

Login function:

- **Overview:**

- Login allows the user to sign in to their already created accounts. This function was originally intended to allow users to authenticate before using the app's proposed features, such as loading maps stored in their account and saving maps into their account. This feature is rendered useless because we were not able to implement popup windows that allow users to successfully edit, load, or save maps in time.

- **Methods:**

- **toLogin(event)**

- **Purpose:** Shows the user the login window

- **Equivalence classes:**

- Event is triggered; user clicks on display login link
- Event is not triggered; user does not click display login link

- **Test cases:**

- **Test 1:** Event is triggered
 - Expected result: User is shown the login window
- **Test 2:** Event is not triggered
 - Expected result: User is not shown the login window

- **login(event, loginEmail, loginPassword)**

- **Purpose:** Logs the user into their account once they have entered their credentials

- **Equivalence classes:**

- Event is triggered; user clicks on login button
- Event is not triggered; user does not click on login button
- loginEmail and loginPassword are equal to any tuple in the database
- loginEmail and loginPassword are equal to none of the tuples in the database

- **Test cases:**

- **Test 1:** Event is triggered
 - Expected result: User is shown the login window
- **Test 2:** Event is not triggered
 - Expected result: User is not shown the login window
- **Test 3:** loginEmail and loginPassword are equal to any tuple in the database
 - Expected result: User can sign in successfully
- **Test 4:** loginEmail and loginPassword are equal to none of the tuples in the database

- Expected result: User is unable to sign in
- **signOut(event)**
 - **Purpose:** Logs the user out of their account
 - **Equivalence classes:**
 - Event is triggered; user clicks on sign out link
 - Event is not triggered; user does not click on sign out link
 - **Test cases:**
 - **Test 1:** Event is triggered
 - Expected result: User is successfully signed out
 - **Test 2:** Event is not triggered
 - Expected result: User remains logged in

Register function:

- **Overview**
 - Register allows the user to create an account, if they do not already have one. This function was originally intended to allow users to take the first step required to use features such as loading maps stored in their account and saving maps into their account. This feature is rendered useless because we were not able to implement popup windows that allow users to successfully edit, load, or save maps in time.
- **Methods:**
 - **toRegister(event)**
 - **Purpose:** Shows the user the login window
 - **Equivalence classes:**
 - Event is triggered; user clicks on register link
 - Event is not triggered; user does not click on register link
 - **Test cases:**
 - **Test 1:** Event is triggered
 - Expected result: User is shown the register window
 - **Test 2:** Event is not triggered
 - Expected result: User is not shown the register window
 - **createAccount(event, registrationEmail, passwordOne, passwordTwo)**
 - **Purpose:** Lets user make a WorldBuilder account
 - **Equivalence classes:**
 - Event is triggered; user clicks on create account button
 - Event is not triggered; user does not click on create account button
 - loginEmail is a string containing an email address
 - loginEmail is a string not containing an email address
 - loginPassword is a string of at least 6 characters

- loginPassword is a string less than 6 characters
- Test cases:
 - **Test 1:** Event is triggered
 - Expected result: User created an account, assuming all info entered is valid
 - **Test 2:** Event is not triggered
 - Expected result: User did not create an account
 - **Test 3:** loginEmail is a string containing an email address
 - Expected result: User inputted a valid email
 - **Test 4:** loginEmail is a string not containing an email address
 - Expected result: User inputted an invalid email
 - **Test 5:** loginPassword is a string of at least 6 characters
 - Expected result: User inputted a valid password
 - **Test 6:** loginPassword is a string less than 6 characters
 - Expected result: User inputted a password that's too weak according to Firebase rules