

### Known Defects:

- Google Sign causes the app to crash after selecting which email to use.
  - Action that causes crash: Selecting “Google Login” then selecting a google email
  - Location of fault: InitialScreen.java
  - Removal: Update the deprecated Google Authentication API
- App returns to the initial screen after prompting for location permission, causing the user to have to sign in twice.
  - Action that causes error: Selecting “Allow” when prompted for user location permission
  - Location of fault: unknown
  - Removal: Try prompting the user when the app first starts, rather than after log in.
- In the android emulator, app will crash after logging in or verifying email.
  - Action that causes error: Selecting “Sign In” when logging in or selecting “Verify New Email and Password” when registering an account.
  - Location of fault: Null pointer exception, MapsActivity.java  
`new LatLng(mLastKnownLocation.getLatitude())`
  - Removal: This is only a problem on a virtual device, it may have to do with the gps location, that the emulator does not have by default.
- App crashes when trying to register an email that already exists
  - Action that causes the error: Selecting “Verify New Email and Password” when the email inputted is already associated with an account
  - Location of fault: ProfileActivityG.java does not check if email is already associated with an account
  - Removal: Check if email is already in use and display and prompt user for a different email
- Users can input multiple ratings
  - Action that causes the error: Repeatedly selecting the “Submit” button
  - Location of fault: ProfileActivity.java does not check to see if the user has already reviewed the restroom
  - Removal: Implementing a user profile that lists what restrooms have been rated
- Back button on the maps screen does not work
  - Action that causes the error: Pressing the back arrow in the upper right hand corner on the maps screen, however signing out and using the device’s back button function normally
  - Location: unknown
  - Removal: Look into where the code for the button is located, possibly delete the button since it is not needed.
- User can sign up with a non-existent email
  - Action that causes error: Selecting “Verify New Email and Password” when the email registered does not exist
  - Location: LoginActivityG.java

- Removal: Add email verification function
- App only displays UCSC restrooms, lack of user input
  - Action that causes error: Accessing the maps off campus
  - Location: unknown
  - Removal: Gain more user input from a variety of locations
- User added restroom locations may not be accurate
  - Actions that causes error: anyone can add a restroom to the database
  - Location: unknown
  - Removal: Add a way to verify the restroom, such as:
    - Instead of automatically adding a restroom, allow users to suggest locations
    - Allow users to report invalid restroom locations