Gamification – Team 1

Overview
This project focuses on validating the impact and effectiveness of gamification. This is accomplished through running a research study collecting various data. This data includes a pre- and post-test along with a gamification, usability and education questionnaire. The data is analyzed to see if the game was effective using a control group and a normal group. Using that and the information from the questionnaires the “Avengers’ game was updated to improve it. The “Gulf” game was updated on its own using a heuristic model.

Objectives
1. Conducting a research study to get data used for updating the “Avengers” game
2. Update the “Gulf” game using a heuristic model to examine it for its usability, gamification and educational effectiveness
3. Submit our findings to help produce a research paper showing whether gamification produces an advantage in a learning environment

Approach
- Research gamification methods and how it has progressed since the beginning
- Review the games and the topics they intend to teach
- Research how to properly construct a survey/questionnaire to administer during the study
- Construct a lecture of the topics in the “Avengers” game to be used for a control group in the study
- Produce a gamification, education and usability survey/questionnaire
- A pre-test and post-test is constructed to gauge how the game performs vs. the lecture
- Submit an application to IRB to get approval for our research study
- Once IRB approval is acquired the study was conducted with individuals that have knowledge of the topics
- With the study complete analyze the date that was obtained (eg. surveys and pre- and post-test)
- The information from the study will be utilized to update the “Avengers” game and to determine if the game improved the ability to learn the topics through the gamification method.
- During this time the “Gulf” game was being separately reviewed and updated by the group
- The finals results were collected and turned into the Ph.D. candidates that are producing a research paper on gamification

Outcomes
1. The results of the of the pre- and post-test proved to be inconclusive and no way to determine if gamification is a more effective way of learning a topic than a lecture
2. Both games were updated to increase their effectiveness, using the approach described above