

<b>RQ1 General Requirements</b>	
<p>RQ1 .1 The system shall consist of three main components.</p> <p>The BotBattleApp for providing access to the Test Arena, allowing students to enter the Tournament, providing access to the View Tournament Website once it has been made public, and allowing the admin to configure the system.</p> <p>The GameManager which will be responsible for actually executing the GameInstances for both the Test Arena and the Tournament.</p> <p>The View Tournament Website which is a completely self-contained website for viewing and playing back each GameInstance in the tournament.</p>	High
<p>RQ1 .2 The BotBattleApp will have an initial configuration page that allows the admin to setup system wide parameters, upload an initial Game Module, and configure an initial tournament. This page will be displayed once when the system is first started.</p>	High
<b>RQ2 Privilege Requirements</b>	
<p>RQ2 .1 The system shall support two user account privilege levels, admin and student</p>	High
<p>RQ2 .2 The system shall allow an admin to login via a web page and have system wide access to all configurable components.</p>	High
<p>RQ2 .3 The system shall allow students to log in and submit their bots to a tournament that they have been enrolled in.</p>	High
<p>RQ2 .4 Student accounts shall be assigned only in the context of a tournament. Each tournament will have its own list of students enrolled in it. When logging in the student shall select which tournament they'd like to access.</p>	Low
<b>RQ3 Tournament Requirements</b>	
<p>RQ3 .1 The system shall support Tournaments in which many bots play against each other within individual game instances, until one ultimately wins.</p>	High
<p>RQ3 .2 All game instances within a tournament will play the same game.</p>	High
<p>RQ3 .3 The system restricts the number of bots per user per tournament to one.</p>	High
<p>RQ3 .4 Tournaments will have a deadline for students to upload their bots.</p>	High

RQ3 .5 The system will ensure the results of each tournament are saved for later viewing as self-contained web pages.	High
RQ3.5.1 The system will provide two levels of access for tournament results, publically viewable to all, and private which is viewable only by Administrators.	High
RQ3.5.2 Tournament results default to private and are only made publically accessible by explicit administrator intervention.	High
RQ3.5.3 The time delay between turns should default to a setting made in the Game Module. This can be overridden tournament wide from the view tournament screen.	High
RQ3 .6 The system shall support the creation and configuration of one initial tournament through the Initial Configuration Page	High
RQ3 .7 The system shall allow an admin to add and delete student accounts from a tournament's user list at any time before the tournament has been run.	High
RQ3 .8 The system shall allow an admin to delete a tournament from the system as long as it is not currently running.	Low
RQ3 .9 The system shall support creating and managing multiple tournaments.	Low
<b>RQ4 Game Module Requirements</b>	
RQ4 .1 The system will hold descriptive metadata about the game rules, bot input and output, default time delay between moves, the source file for the Game, the name of the Game, etc. inside a single coupled entity for ease of access / use throughout the system.	High
RQ4 .2 The system shall support the uploading and configuration of one initial game module through the Initial Configuration page.	High
RQ4 .3 The system shall support the uploading of a new rules.html file for the Game Module at runtime through the Admin portal	High
RQ4 .4 The system shall support multiple Game Modules at the same time for use in different tournaments and the test arena.	Low
RQ4 .5 The system will allow admin to add, update, and delete Game Modules at any time.	Low
<b>RQ5 Game Instance Requirements</b>	
RQ5 .1 The system shall limit game instances to exactly two players, whether human or bots.	High

RQ5 .2 The Game will be responsible for ensuring all game rules are met while playing.	High
RQ5 .3 The system shall communicate with bots via standard input and output.	High
RQ5 .4 The system shall generate HTML representations of the current game board and state and save them for further processing.	
RQ5 .5 The system shall impose a time limit on a player's moves.	High
<b>RQ6 Test Arena Requirements</b>	
RQ6 .1 The time delay between turns should default to setting made in the Game Module for the Game to be played. This can be overridden from the Test Arena screen.	High
RQ6 .2 The system shall allow unauthenticated users access to the test arena	High
<b>RQ7 Bot Requirements</b>	
RQ7 .1 The system shall limit bots to reasonable memory and CPU usage.	Med
RQ7 .2 The system shall run bots in an isolated execution environment to protect system stability.	High
RQ7 .3 If the bot generates output that doesn't match the format specified by the Game Module it will be disqualified	High