
Design Document for Cy-Hill

Group 4_kabir_4

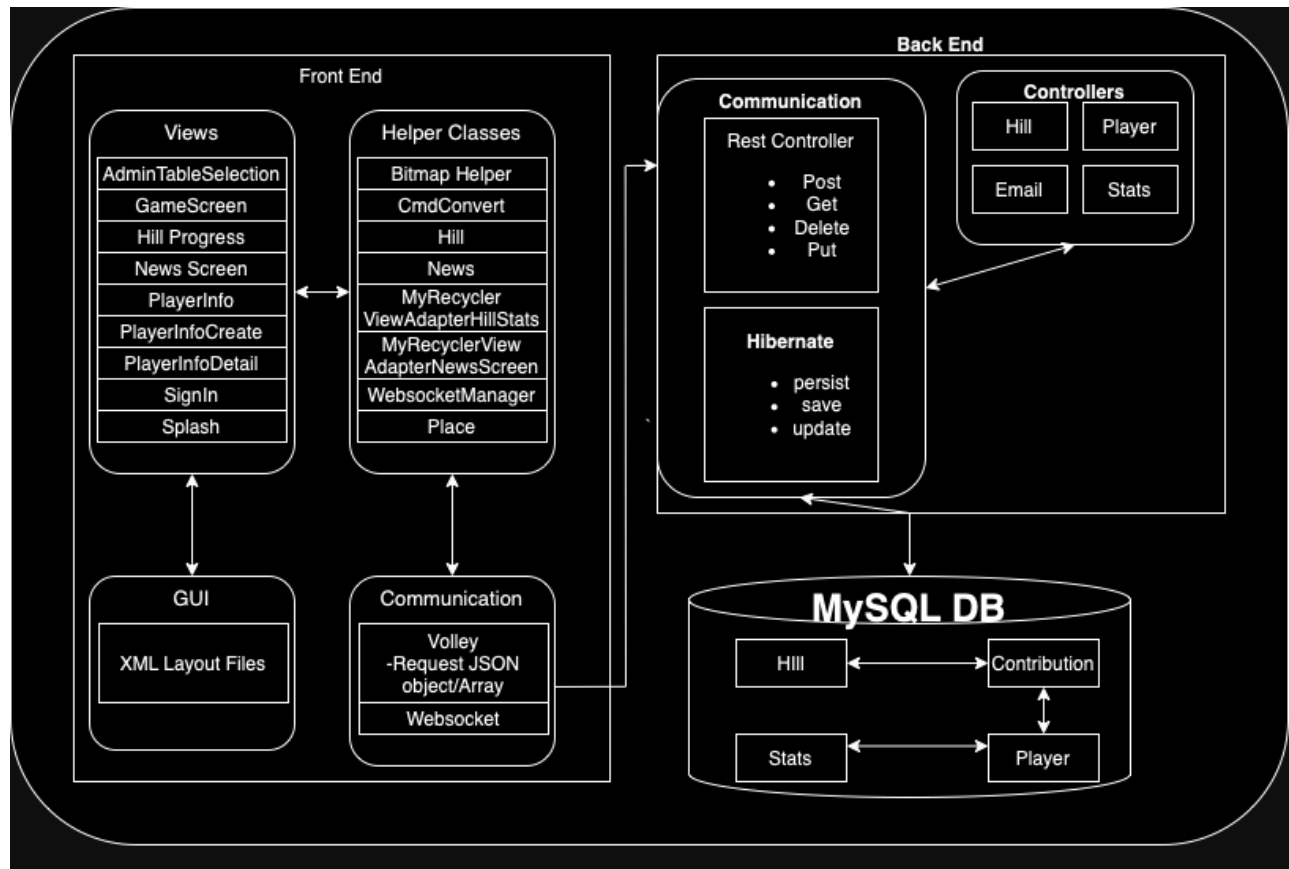
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PUT THE BLOCK DIAGRAM PICTURE ON THIS PAGE! (Create the picture using pencil or drawIO)



Use this third page to describe complex parts of your design.

Front End(currently):

- Admin Table Selection
 - Works with other views
 - PlayerInfo
 - PlayerInfoDetail
 - PlayerInfoCreate
 - Helper Classes:
 - CmdConvert
 - Communication:
 - volley
 - Usage
 - This is a admin screen meant exclusively for users who are tagged a admin. It will allow us to view all of the current tables and their current contents. Once every thing is listed we can then click onto a field to edit specific JSON elements or to delete them. We also have the option to add elements to the specified table.
- Game Screen
 - Helper Classes:
 - Place
 - PlacesRenderer
 - PlacesReader
 - PlacesResponse
 - BitmapHelper
 - Communication:
 - Websocket
 - Usage:
 - This is the main screen for the game that contains the map and the generated hills. Google maps API is used to generate the map and associated tools track the players location. Hills are generated from a JSON file containing

the name, status, and location of the hill. The player's info, coins, levels, location, are displayed here as well so that the player can see their information. A player can donate to a hill from the game screen and this will decrement the coins of the player and increment the coins of the selected hill that is within range.

- Hill Progress
 - Helper Classes:
 - MyRecyclerViewAdapterHillStats
 - Hill
 - Communication:
 - websocket
 - Usage:
 - This will be the Hill Progress screen, it will show all the current hills available to be captured by players. It will show the Name, Time left for the hill captured period (though if all hills will have the same capture period, that could be pulled and out at the top) as well as a progress bar, showing the progress for your team relative to the entire hill.
- News Screen
 - Helper Classes:
 - MyRecyclerViewAdapterNewsScreen
 - News
 - Communication:
 - websocket
 - Usage:
 - This the News/Events screen, this screen will list off events and news from the most recent to the oldest. Players can see what events are currently happening and any news of upcoming events activity.
- SignIn
 - Helper Classes:
 - CmdConvert
 - Communication:

- Volley
- Usage:
 - This screen allows returning players to log back into and access their accounts. It contains a Username and Password field that users can enter their information into. A request is then sent to the backend and the username and password are compared against the database, if a match is found then the user is allowed to the GameScreen otherwise they are prompted to try the login again.
- Splash
 - Usage:
 - This is just the basic screen that all users see as soon as they load into the app. This screen contains a custom, game themed graphic and two buttons for Login and Signup. These buttons will take the user to the SignIn and PlayerInfoCreate screens respectively. This screen is mainly just a placeholder that had art for the game.

Back End:

Controllers: We have four controllers, they are Player, Hill, Email, and Stats. The Player controller is responsible for controlling players' creation, deletion, and updating. When a new user is created, this controller communicates with the repository to save them in the database. An admin uses our hill controller to create a new one and save it in the database. The email controller handles the email confirmation sent to a new user. When a new account is made, an email is sent to them with a link to click, this link is a Get mapping, which checks upon clicking activates the associated account. The stats controller updates a player's stats once they have created an account; because stats and player have a one-to-one relationship, there is no need to create a new stats object unless we have an associated player. An admin can use this controller to modify a person's stats.

Data Base: Our database has four tables: player, stats, hill, and contribution. The player table holds the basic information the player gave us when they created their account, such as Name, DOB, password, and email. The stats table has a one-to-one relationship with the player table since each player has associated stats. The stats table holds information relevant to the game, like the player's team, coins, level, and XP. The hill table contains the names of hills along with their longitude and

latitude, the number of coins the hill will hold, and its current coin count. The contribution table records each player's donation to a specific hill; it contains the hill donated to, the player who donated, and the amount they donated.

