Bot!Battle! Project: Web Server Application -- Functional Requirements

Priorities are listed with 1 being the highest priority. Any item with a priority of 3 or less is considered in the scope of the proposed project. Any item with a priority of 4 or more is considered extra, and may not be developed.

Requirements with a priority of 1 generally deal with site navigation, and requirements with a priority of 2 generally deal with critical functionality of the Web Server Application that are essential to the Bot!Battle! game being playable. Requirements with a priority of 3 deal with administrator requirements and with requirements that are not essential to the playability of the Bot!Battle! Game.

General Requirements

Number	Functional Requirement	Priority	Use Cases
1	System shall display a landing page to anonymous users.	1	BBS001
2	System shall allow user to securely register an account to use Bot!Battle!, and will store their specified account credentials on the database.	2	BBS008
3	System shall require user to sign in to their account to use Bot!Battle!, and will verify the account's credentials against those on the database.	1	BBS001
4	System shall allow user to sign out of their account.	1	BBS019
5	System shall display the user homepage once user signs in.	1	BBS001
6	The user homepage shall display the following: link to the lessons page, link to the challenges page, link to the contests page, link to the Contact Us page, link to the About Bot!Battle! page, link to the My Account page, and a link to the Administrator Page if the user is an administrator.	2	BBS002 BBS007 BBS009 BBS013
38	System shall allow users to search for matches and for people involved in matches.	4	

Administrator Requirements

Number	Functional Requirement	Priority	Use Cases
7	System shall redirect administrator to the administrator page when the admin link on the user homepage is clicked.	3	BBS007
8	Administrator page shall allow administrator to create lessons, challenges, and contests, which shall be added to the database.	3	BBS016 BBS017 BBS018
9	Administrator page shall allow administrator to specify a new lesson's category, name, difficulty, lesson text, and optional video.	3	BBS016
10	Administrator page shall allow administrator to specify a new challenge's category, name, difficulty, completion information and relevant lessons from the administrator page.	3	BBS017
11	Administrator page shall allow administrators to specify a new contest's contest date, name, and challenge.	3	BBS018

Lesson Requirements

Number	Functional Requirement	Priority	Use Cases
12	System shall maintain in the database for each lesson a name, a category, a difficulty, an admin creator, lesson text, and an optional video.	1	BBS013 BBS016 BBS021
13	System shall display all lessons on the lessons list page.	1	BBS013
14	Lessons list page shall group lessons by category first, then by difficulty.	3	BBS013
15	Lessons list page shall allow user to select a lesson, redirecting the user to the selected lesson page.	2	BBS013
16	System shall display the selected lesson's category, name, lesson text, and optional video on the selected lesson page.	2	BBS014 BBS015
17	Lesson page shall allow administrators to add, edit, or delete lesson.	3	BBS015 BBS016 BBS021

Challenge Requirements

Number	Functional Requirement	Priority	Use Cases
18	System shall maintain in the database for each challenge a name, a category, a difficulty, completion information, an admin creator, published bots, and relevant lessons.	1	BBS009 BBS011 BBS012 BBS017
19	System shall display all challenges on challenges list page.	1	BBS009
20	Challenges list page shall group challenges by category first, then sorted on difficulty.	3	BBS009
21	Challenges list page shall allow user to select a challenge, redirecting user to the selected challenge page.	2	BBS009
22	System shall display the selected challenge's name, category, relevant lessons and completion information on the selected challenge page.	2	BBS010 BBS011
23	Challenge page shall allow user to upload a bot to complete the selected challenge.	2	BBS010. BBS023
24	Challenge page shall display links to testing arenas, where user's bot for the selected challenge can be tested.	3	BBS010
25	Challenge page shall allow user to publish their bot to the database for the selected challenge.	2	BBS010
26	Challenge page shall allow administrators to add, edit, or delete challenge.	3	BBS011 BBS012 BBS017

Contest Requirements

Number	Functional Requirement	Priority	Use Cases
27	System shall maintain in the database for each contest a name, a contest date, a challenge, an admin creator, contest results, contest status, and uploaded bots.	1	BBS002 BBS003 BBS018 BBS020
28	Contests list page shall list contests with a contest status of "upcoming" on the contests list page in chronological order according to their contest date.	1	BBS002
29	Contests list page shall list contests with a contest status of "completed" or "in progress" in reverse chronological order according to their contest date.	2	BBS002
30	Contests list page shall allow user to select a contest, redirecting the user to the selected contest page.	2	BBS002
31	System shall display the selected contest's challenge, name, contest date, and contest status on the selected contest page.	2	BBS003 BBS006
32	Contest page shall allow user to upload a bot for the selected contest if the contest status is "upcoming".	2	BBS003 BBS023
33	Contest page shall allow users to view contest results and contest rounds once the contest status is "completed."	2	BBS004
34	Contest page shall allow an administrator to run a contest.	3	BBS005
35	System shall allow contest results to be broadcast.	3	BBS005
36	Contest page shall allow administrators to add, edit, or delete contest.	3	BBS006 BBS020 BBS018

API Requirements

Number	Functional Requirement	Priority	Use Cases
37	System shall provide an API for uploading and accessing saved matches, maps, and contests from the database.	2	BBS022