System Requirements

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Definitions

Account page/area: the place where a user can manage their account

Game center: the place where a registered user can manage and create their games

Game: the place where a user updates scoring information about a specific game

Public Game ID: the code that lets others view a game

Private Game ID: the code that lets others view and control a game

Public Tournament ID: the code that lets others view a tournament and all games within it

Private Tournament ID: the code that lets others view and control a tournament and all games within it

Functional Requirements

The user will be able to create a single-user game

The user will be able to create a multi-player game

The user will be able to save a game's score.

The user will be able to view a game's score.

The user will be able to update a game's score.

The user will be able to join a game.

The user will be able to create a tournament bracket.

Non-Functional Requirements

The system will run on a React front-end.

The system will run on a Meteor back-end.

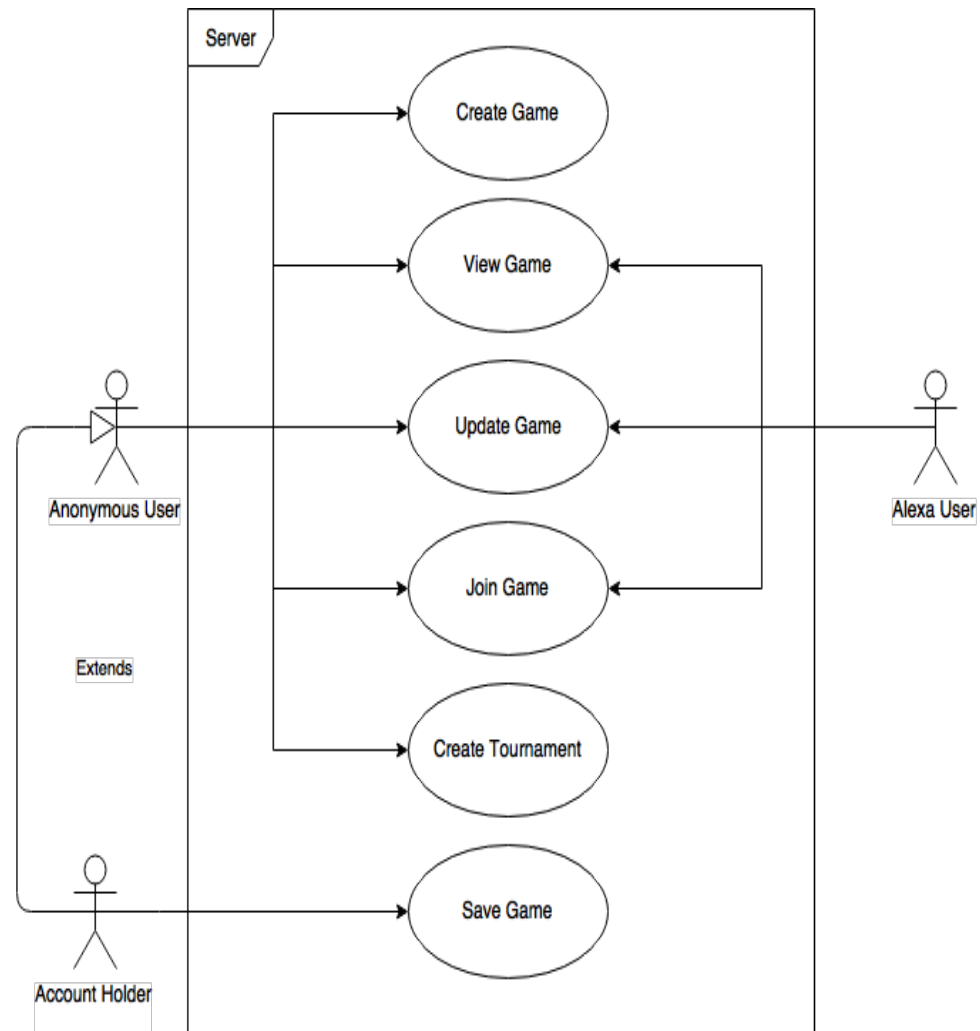The system will utilize MongoDB as its database of choice.

The system must be able to co-operate with Amazon Echo.

