# GAM 495 Course Artifact Metadata Sheet

**Part I: Original Artifact**

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| Artifact Name: | Magi Coliseum | | |
| Original Course or Origin: | An Unreal project based on the concept I refined in GAM 465 | Date Completed: | Not Complete (last updated 6/23/20) |
| Artifact Description: | | | |
| A work in progress Unreal project I began working on in my free time after finishing GAM 465. In GAM 465, I created and refined a concept for a scalable combat system for a hypothetical game. In this game, players would be able to select from various properties available to them, based on their character’s level, to create custom magic spells. What makes it scalable is every possible property is stored in a single location, a spellbook object which every character holds an instance of. When making a spell, the character queries the spellbook to see what is available. Casting the spells can then be thought of as spawning packets of information, then when the spell hits it will tell the target’s spellbook the info it holds and the spellbook will trigger the spell’s effect(s). The spellbook object can be thought of as a database and adding more properties to the game would only require adding a new entry to the database. | | | |
| Keywords: | Combat System, RPG | | |
| Tool(s) Used: | Unreal Engine 4 | | |
| Skills You Hope to Highlight: | | | |
| I hope to highlight my aptitude for taking a concept from idea, to plan, to deliverable. I also hope to highlight my ability to build a complex, scalable system. | | | |

**Part II: Refinement Plan**

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| Proposed change(s) to create a polished artifact: | | |
| First, complete the spellbook. The spellbook actor component is already set up to hold the requisite information, all that is left to complete the spellbook is to create all the functions it may need, e.g. check mp cost, set mp, calculate damage, set hp. Second, add a menu system to query the attached spellbook and set the properties of the active spell. Finally, create objects to act as the spells, just simple objects that hold information, travel through the world, and if they find an actor with a spellbook then communicate that information with the spellbook so that it can trigger the appropriate effect(s). | | |
| Format of your original artifact (include link or zipped attachment for artifact files) | Unreal Engine 4.24 blueprint project  <https://github.com/Heros-Tempus/Magi-Coliseum> | |
| Indicate which components your revised artifact will demonstrate. | | |
| ☐ Game Engine Mastery | | ☐ Game AI |
| ☐ 2D Graphics | | ☐ Game Physics |
| ☐ 3D Graphics | | ☐ Complex Logic Problem Solution |
| ☐ Graphic Interface Design | | ☐ Other |
| Indicate how your proposed changes will showcase your relevant knowledge, skills, and abilities. | | |
| At its core, this project is one great big logic problem. Details like the UI are secondary, the focus is the system. The system was conceived as something that can be scaled up or down and inserted into a game. It is not intended to have a complete and consistent art style or finalized UI, it is only intended to show that the proposed solution works. | | |
| Instructor Feedback: | | |
| *This area for use by the instructor.* | | |