Risk Management Plan

1. Files are lost or destroyed

Category: Procedural Risk

Description: USB is corrupt, Computer Hard Drives are cleared, Lose the password for online storage/account

Risk Probability: 0.5 **Risk Impact**: 0.8

Risk Score: 0.4

Response Plan: Avoidance - The major deliverables will be stored on cloud storage (such as Github) as well as on a USB. Everyday, each member of the team will upload their changes onto the cloud storage.

Areas of WBS Affected: Working Code, Product Deliverables

How: Incomplete components

Results: Potentially save the files

Level of Risk After: Minimal

2. Time allotted for project runs out

Category: Estimation and Scheduling

Description: The project is missing required features at the mandatory time of game submission

Risk Probability: 0.3 **Risk Impact**: 0.8

Risk Score: 0.24

Response Plan: Avoidance - The WBS will be carefully doctored to produce the most efficient game components first, so the game functions with its base elements no matter which components fail to work by the deadline.

If the project end is near, and the project is not complete, the development team will work overtime to ensure the project is complete by the deadline.

Areas of WBS Affected: Product Deliverables

How: Incomplete components

Results:

Level of Risk After: Moderate

3. Game is unstable (fatal flaws)

Category: Estimation and Scheduling and Gold-plating

Description: The project is borderline unplayable, due to poor planning and miscalculated timing

Risk Probability: 0.5 **Risk Impact**: 0.8

Risk Score: 0.40

Response Plan: Avoidance - Focus heavily on the designing and planning structures so the game is always stable with each new added feature. If a feature is incomplete, the game will still function without it.

Areas of WBS Affected: Working Code, Product Deliverables

How: Unstable program

Results: The risk of having an unstable program late into development is less likely

Level of Risk After: Moderate

4. Student leaves team

Category: Employee Turnover

Description: A member of the development team, leaves due to a justifiable reason (ie. moving, expulsion, etc.)

Risk Probability: 0.1 **Risk Impact**: 0.8

Risk Score: 0.08

Response Plan: Acceptance - Other team members have no control over the loss of a project team member, and therefore the work must be completed by the other programmer alone. A coding journal will be created and updated daily to inform the other members of their progress on the program. This will help the remaining member continue without the other.

Areas of WBS Affected: Working Code, Product Deliverables

How: Harder to complete the project

Results:

Level of Risk After: Same (Moderate)

5. School is cancelled due to strike or DDSB concerns

Category: Compromising on Designs

Description: The project is borderline unplayable, due to poor planning and miscalculated timing

Risk Probability: 0.1 **Risk Impact**: 0.8

Risk Score: 0.08

Response Plan: Mitigation - Maintain the same planning structure; team members use project time on personal computers at the same time as if they were in the designated school period.

Areas of WBS Affected: Product Deliverables, Working Code

How: Insufficient resources to complete project

Results: Divert development to personal resources

Level of Risk After: Minimal

6. Gold-plating (fluff)

Category: Gold-plating

Description: Adding unnecessary features that extend outside of the project's requirements.

Risk Probability: 0.5 **Risk Impact**: 0.4

Risk Score: 0.2

Response Plan: Avoidance - Stay within the scope of the project to prevent resources being spent on unnecessary parts of the programs.

Areas of WBS Affected: Product Deliverables

How: Unnecessary features that compromise other parts of the project

Results: More of an awareness to stay within the scope of the project

Level of Risk After: Moderate

7. Computers don't work

Category: Unavoidable Risk

Description: The computers that are used for project development are unusable for some uncontrolled reason (system upgrade, virus, power failure, etc.)

Risk Probability: 0.1 **Risk Impact**: 0.4

Risk Score: 0.04

Response Plan: Mitigation - Divert project development from company computers to personal computers.

Areas of WBS Affected: Product Deliverables

How: Insufficient resources to complete project

Results: Divert project development from company computers to personal computers.

Level of Risk After: Minimal

8. Internet failure

Category: Unavoidable Risk

Description: The company network is down due to unforeseeable reasons which prevents access to the internet.

Risk Probability: 0.9 **Risk Impact**: 0.8

Risk Score: 0.72

Response Plan: Avoidance - A copy of the program will be kept on a USB at all times throughout the development process, which will be used in the case of a network failure.

Areas of WBS Affected: Product Deliverables

How: Insufficient resources to complete project

Results: Resort to offline versions of the program

Level of Risk After: Minimal

9. Knowledge insufficient for game idea

Category: Technical Risk

Description: Project programmers do not have the training necessary for advanced game elements.

Risk Probability: 0.5 **Risk Impact**: 0.4

Risk Score: 0.20

Response Plan: Avoidance - Provide a document with links to tutorials on how to complete certain game elements, to ensure competence

Areas of WBS Affected: Product Deliverables

How: Insufficient resources to complete project

Results: Divert project development from company computers to personal computers.

