Project Summary

1. **Problem Statement:** People ages 8 and up are looking for a fun and interactive way to improve their cognitive abilities and keep their minds active. The game that we are creating will help people improve their problem solving skills, speed and flexibility.
2. **Project Goal and Objectives:** At Rocket 16, our objective is to create a web-based game that will engage and encourage players to challenge themselves, to track their progress and to keep them playing. This game will be both fast paced and visually appealing while offering great replay value. We are doing this project in order to gain recognition as an upcoming brain training game development team.
3. **Choose a Strategy:** Create **Kitty Cat Space Map**. This game will have users determine the shortest path within a time constraint in order to progress. The game will increase in difficulty as more objective points are added and maps become more complex. We will use different web technologies such as HTML, CSS, PHP, etc. to create our game. We will utilize GitHub to upload and share working files. Also, we will have meetings three times a week on top of our daily scrums in order to explore and resolve any issues.
4. **Gathering requirements:** This project must be completed within a 5-week time frame starting as of April 26th 2016. Kitty Cat Space Map must be categorized as a brain game aiming to improve one or more of problem solving skills, memory, speed, flexibility, etc. No game engine can be used to create this game.
5. **Deliverables and success criteria:** Our **first** deliverable will consist of the base structure of the game. This will include constructing basic paths and having a working grid based system for each of the points on the map. The **second** deliverable will be able to validate user input and use that to complete the levels. The **final** deliverable will consist of a visual overhaul of the game so that it will look visually appealing, and the implementation of a score keeping system, which will also include a leaderboard so that players can compare their scores to others.
6. **Assumptions and Risks:** Our biggest assumption is that if the players have a very finite amount, or only single levels for each world then the game will get very repetitive and players will get bored very quickly. To resolve this we will implement a randomly generated map for each world. Adding randomness to the game presents the huge risk of randomly creating an insolvable level. So instead of having completely random levels, we will hardcode a pool of levels and randomly select from that pool. One risk is that the gameplay may be too easy and that the players will, once again, get bored fast. So adding interesting features such as wormholes, nebulas, meteor fields, etc. with different effects will make the game much more interesting. Our biggest risk is not staying on schedule, and spending too much time on certain tasks when we should. To mitigate this we will openly communicate issues quickly and often. Another way to solve this problem is to prioritize each feature and task, allocating appropriate time to them.
7. **Scope Statement:** Our game will not have a completely randomized level. We will create a pool of preset levels and each time the player starts up a world, it randomly selects from a specific pool of challenges. This game is to find the smallest path while reaching different objectives within a time constraint.
8. **Stakeholders:** Stakeholders include our instructors and team members. As the people developing *this game*, we are the most invested in this project as it directly affects our grade and a finished product that could be used as a portfolio piece. Our instructors are overseeing this project and play the role of our project sponsors and also offering us technical help and guidance.
9. **Approval:** We must receive approval from all stakeholders before proceeding to the next phase.