**Three-D 2048 Project Plan**

Submitted to**: Mr. Peck**

Project Manager**: Sandeep Raghunandhan**

Date: May 1, 2014

Project Overview: The project consists of designing a 3-dimensional version of a popular game on the internet known as 2048 and will consist of 64 tiles in 3D space. In addition to adding a new dimension to the game, our version will also allow for greater gaming flexibility on the user-end, such as having a possible multiplayer or tournament mode and other tools. A 2-dimensional version will also be available for the traditionalists. The 3D version will be rendered on a Java3D canvas while the 2-D and multi-dimensions beyond 3-D will be rendered on JFrame. The networking will allow for multiple players to play each other or play against a computer.

Project Team:

Yash Sinha: Create and manage underlying data structures, in charge of implementing networking functionality

Sandeep Raghunandhan: Will take care of handling the 3-D graphics rendering and animation using Java3D.

Challenges (Potential problems):

Possible lagging if the graphics get too intense; hopefully, we’ll be able to optimize for that. The Java3D class has a very rich library so there’s a lot of material to learn in about a month. Implementation of data structures for 3D graphics may prove to be challenging.

Major Tasks and Schedule:

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| Task | When | Responsible |
| Generate an outline for all the necessary classes | Week of May 5 - 9 | Yash and Sandeep |
| Generate Javadocs | Week of May 5 - 9 | Yash and Sandeep |
| Work on the GUI class handling the 3-D rendering | Week of May 12 - 16 | Sandeep |
| Work on the GUI class handling 2-D and multidimensional rendering | Week of May 12 - 16 | Sandeep |
| Work on the class handling underlying data structures | Week of May 12 - 16 | Yash |
| Enable animation and user interaction | Week of May 19 - 23 | Sandeep/Yash |
| Enable networking capability | Week of May 19 - 23 | Yash |
| Write the JUnit Tests and test the program extensively. | Week of May 26 - 30 | Yash and Sandeep |

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