# 30 Day Challenge

**Highlighting Tasks:**

Push-up and running fitness goals within a 30-day span is a unique challenge among all the existing mobile fitness applications. By achieving their set fitness goals in 30 days, user that is new to work out could establish a fitness habit in a month (since 21 days is known as a convincing period to establish a new habit). While Push-up setting is rarely to see in other fitness App, user could simply calculate and store their push-up numbers by touching the mobile device with nose.

**Features:**

Push-Up:

Include a GIF for a tutorial showing how to do a push-up

Provide a number goal to motivate the user to work towards

Counts number of push-ups completed by pressing button with your nose

Run:

Use a chronometer to show the user how long they have been running

Use Google API for location

Provide a distance and time goal to motivate the user to work towards

Reports and calculates distance every 10 seconds

**Team Roles:**

***Daniel V. Galarza*** *(Team Leader)*

*Database Queries, Data Access Layer*

***Hongcheng Jiang***

*Database Architecture*

***Steven G. Ward***

UI Design, Database Implementation

***Xi Wang***

Database Design, Challenge Progress

**Problems and Solutions:**

**1. How to calculate the distance when user is running?**

Solution: We used the Google Play services Location API to manage our application’s retrieval and periodic updates of the user’s location.

**2. How to use GitHub for code version control?**

Solution: We all had to maintain the same codebase, while working on the same files simultaneously. This led to many precisely carried out merges, which was at times difficult, but a learning process.

**3. How to measure when a person has done a push-up?**

Solution: Have the person touch the smart phone with their nose to indicate a push-up down to the ground.

Additional Problems: We had difficulty using the YouTube API, so we decided to display a GIF tutorial instead; We had problems getting the distance to be calculated every 10 seconds because it is not a chronometer function as we assumed. So, we ended up using a Timer object instead.

**New Knowledge Acquired:**

***Application Development***: Java, Android Studio

***Database Development***: SQLite

***Version Control***: GitHub

***Plus,***

Team Collaboration is important, we learned a lot from each other’s unique skill sets!

**Instruction for Installing:**

1. Open folder 'Challenge' using Android Studio program.

2. Resolve any required package dependencies.

3. Build, then run application.

4. Proceed to login screen, then 'Create' a user with a email and password.

5. This will then let you create your fitness goals and use the app.

**SQLite Data Dump**

A SQLite database file with sample application data is available in the root of the submission directory: ‘30DayChallenge.db’.

**Deficiencies:**

The app only works for a single run or pushup session at a time, you can not maintain multiple goals for a user.

**Future Scope:**

The Pacer Run component of the application could greatly be visually enhanced in the future by adding a map that correlates to the position of the user.

Additionally, the Pushup component of the app could be enhanced by just using the camera rather than physical contact.