

# **MEet and You**

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## TEST PLAN

### Test Policy

#### In Scope

- Unit Testing
- Integration Testing
- End to End Testing

#### Out of Scope

- Penetration Testing
- Performance Testing
- Regression Testing
- Accessibility Testing

### General Test Policy

#### Unit Testing

All the components related to a class, such as its methods and constructors, must pass unit tests before more thorough testing can be performed. In order to pass the unit test, each method must have a valid result based on the pass or failure scenarios. The goal of all tests is to have all of our tests return their expected values. Unit tests will be performed in each sprint with each completion of a new function, a set of functions, or the completion of classes.

Each component that undergoes unit testing should not take longer than 5-10 seconds for the test suite to be completed. This value will be subject to change, but as the code is reoptimized, the runtime.

#### Integration Testing

Utilized to determine whether the various components of our website are compatible and work together as designed. It will not be system-wide testing but will be required on various features coupled together or requiring various components.

It ensures that we have a web application with components that work together well at the feature level.

## TEST PLAN

### **End to End Testing**

End to end refers to the testing of the application from the front end to the back end. It ensures that all the components and the incorporated features work as intended. It tests the flow as we transition from one scenario in one end to another. It does not focus on the communication of the two modules.

### Feature Level Scenarios

#### Datastore Access

Test Creation Time Estimate:

Test Execution Time Estimate:

Total Testing Time (TTT):

Datastore access includes the ability to create, delete, update, and read application data.

Datastore is indispensable to the functionality of the application due to its influence over other features. As such, effective end-to-end testing is required to validate the integrity of application data.

#### End to End Testing

- **Expected Outcome(s)**
  - The system can create and store application data.
  - The system can delete existing stored data.
  - Existing data within the system can be modified.
  - The ability to read data from the system is supported.
- **Failing Outcome(s)**
  - The ability to create and store data is not present within the system.
  - Data within the system cannot be deleted, updated, or read.

#### Logging/Archive

Test Creation Time Estimate:

Test Execution Time Estimate:

Total Testing Time (TTT):

Logging as well as archiving will be well tested along with our various features. The specific tests for logging can be narrowed to end-to-end testing in order to verify data is logged to the database.

#### End-to-End Testing(Logging)

- **Expected Outcome(s)**
  - Personal user data is recorded unless the user opts out
  - Errors and telemetry based data is properly logged
- **Failing Outcome(s)**
  - Data/Actions are not logged into the database.
  - Data/Actions are inaccurately logged into the database.

## TEST PLAN

### End-to-End Testing(Archive)

- **Expected Outcome(s)**
  - Logs with extended lifespans are archived when one-day criteria are met.
- **Failing Outcome(s)**
  - Logs are not archived when the time conditions are met.
  - The logs are not properly carried over into the archives.
  - The log does not provide enough contextual information.

### Login / Logout

Test Creation Time Estimate:

Test Execution Time Estimate:

Total Testing Time (TTT):

### Integration Testing (Log in)

- The user will attempt to log in to the system using the appropriate username and password associated with their account without two-factor authentication.
  - **Expected Outcome(s)**
    - The system will verify that the username and password entered are associated with an account in the database and allow the user further access to the web app's features.
  - **Failing Outcome(s)**
    - The system will display an error message if the user enters a username and password that does not have a corresponding account.

### End-to-End Testing (Log in)

- The user attempts to log into the system with invalid credentials.
  - **Expected Outcome(s)**
    - The system will give the user an error message stating that their username or password is incorrect.
    - The site will prompt the user to enter their credentials again.
  - **Failing Outcome(s)**
    - Nothing happens, and the user is left with no message.
- The user will attempt to log into the system using the appropriate username and password associated with their account with two-factor authentication.
  - **Expected Outcome(s)**
    - The system will verify the username and password and then ask the user to send a code to their phone.
  - **Failing Outcome(s)**
    - The system will display

## TEST PLAN

### Integration Testing (Log out)

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### User Access Control:

Test Creation Time Estimate:

Test Execution Time Estimate:

Total Testing Time (TTT):

### End to End Testing

- An account attempts to edit information without suitable permissions
  - **Expected Outcome(s)**
    - The user should not have the ability to view, execute, or manipulate data that does not apply to them.
    - The system informs unauthorized users that they do not have access to the data they are trying to access.
    - Users are prompted to sign up/sign in order to perform a certain action.
  - **Failing Outcome(s)**
    - Changes are logged and successfully saved into the data store.
    - User is not prompted to sign up/sign in order to perform a certain action
- User attempts to edit information from outside the specific country of the web application.
  - **Expected Outcome(s)**
    - Informs unauthorized users that they do not have access to the data they are trying to access.

## TEST PLAN

- **Failing Outcome(s)**
  - The user is outside of the United States and can access the web application.

