interface that's too difficult to navigate | Medium | Medium | We will make sure the user interface is easy to navigate by reviewing it regularly. | Alina |
| R13 | Technology | Insufficient code testing | Medium | High | A big part of the second assessment is testing so we will make sure this testing is done properly and that we do it correctly. | Luiz and Alastair |
| R14 | Project | Lack of client meetings | Low | High | We value that feedback is important so by scheduling client meetings when we need them, we will be able to see if we are on the right track and are meeting the requirements necessary. | Sophie |
| R15 | Team | The last 3 weeks before the deadline is the Christmas holidays so team members may not be in person | High | Medium | We will make sure we have milestones set for each week so we complete all the tasks on time and we will try to put the majority of tasks while we are still in person. We will also keep good communication on the group chat to make sure it is | Megan |

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