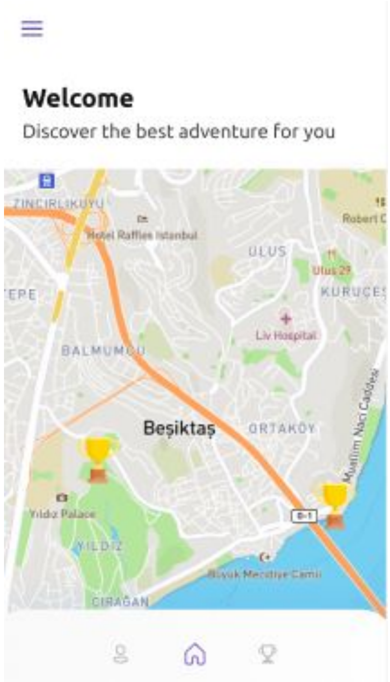
World Exploration Action

Houlin (Mike) He, Juntong Luo

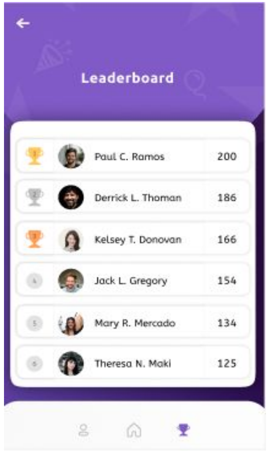
Francisco Farinha, Sara Mohamed

Project Topic



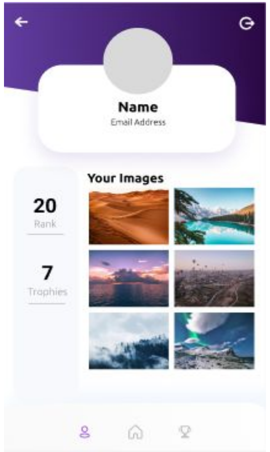
Welcome

Discover the best adventure for you



Leaderboard

Paul C. Ramos	200
Derrick L. Thoman	186
Kelsey T. Donovan	166
Jack L. Gregory	154
Mary R. Mercado	134
Theresa N. Maki	125



Name

Email Address

Your Images

20 Rank

7 Trophies

Main Actor and Central Use Cases

Main Actor: Logged-in Users

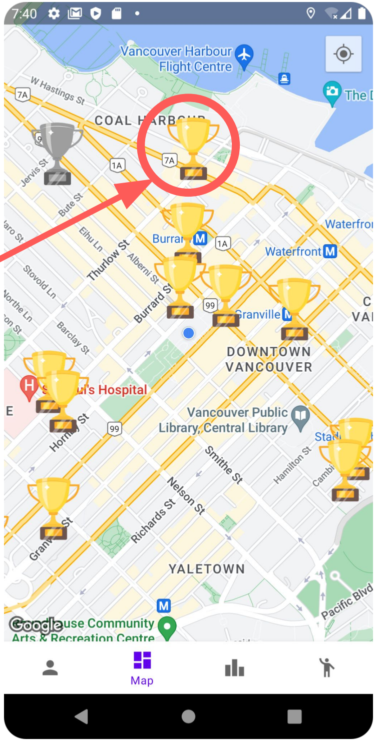
- **View Map**
  - Area surrounding the current user location
  - Trophy displayed on places of interest

- **View Trophy Details and Photos**
  - Photos taken by others.
  - The user can collect the trophy when the user is physically near the trophy.
  - The user can take a photo/replace the old one
  - Photos can be sorted by time or number of likes.
  - “Maps” button opened on the trophy’s location.

- **Manage Friends**
  - The user can search for other users.
  - The user can send friend requests/accept or decline requests.
  - The user can delete or view profile of friends.

