**Project 1**

3. b. i.

GameServer – The game server will be the component, Raspberry PI, that interfaces with our program. The GameServer will deliver our program the Game “Rules”. The GameServer will also deliver results of a fired missile as a hit or miss if a target is fired on.

GameClient – The GameClient will be our application that connects to a Dream Cheecky USB missle launcher and Web CAM. The GameClient will process game “Rules” presented by the GameServer and allow the Operator manual interface to control various aspects of the Game.

Operator – The Operator will be the person interfacing the GameClient console to either manually use the missile launcher or perform calibration of the equipment. The Operator will also be responsible for the setup of peripheral equipment. i.e. Game Cheeky and Webcam.

Magistrate – The games Magistrate will be the official party that will begin each game and delivering instructions to the operator. The Magistrate will also validate that a successful hit of the target will result in a score.

Twitter – As the Game is played the GameClient must Tweet messages to a Twitter account. These messages must be clean in nature.

b. ii.

**GameServer**

***As a*** GameServer ***I want*** to communicate with GameClient ***because*** I need to deliver game data.

1. ***As a*** GameServer ***I want*** your team name ***because*** I need to keep score.
2. ***As a*** GameServer ***I need*** you to tell me to Start a new game ***because*** I need to initiate Game and timer.
3. ***As a*** GameServer ***I will*** record a target as hit if a missile strikes ***because*** I will use this to keep your score.
4. ***As a*** GameServer ***I need*** you to imitate a Stop game command if errors occur ***because*** I will need to stop timer.

**GameClient**

1. ***As a*** GameClient ***I want*** a live video feed from a web cam ***because*** I must identify targets in this manner.
2. ***As a*** GameClinet ***I want*** a screen display with target information presented by the GameServer ***because*** I need my operator to be informed of all data relevant the current game.
3. ***As a*** GameClient ***I want*** directional buttons on my interface ***because*** the manual game mode will require my Operator to position the missile launcher for use.
4. ***As a*** GameClient ***I want*** a fire button ***because*** the manual game mode will require my operator to use for missile deployment.
5. ***As a*** GameClient ***I want*** driver interfaces to DreamCheecky missile launcher and WEbCAm ***because*** I must be able to interact with the game.

**Operator**

1. ***As an*** Operator ***I want*** a graphical user interface to the program ***because*** I want ease of use.
2. ***As an*** Operator ***I want*** information displayed on screen delivered from the Game Server about the Game mode and target information ***because*** I need to be able to calibrate controls to win.
3. ***As an*** Operator ***I want*** the ability to steer the direction on the missile launcher left, right, up, and down ***because*** ***I will need*** to manually operate per game requirements.
4. ***As an*** Operator ***I want*** the ability the manually fire at targets ***because*** this is a requirement of one of the games.
5. ***As an*** Operator ***I want*** a start button ***because*** I want to initiate a new game.
6. ***As an*** Operator ***I want*** a stop button ***because*** I want to be able to end game at any time.
7. ***As an*** Operator ***I want*** to know how many missiles I have left to fire ***because*** I need to know when I expelled my ammunition
8. ***As an*** Operator ***I need*** a score indicator ***because*** I want to know status of my progress.
9. ***As an*** Operator ***I need*** a timer ***because*** I need to track how long each game is played.
10. ***As an*** Operator ***I need*** a command line interface ***because*** I need to be able to make adjustment to software as appropriate.

**Magistrate**

1. ***As a*** Magistrate ***I need*** a team name before start of game ***because*** I will need to keep score.
2. ***As a*** Magistrate ***I need*** access to the playing field ***because*** I will watch the targets for glancing hits and adjust the score appropriately if not registered.
3. ***As a*** Magistrate ***I need*** access to the GameServer ***because*** I will initialize the game mode.

**Twitter**

1. ***As a*** Twitter ***I need*** an account I have access to ***because*** I will deliver Tweets in game.
2. ***As a*** Twitter ***I need*** messages that indicate information you would like posted ***because*** I will deliver the message on Twitter.
3. ***As a*** Twitter ***I need*** the massage body to be clean ***because*** there may be children present.

f. Define Formal Use Cases