### User Management:

Test Creation Time Estimate:

Test Execution Time Estimate:

Total Testing Time (TTT):

### Integration Testing

- Users attempt to delete their account.
  - **Expected Outcome(s)**
    - The account holder's records are deleted from the data store and they are simultaneously logged out of the application.
  - **Failing Outcome(s)**
    - The account holder's records remain in the data store.
    - User remains logged in after a successful account deletion.
- User fails to login after multiple attempts.
  - **Expected Outcome(s)**
    - Account is locked down and further attempts thwarted
    - User is prompted on the duration of the account lockdown.
    - Access attempts are logged.
  - **Failing Outcome(s)**
    - Account remains unlocked
    - Users are not prompted on lockdown duration.
    - Attempts to log into the account are not logged.
- Administrator attempts to unlock a locked account
  - **Expected Outcome(s)**
    - The administrator successfully unlocks the target account.
  - **Failing Outcome(s)**
    - Administrator fails to unlock the account.
    - Wrong account is unlocked
- Administrator attempts to delete an account
  - **Expected Outcome(s)**
    - The target account is successfully deleted from the data store
  - **Failing Outcome(s)**
    - The target account remains in the data store.
    - The wrong user is deleted due to similar account details such as username.

## TEST PLAN

### Registration

Test Creation Time Estimate:

Test Execution Time Estimate:

Total Testing Time (TTT):

### Integration Testing

- The user attempts to register an account with a valid email, valid name, valid username, valid password, and valid phone number.
  - **Expected Outcome(s)**
    - Account information (such as user's email, username, and password) is stored in the data store.
    - The user is redirected to the home page.
    - A verification email is sent to the account holder's email
  - **Failing Outcome(s)**
    - Account information is not stored in the data store.
    - Incorrect information is stored within the data store.
    - Verification email is not sent to specified email.
    - An account with invalid information is created and stored in the data store.
- User registers for an account with a duplicate username.
  - **Expected Outcome(s)**
    - User is prompted that the username is already in use and the account is not created.
    - Written account info is stored for user to freely manipulate it after the account creation fails
  - **Failing Outcome(s)**
    - User is not prompted that the username is already in use.
    - Account is created and the information stored within the data store.
    - Prior information is not saved.
- User attempts to register an account with a duplicate email.
  - **Expected Outcome(s)**
    - The user is prompted with an error message ;letting them know that the mail is in use.
    - Written account info is stored for users to freely manipulate it after the account creation fails.
  - **Failing Outcome(s)**
    - No error message is displayed.
    - The account is created and stored in the data store.
- User attempts to register an account with an invalid name
  - **Expected Outcome(s)**



## TEST PLAN

- The user is prompted that their name does not match the given criteria.
  - Written account info is stored for users to freely manipulate it after the account creation fails.
- **Failing Outcome(s)**
  - The user is not prompted with an error message.
  - The account is created and stored in the data store.
- The user attempts to register an account with an invalid email.
  - **Expected Outcome(s)**
    - The user is prompted with an error message letting them know that the email was invalid.
    - Written account info is stored for users to freely manipulate it after the account creation fails.
  - **Failing Outcome(s)**
    - The user is not prompted with an error message.
    - The account is created and stored in the data store.
- The user attempts to register with an invalid username.
  - **Expected Outcome(s)**
    - The user is prompted with an error message letting them know that the username was invalid.
    - Written account info is stored for users to freely manipulate it after the account creation fails.
  - **Failing Outcome(s)**
    - The user is not prompted with an error message.
    - The account is created and stored in the data store.
- The user attempts to register with an invalid password.
  - **Expected Outcome(s)**
    - The user is prompted with an error message letting them know that the username was invalid.
    - Written account info is stored for users to freely manipulate it after the account creation fails.
  - **Failing Outcome(s)**
    - The user is not prompted with an error message.
    - The account is created and stored in the data store.
- The user attempts to register with a phone number.
  - **Expected Outcome(s)**
    - The user is sent a confirmation message.
  - **Failing Outcome(s)**
    - The user is not sent a confirmation message.
    - The account is created and stored in the data store.
- The user attempts to register with an invalid phone number.

## TEST PLAN

- **Expected Outcome(s)**
  - The user is prompted with an error message letting them know that the phone number was invalid.
  - Written account info is stored for users to freely manipulate it after the account creation fails.
- **Failing Outcome(s)**
  - The user is not prompted with an error message.
  - The account is created and stored in the data store.

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## TEST PLAN

# TEST PLAN

Unit Level Testing	5
Test Data	6
<b>3 Feature Level Scenarios</b>	<b>7</b>
Logging	7
End to End Testing	7
Archiving	7
End to End Testing	7
Datastore	8
End to End Testing	8
UI	8
User Access Controls	8
End to End Testing	8
User Management	9
Integration Testing	9
End to End Testing	11
Registration	11
Integration Testing	11
Login	13
Integration Testing	13
End to End Testing	13
Logout	14
Integration Testing	14
User Analysis Dashboard	15
Integration Testing	15
End to End Testing	15
Components Catalog	16
Integration Testing	16
End to End Testing	17
	2
<hr/>	
Vendor Linking	19
Integration Testing	19
End to End Testing	20
Builder	21
Integration Testing	21
End to End Testing	22
Upgrader	22
Integration Testing	22
End to End Testing	23
Most Popular PC Builds	23
Integration Testing	23
End to End Testing	25
User's Garage	26
Integration Testing	26
End to End Testing	28
User Reviews and Ratings	34
Integration Testing	34
End to End Testing	34
Support Page	35
<b>References</b>	<b>36</b>