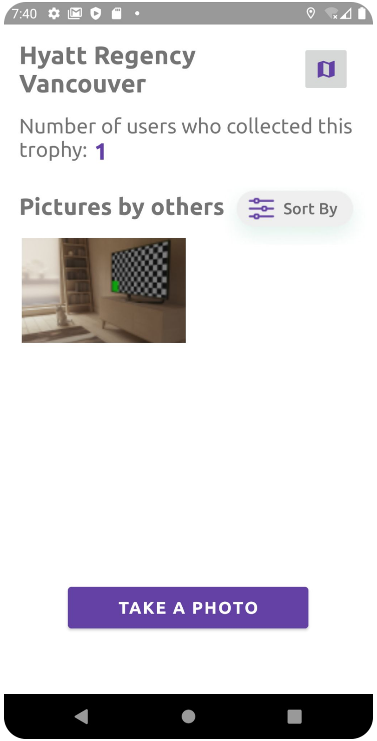
Main Actor and Central Use Cases

- View Map



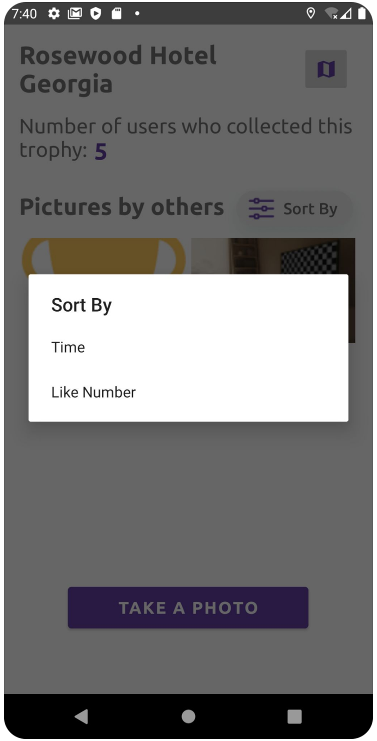
Trophy Icon

- View Trophy Details and Photos


Hyatt Regency Vancouver

Number of users who collected this trophy: 1

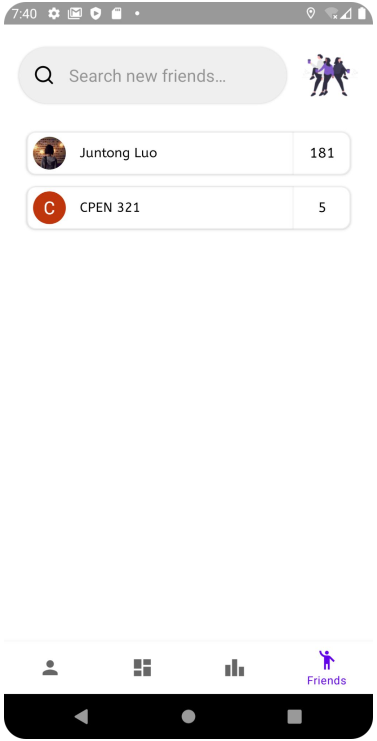
Pictures by others


Rosewood Hotel Georgia

Number of users who collected this trophy: 5

Pictures by others

- Manage Friends


Juntong Luo	181
CPEN 321	5

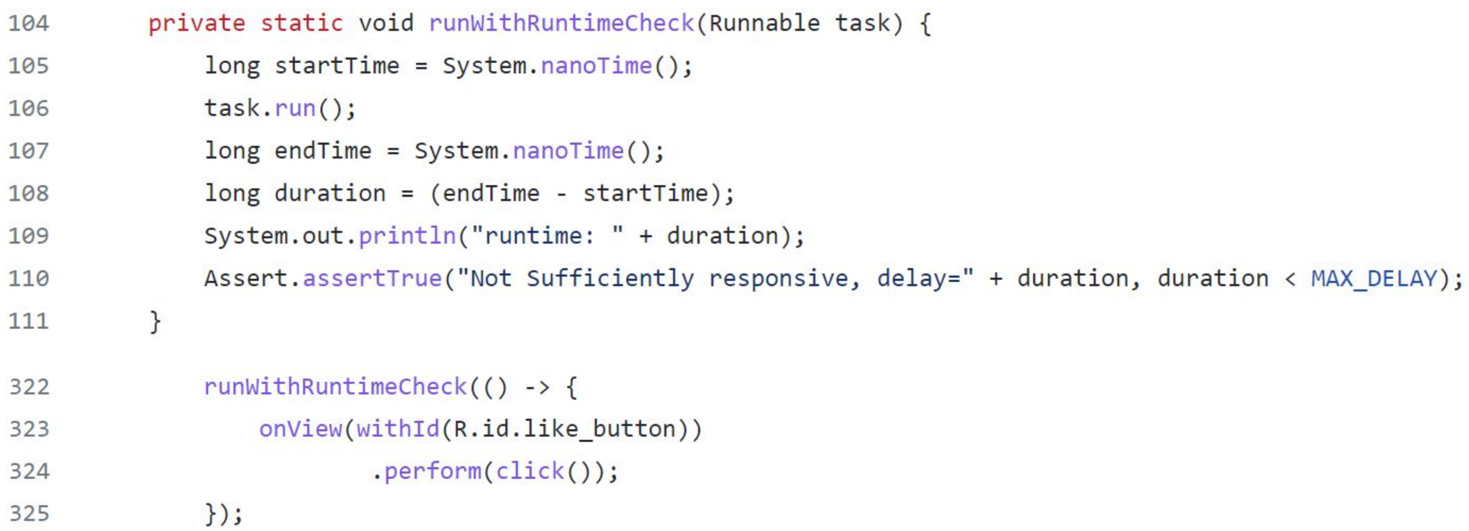
Non-Functional Requirements

- **NFRs**
  - **Responsiveness**
    - Responds within **2s** after any clicks
  - **Usability**
    - Number of operations **<= 5** for all actions

- **Verification**