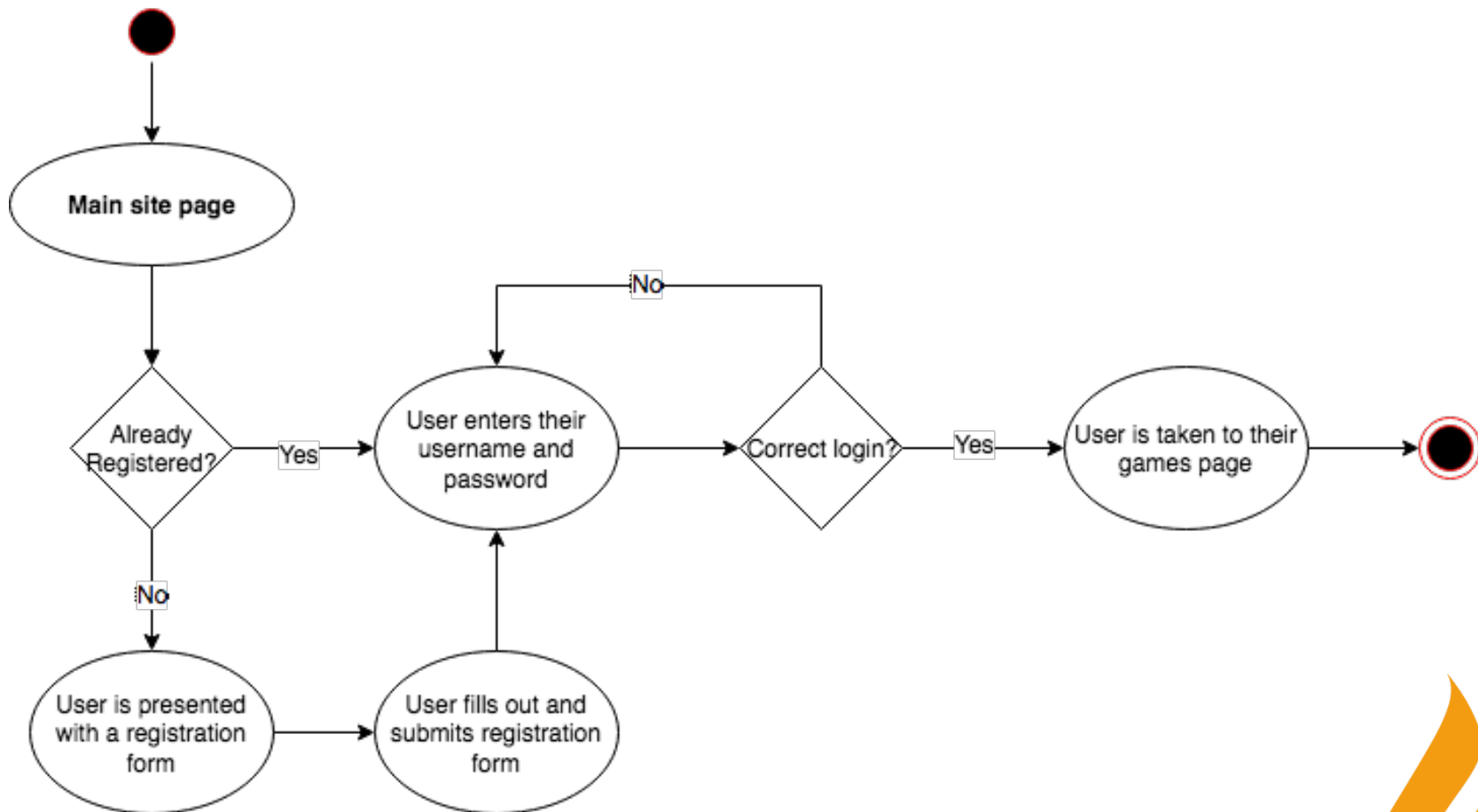