**CSC 335 Analysis and Design Artifacts for Final Project**

*This must be in a private Github repo in a directory named documents*

*with your project manager added as a collaborator*

**1. Team Name:**  Null Pointer Exception

**2. Team Members**: Miranda Motsinger Lisa Zhang

Brittany Saffo Spencer Wiltbank

**3. Candidate Objects or Class Hierarchies**

List the most important objects, or the name of an inheritance hierarchy, and the main responsibility.

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| --- | --- |
| **Candidate Object** | **Single Responsibility in 1 or 2 sentences** |
| Game | Manages the instance variables, sends messages to the UI with Observable. |
| Agent (Abstract) | Different types of agents (builder, cook, miner etc..) and manages their needs. |
| Map | In charge of populating 2D array with terrain. |
| Resource (Abstract) | Each resource dependent on terrain. |
| Building (Abstract) | Stores resources and can create new items from current resources. |
| View | Paints all objects and animations. Allows user to interact with game. |
| Map Generator(Static) | Initializes the map. |

*These Class and Sequence Diagrams may be written by hand and scanned or drawn with a UML editor such as Violet* [*http://sourceforge.net/projects/violet/files/violetumleditor/*](http://sourceforge.net/projects/violet/files/violetumleditor/) *and / or the sequence diagram editor or* [*https://www.websequencediagrams.com/#*](https://www.websequencediagrams.com/)

4. Class Diagram: Your team UML Class Diagram must show at least all of your candidate objects from above. Show any relationships between them the classes such as inheritance or interface implementation. Draw general associations such as dependency or aggregation. Label some to help explain things. Add any multiplicity adornments that seem appropriate. Use notes to explain things if you feel it will help. Each UML class must show the class name. For full credit, each class must have an average of at least one attribute per class. There must be an average of at least 2.0 methods per class, which may be implicit (no need to repeat methods) if the class implements a Java interface with methods shown there.

**5. Sequence Diagram:** Your team UML Sequence Diagram should show the most important scenario you can think of. Your sequence diagram should show most of your objects from above and how they communicate with each other.