  - A UI test for each action (with relevant assertions)

Non-Functional Requirements

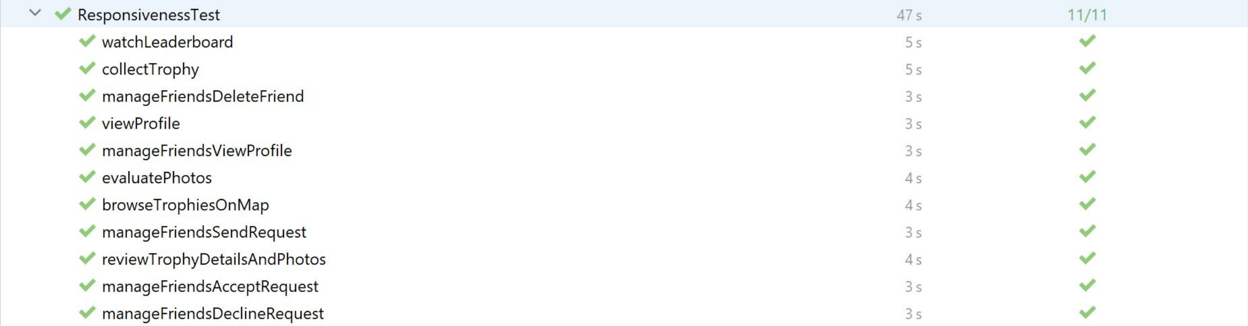
- Example - Responsiveness Tests



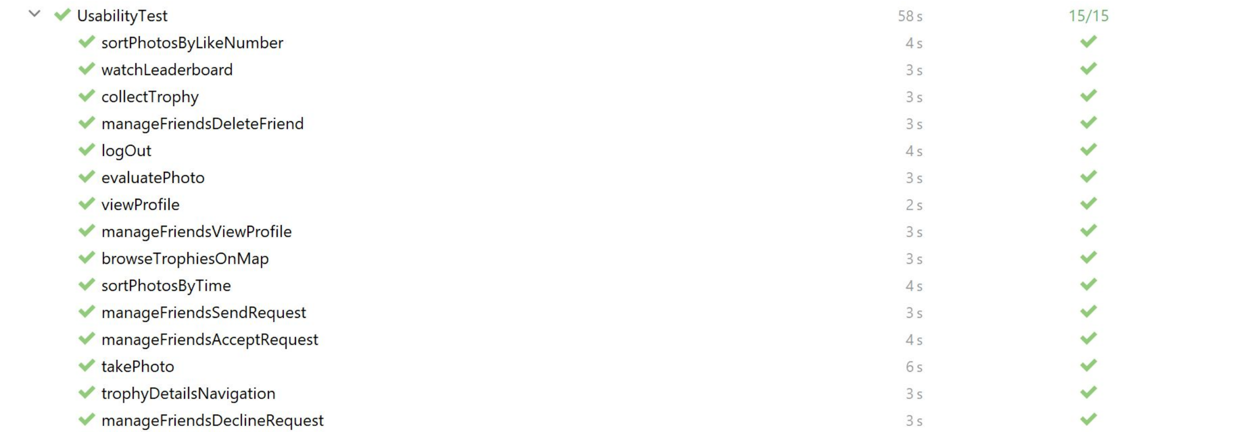
```
private static void runWithRuntimeCheck(Runnable task) {
    long startTime = System.nanoTime();
    task.run();
    long endTime = System.nanoTime();
    long duration = (endTime - startTime);
    System.out.println("runtime: " + duration);
    Assert.assertTrue("Not Sufficiently responsive, delay=" + duration, duration < MAX_DELAY);
}

    runWithRuntimeCheck(() -> {
        onView(withId(R.id.like_button))
                .perform(click());
    });
```

