GOAL

- To get America to lose some pounds.
- To redefine the linear and predictable scoring system of exercise gamification into an uncertain and competitive system called **conditional calculation**.

Motivations and Objectives

**Motivations**

- To create a culture of healthy living in America through exercise gamification, where players are rewarded based not only on how much exercise they do, but also how many people in their community exercises.

**Objectives**

- To invent a new system of exercise gamification score calculation (**conditional calculation**).
- To build an Android application for players to use in uploading their individual exercise data into the National Health Challenge Game system.
- To create a competitive environment that will encourage people to exercise in order to improve their state’s rank in this game.

Methodology

- The **conditional calculation** system of scoring rewards a player based on a two-part score system.
  1. The amount of exercise a player performs in a day, and
  2. The “health of the crowd”: the number of people who exercise in his or her State.
- A player in the National Health Challenge Game system competes for the title of “Most fit” in his or her State.
- The States are also ranked according to the percentage of players who exercise in any given day.

Results

- Depicted below shows the map of a simulation of the system with a sampled number of fake users created for each state with respect to the obesity percentages and populations of each state.
- Depicted below is the NHC game application login and home page showing all the features supported by the system.

Research Challenges

- Setting up the hardware to be used for the system. Given that the system was made up of a database and website. We had to plough through learning to install and configure a server and a database to suit the needs of the system.
- Designing and building an Android application that is compatible with the diverse Android platforms.
- Testing the functionality and performance of the system as a whole.

Acknowledgement

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References