Requirement Analysis

Mandatory:

* Shall be browser based
* Data shall be persisted on the server
* Must be client-server architecture
* Must be able to scan QR codes

USERS

* shall be identified by their email **and**
* shall be able to identify user through text enabled phone number.
* shall be assigned a human consumable and human friendly access code.
* shall be sent an access codes as a text message (“Thank you for Playing BucHunt: Your access code is <insert here> “)
* shall be sent the URL for the game via email at the same time as their access code is sent to their phone. (“Thank you for Playing BucHunt. The current hunt is accessed here <insert url> and your access code has been sent to your phone. Good Luck and have fun!”)
* shall be required to enter the game URL into a browser and enter a valid access code in order to begin playing.
* shall be presented with a fixed list of task labels upon entering a valid access code.
* shall have their game status automatically stored on the server.
* shall have the ability to manually enter the decoded QR Code from within the client interface to complete a task.
* shall have a username associated with them (defaults to a random number).

GAME

* shall store any additional information about each player on the server.
* shall support a single game and it is considered active at all times.
* shall associate multiple tasks with the game (including task label, GPS location, QR Code image, QR Code decoded value)
* shall track each Player’s progress in completing the tasks for the game
* shall display to each Player, each task label in the list along with a completion indicator.
* shall display an error message to the user if they enter an invalid decoded QR Code
* shall update the server and display to indicate a task is complete when the Player enters a valid decoded QR Code
* shall store a timestamp in association with any completed task
* shall send a Congratulations message to the client interface and in an email when the Player successfully completes all tasks defined in the game.
* shall send each Player an email with their results and rank when the game is ended.
* shall refresh the client interface periodically to ensure the Player is seeing their actual progress and statistics.
* shall NOT use cookies or persist any data on the client devices.

Optional:

* Players may have the ability to edit their display name which defaults to a random number.
* Players may have the ability to scan a QR Code from within the client interface which will complete a task
* scanning an invalid QR Code will result in an error message to the Player.

System level data model = client -server – more like tasks for hunt and access codes

Graphical user interface, Teams

Description automatically generated

RISKS:

* Integrating scanning QR codes
* Server reliability
* Mobile compatibility
* User validation
* Browser compatibility
* Method for mobile communications
* Integration of Google maps or other maps

Software Design Document UML - BucHunt

Diagram

Description automatically generated