Non-Functional Requirements



✓ ResponsivenessTest	47 s	11/11
✓ watchLeaderboard	5 s	✓
✓ collectTrophy	5 s	✓
✓ manageFriendsDeleteFriend	3 s	✓
✓ viewProfile	3 s	✓
✓ manageFriendsViewProfile	3 s	✓
✓ evaluatePhotos	4 s	✓
✓ browseTrophiesOnMap	4 s	✓
✓ manageFriendsSendRequest	3 s	✓
✓ reviewTrophyDetailsAndPhotos	4 s	✓
✓ manageFriendsAcceptRequest	3 s	✓
✓ manageFriendsDeclineRequest	3 s	✓



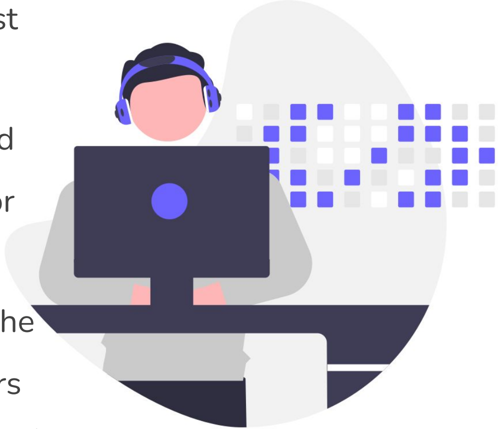
✓ UsabilityTest	58 s	15/15
✓ sortPhotosByLikeNumber	4 s	✓
✓ watchLeaderboard	3 s	✓
✓ collectTrophy	3 s	✓
✓ manageFriendsDeleteFriend	3 s	✓
✓ logOut	4 s	✓
✓ evaluatePhoto	3 s	✓
✓ viewProfile	2 s	✓
✓ manageFriendsViewProfile	3 s	✓
✓ browseTrophiesOnMap	3 s	✓
✓ sortPhotosByTime	4 s	✓
✓ manageFriendsSendRequest	3 s	✓
✓ manageFriendsAcceptRequest	4 s	✓
✓ takePhoto	6 s	✓
✓ trophyDetailsNavigation	3 s	✓
✓ manageFriendsDeclineRequest	3 s	✓

“Complexity“ Idea

- We were unable to implement the “complexity” idea because we are missing one teammate.

Contributions

- **Houlin (Mike):** Backend modules and databases implementation. Mock the backend modules, and external services. Module test designs, and module test and use-case test implementation.
- **Sara:** Designed the User Interface and the prototype of the app, implemented the frontend of some of the use cases, and developed all the frontend tests for the central use cases.
- **Juntong:** Created skeletons of the frontend and the backend, implemented the UI for the map, leaderboard, and friends page, implemented the backend Users module, wrote all NFRs tests and some backend tests, setup GitHub Action, and helped other teammates
- **Francisco:** Implemented Backend Trophy routes, token authentication and sessions, Trophy Details module, places API setup (get user trophies). Designed interface tests, fixed some problems found in code reviews



The Most Important Lesson Learned

- Time organization and job distribution is much more important than we think
  - Start working early because software developing is full of surprises