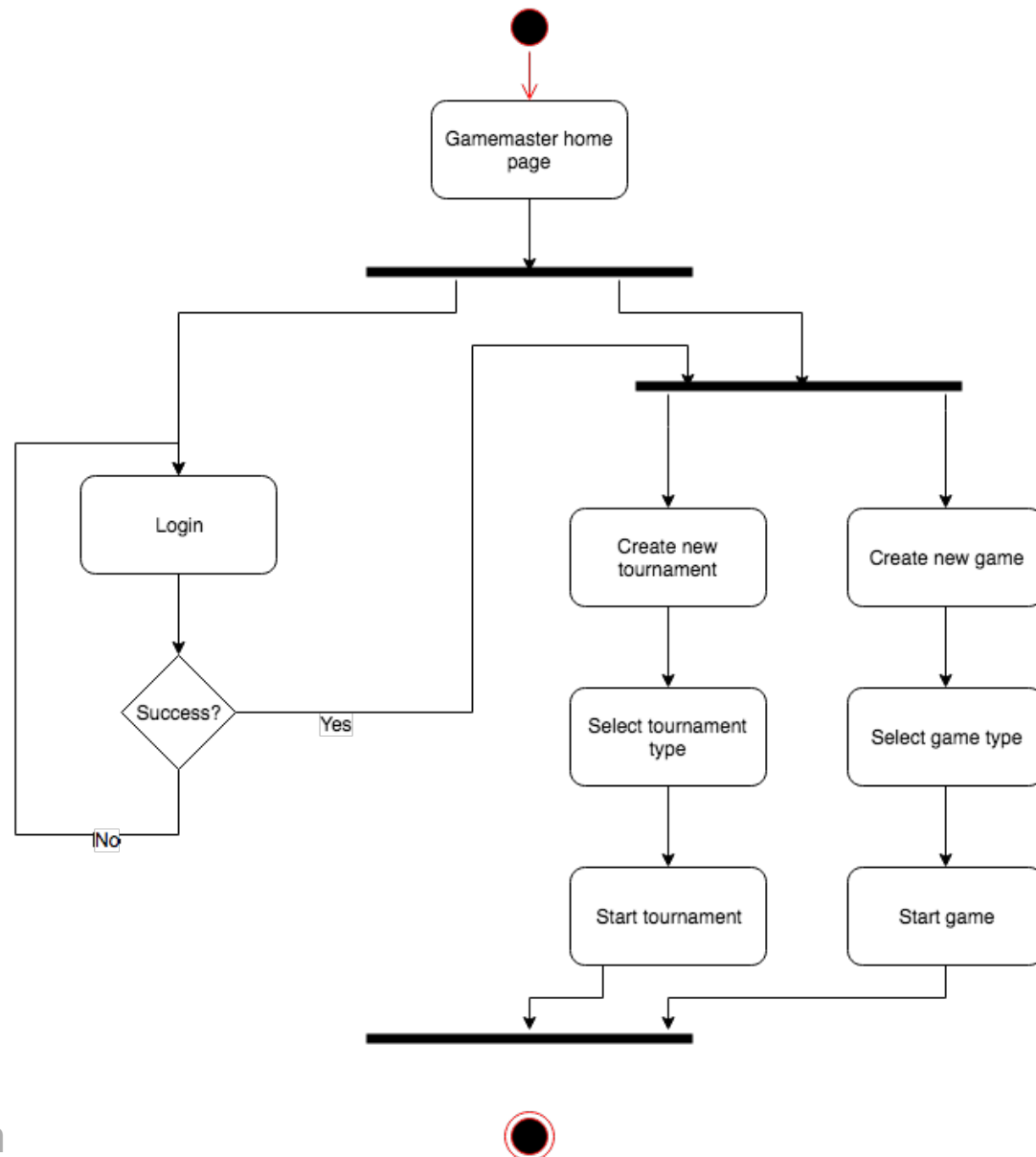# Use Case Diagram