Level of Risk After: Minimal

10. Failure to complete a key feature

Category: Productivity Issues

Description: The program is missing an essential feature that was required as a part of the project.

Risk Probability: 0.5 **Risk Impact**: 0.8

Risk Score: 0.4

Response Plan: Avoidance - The WBS will be carefully followed to develop the most essential product features first.

Areas of WBS Affected: Working Code, Product Deliverables

How: Incomplete program

Results: Following the WBS will ensure that we don't miss a feature

Level of Risk After: Minimal

11. Failure to implement a feature

Category: Productivity Issues

Description: The program is missing a feature that was part of the scope but is not required as a part of the project.

Risk Probability: 0.5 **Risk Impact**: 0.8

Risk Score: 0.4

Response Plan: Acceptance - If knowledge or time is insufficient, the feature will be excluded from the project.

Areas of WBS Affected: Working Code, Product Deliverables

How: Incomplete program

Results: Following the WBS will ensure that we don't miss a feature

Level of Risk After: Minimal

12. Developer has an injury to the hand

Category: Unavoidable Risk

Description: A member of the development team has a hand injury that prevents them from contributing to the development of the project.

Risk Probability: 0.1 **Risk Impact**: 0.8

Risk Score: 0.08

Response Plan: Mitigation - The injured member will pair program with the other members of the development team.

Areas of WBS Affected: Working Code, Product Deliverables

How: Insufficient resources to complete project

Results: Pair programming so the injured member can contribute

Level of Risk After: Minimal

13. Project causes interference outside of work life

Category: Procedural Risk

Description: The project's development causes interference with a developer's life outside of the workplace (extracurriculars and other courses)

Risk Probability: 0.5 **Risk Impact**: 0.4

Risk Score: 0.4

Response Plan: Mitigation - The developer will put the completion of the project as their highest priority, while still attending to personal matters.

Areas of WBS Affected: Working Code, Product Deliverables

How: Insufficient resources to complete project

Results: The project is the highest priority

Level of Risk After: Moderate

14. Employee miscommunication

Category: Procedural Risk

Description: Employees do not share clear representation of their ideas, so the end component is incorrect and scattered.

Risk Probability: 0.3 **Risk Impact**: 0.2

Risk Score: 0.06

Response Plan: Avoidance - Use software such as Telegram Messenger daily to avoid programming discrepancies and increase workplace clarity.

Areas of WBS Affected: Working Code, Product Deliverables

How: Miscommunication

Results: Text and IM other members

Level of Risk After: Minimal

15. Compiling errors

Category: Technical Risk

Description: The program causes errors when compiled or does not run.

Risk Probability: 0.5 **Risk Impact**: 0.8

Risk Score: 0.4

Response Plan: Acceptance - The development team will research the errors and attempt to find solution for them. However if the solutions don't work, the development team will either attempt the newest feature again or plan another way of executing it.

Areas of WBS Affected: Working Code, Product Deliverables

How: Unstable product

Results: The development team will research and fix the errors.

Level of Risk After: Moderate

16. Unclear requirements from teacher

Category: Breakdown of Specifications

Description: The programming team is unsure of what aspects of a feature should be implemented.

Risk Probability: 0.5 **Risk Impact**: 0.8

Risk Score: 0.4

Response Plan: Mitigation- Increase the effectiveness and frequency of communication with the teacher to decrease the possibility to misunderstand the project requirements. Refer to the Moodle and rubric for information if the teacher is unavailable.

Areas of WBS Affected: Working Code, Project Deliverables

How: The game does not include necessary components to reach a 95%+ mark, due to the team's misinterpretation of the teacher's requirements

Results: Use LanSchool to communicate frequently with the teacher to clarify any potential conflicts. If that does not work, talk to him directly.

Level of Risk After: Minimal

17. New ideas introduced late into development

Category: Sudden Growth of Requirements

Description: The programming team comes up with new ideas late into development.

Risk Probability: 0.5 **Risk Impact**: 0.2

Risk Score: 0.1

Response Plan: Avoidance - The deadline for new ideas will be November 1, 2016. If new ideas are introduced they will be added to a list of features prioritized by importance.

Areas of WBS Affected: Working Code, Project Deliverables

How: Code and deliverables are in potential hazard of being incomplete, if coders devote

time to a brand new feature.

Results: Deadline is set to prevent changes past a certain date.

Level of Risk After: Minimal

Risk Analysis Matrix					
Probability					
0.9					Risk 8
0.7					
0.5			Risk 17	Risk 6, 9, 13, 16	Risk 1, 3, 10, 11, 15
0.3			Risk 14		Risk 2
0.1				Risk 7	Risk 4, 5, 12
	0.05	**0.10**	**0.20**	**0.40**	**0.80**
	Impact				