Test Cases

1. Successful Registration

Purpose: This test case is for when the user successfully registers an account with TyM website.

Prereq: NA

Steps:

Step 1: Open URL <http://127.0.0.1:5000/register>

Expected Result: Register page is displayed and contains the following fields:

* “Username” text field
* “Email” text field
* “Fullname” text field
* “Address” text field
* “Password” text field
* “Confirm Password” text field
* “Submit” button

Step 2: Enter valid data for all the fields in Register page

Expected Result:

* “Username” text field is populated with some text
* “Email” text field is populated with some valid email
* “Fullname” text field is populated with some text
* “Address” text field is populated with some text
* “Password” text field is masked and not readable
* “Confirm Password” text field is masked and not readable
* “Password” text field and “Confirm Password” text have the same text

Step 3: Click Submit button

Expected Result: Application home page is displayed.

2. Unsuccessful Registration due to invalid email

Purpose: This test case is for when the user enters an invalid email in the email text field.

Prereq: NA

Steps:

Step 1: Open URL <http://127.0.0.1:5000/register>

Expected Result: Register page is displayed and contains the following fields:

* “Username” text field
* “Email” text field
* “Fullname” text field
* “Address” text field
* “Password” text field
* “Confirm Password” text field
* “Submit” button

Step 2: User enters data in the fields but the email field does not contain valid email.

Expected Result: Notify the user that the text in the email field is invalid. User has to refill the “email” field.

3. Unsuccessful Registration due to password and confirm password field not matching

Purpose: This test case is for when the user enters different password text in the password and confirm password fields.

Prereq: NA

Steps:

Step 1: Open URL <http://127.0.0.1:5000/register>

Expected Result: Register page is displayed and contains the following fields:

* “Username” text field
* “Email” text field
* “Fullname” text field
* “Address” text field
* “Password” text field
* “Confirm Password” text field
* “Submit” button

Step 2: User enters data in the fields but the text in the password and confirm password field do not match.

Expected Result: The user is notified about this situation and the user then has to reenter the password and confirm password fields.

4. Successful Login

Purpose: This test case is for when the user successfully logins into TyM website.

Prereq: User account should exist

Steps:

Step 1: Open URL <http://127.0.0.1:5000/login>

Expected Result: Login page is displayed and contains the following fields:

* “Email” text field
* “Password” text field
* “Submit” button

Step 2: Enter valid data for all the fields in Login page

Expected Result:

* “Email” text field is populated with some valid email
* “Password” text field is masked and not readable

Step 3: Click Submit button

Expected Result: Application home page is displayed.

5. Unsuccessful Login due to invalid password

Purpose: This test case is for when the user is not able to log in due to invalid password.

Prereq: NA

Steps:

Step 1: Open URL <http://127.0.0.1:5000/login>

Expected Result: Login page is displayed and contains the following fields:

* “Email” text field
* “Password” text field
* “Submit” button

Step 2: User enters data in the email and password fields but the password is not correct.

Expected Result: The user would need to enter the details again.

6. Successful selection of ML model choice

Purpose: This test case is for the successful selection of ML model choice

Prereq: User should be logged in.

Steps:

Step 1: Open URL <http://127.0.0.1:5000/model_choice>

Expected Result: The Page with a form for model choice is displayed. The user can select any one of the following three options using radio buttons:

* “Regression”
* “Classification”
* “Clustering”

Step 2: Click Submit button

Expected Result: A form for the selection of algorithm choice is displayed. This page depends on the ML model choice selected by the user. For example, if a user selects Regression in the model choice page, then the regression models would be displayed in the form.

7. Successful selection of ML algorithm

Purpose: This test case is for the successful selection of ML model algorithm.

Prereq: User should be logged in.

Steps:

Step 1: After selecting the ML model choice, this page would be opened.

Expected Result: The Page with a form for model algorithm is displayed. If the user selects Regression option in the model choice page, then the following options are displayed:

* “Linear Regression”
* “Polynomial Regression”

If the user selects Classification option in the model choice page, then the following options are displayed:

* “Logistic Regression”
* “SVM”

If the user selects Clustering option in the model choice page, then the following options are displayed:

* “K Means”
* “K Medoid”

Step 2: Select an algorithm and click Submit button

Expected Result: A form with fields for parameters for the algorithm is displayed. Also, the field for training data is present where the user would need to upload training data in csv format.

8. Parameters and training data entered by the user successfully

Purpose: This test case is for when the user enters valid parameters and the training data in the form presented to the user.

Prereq: The user should be logged in.

Steps:

Step 1: After selecting the ML algorithm, this page would be opened.

Expected Result: The Page with a form for algorithm parameters is displayed. Also, the field for training data is present.

Step 2: The user enters the parameters and uploads training data.

Expected Result: The fields should not be blank.

Step 3: After entering the parameters and the training data, The user clicks the submit button.

Expected Result: The ML model is implemented in the backend and the user is redirected to the home page. The user can check their models in the history page.

9. Parameters and training data entered by the user unsuccessfully due to blank fields

Purpose: This test case is for when the user leaves some of the parameter fields blank or does not upload the csv file.

Prereq: The user should be logged in.

Steps:

Step 1: After selecting the ML algorithm, this page would be opened.

Expected Result: The Page with a form for algorithm parameters is displayed. Also, the field for training data is present.

Step 2: Some of the fields are left blank by the user.

Expected Result: The user is notified that the fields are blank. The user then has to enter the fields left blank.

10. History page

Purpose: This test case is for when the user opens the history page to see his past models.

Prereq: The user must be logged in.

Steps:

Step 1: Open URL <http://127.0.0.1:5000/history>

Expected Result: The history page is opened which displays all the past ML models implemented by the user in a tabular format.