Server

Create Game

View Game

Update Game

Join Game

Create Tournament

Save Game

Anonymous User

Extends

Account Holder

Alexa User

Use Case Diagram

Activity Diagrams

Skorch: Registration and Login

Activity Diagram

Skorch: Create New Game or Tournament

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                          ┌─────────────────┐
                          │ Gamemaster home │
                          │ page            │
                          └─────────────────┘
                                    │
        ━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━

                    ━━━━━━━━━━━━━━━━━━━━━━━━━━

        ┌─────────┐      ┌──────────────┐   ┌──────────────┐
        │ Login   │      │ Create new   │   │ Create new   │
        │         │      │ tournament   │   │ game         │
        └─────────┘      └──────────────┘   └──────────────┘

         ◇ Success?  Yes  ┌──────────────┐   ┌──────────────┐
                          │ Select       │   │ Select game  │
         No               │ tournament   │   │ type         │
                          │ type         │   │              │
                          └──────────────┘   └──────────────┘

                          ┌──────────────┐   ┌──────────────┐
                          │ Start        │   │ Start game   │
                          │ tournament   │   │              │
                          └──────────────┘   └──────────────┘

                    ━━━━━━━━━━━━━━━━━━━━━━━━━━

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Activity Diagram

Skorch: User Connects Amazon Alexa to game

User obtains game code

User tells Alexa, "Alexa, Open Skorch and join game x."

User tells Alexa, "Alexa,Open Skorch and update score."

User tells Alexa, "Alexa,Open Skorch and check the score."

User tells Alexa, "Alexa,Open Skorch and end game."

User has private game code?

Yes

No

Alexa acknowledges score update

Alexa responds with score

Alexa acknowledges game ending
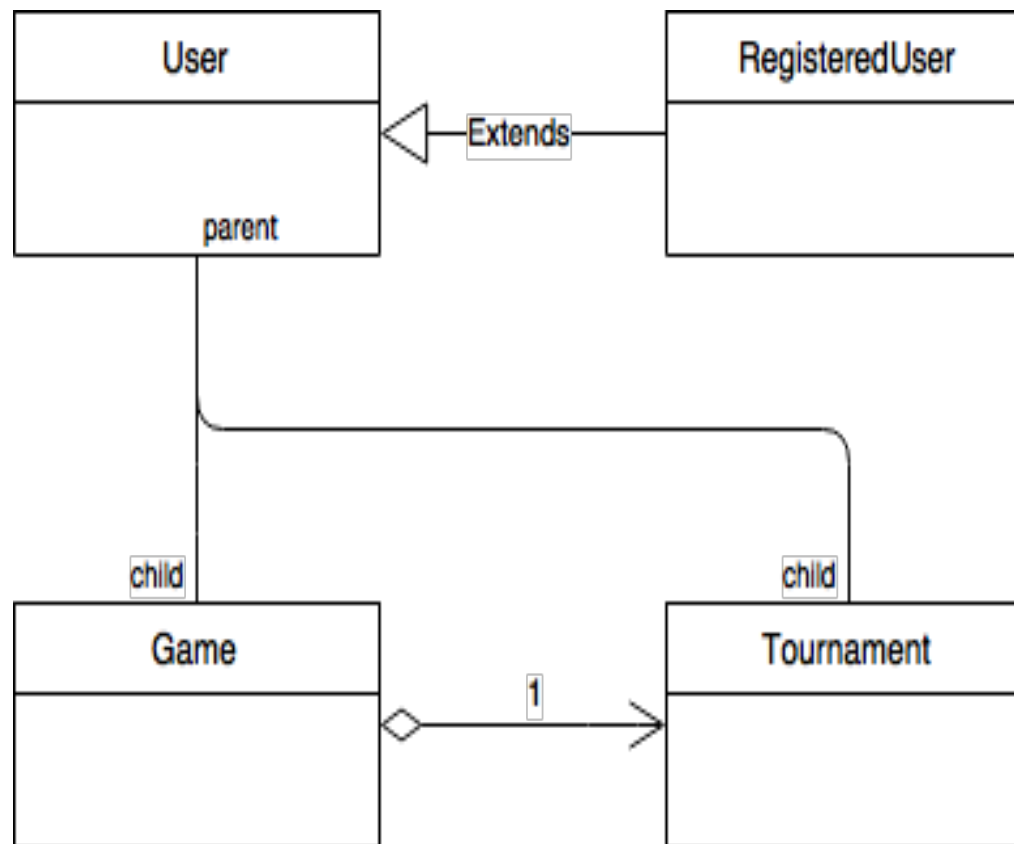
Alexa refuses score update

Done interacting with game?

No

Yes

Activity Diagram

Class Diagram

Class Diagram