

Coverage (Issues Key	Name
FNDJL-17	FNDJL-T1 Successful Login
FNDJL-17	FNDJL-T2 Invalid Username
FNDJL-17	FNDJL-T3 Invalid Password
FNDJL-17	FNDJL-T4 Blank Username and Password
FNDJL-17	FNDJL-T5 Locked Account
FNDJL-21	FNDJL-T6 Registration - Successful Registratio
FNDJL-21	FNDJL-T7 Registration - Invalid Email Address
FNDJL-21	FNDJL-T8 Already Registered User

FNDJL-4 FNDJL-T9 Validating News Verification Proces

FNDJL-4 FNDJL-T10 Text Input Validation

FNDJL-4 FNDJL-T11 History Display

FNDJL-4 FNDJL-T12 About Us Information

FNDJL-4 FNDJL-T13 Contact Page Accessibility

FNDJL-32 FNDJL-T14 ML model accuracy

FNDJL-32 FNDJL-T15 Confusion matrix Accuracy

FNDJL-32 FNDJL-T16 F1 Score

## Objective

To verify that a user can successfully log in to the web application using valid credentials.

To verify that an error message is displayed when an invalid username is entered during login.

To verify that an error message is displayed when an invalid password is entered during login.

To verify that an error message is displayed when both username and password fields are left blank during login.

To verify that an error message is displayed when a user tries to log in with an account that has been locked.

To verify that a user can successfully register by providing valid information in the registration page.

To verify that the registration process fails when an invalid email address is provided.

To verify that a user can successfully log in with valid credentials after completing the registration.

Verify that the system accurately determines the authenticity of news based on the input text.

Ensure the system handles text inputs within the sp

Confirm that the system accurately displays the use

Ensure the "About Us" tab provides relevant inform

Confirm that users can access the "Contact" tab.

Verify that the machine learning model accuracy is i

Confirm that the confusion matrix accuracy is above

Ensure that the F1 score is near 1 for the machine le

#### Test Script (Step-by-Step) - Expected Result

The user should be successfully logged into the application and redirected to the home page.

An error message should be displayed indicating that the username is not recognized.

An error message should be displayed indicating that the password is incorrect.

An error message should be displayed indicating that both username and password are required.

An error message should be displayed indicating that the account

The System saves the data in backend tables.  
The system redirects the user to the login page.

User receives an error message indicating that the email address is invalid.  
The system does not proceed with the registration process.

User is redirected to the home page or a dashboard, indicating successful login.  
The system displays the user's information or appropriate content for a logged-in user.

The system accurately classifies the news as either true or fake.  
A clear indication of the result is displayed.

The system should display an error message indicating that the input is too short.

The system should show a list of previous news searches with relevant details (date, result, etc.).

The page should contain information about the purpose, creators, and any other relevant details about the application.

The system should display contact information or a form for users to get in touch.

The model accuracy should be above 90%.

The overall accuracy from the confusion matrix should be above 9

The F1 score for each class should be near 1.

#### Test Script (Step-by-Step) - Step

1. Open the application login page.
2. Enter a valid username in the username field.
3. Enter a valid password in the password field.
4. Click on the "Login" button.
  1. Open the application login page.
  2. Enter an invalid username in the username field.
  3. Enter a valid password in the password field.
  4. Click on the "Login" button.
1. Open the application login page.
2. Enter a valid username in the username field.
3. Enter an invalid password in the password field.
4. Click on the "Login" button.

1. Open the application login page.
2. Leave the username field blank.
3. Leave the password field blank.
4. Click on the "Login" button.
1. Open the application login page.
2. Enter a valid username with a locked account.
3. Enter a valid password.
4. Click on the "Login" button.

1. Open the registration page.
2. Enter a valid first name in the "First Name" field.
3. Enter a valid last name in the "Last Name" field.
4. Enter a valid and unique email address in the "Email Address" field.
5. Enter a secure password in the "Password" field.
6. Click on the "Register" button.
1. Open the registration page.
2. Enter a valid first name in the "First Name" field.
3. Enter a valid last name in the "Last Name" field.
4. Enter an invalid email address (e.g., without "@" symbol) in the "Email Address" field.
5. Enter a secure password in the "Password" field.
6. Click on the "Register" button.
1. Open the login page.
2. Enter the registered email address in the "Email Address" field.
3. Enter the password used during registration in the "Password" field.
4. Click on the "Login" button.

1. Enter a valid text input containing more than 50 words and less than

500 words.

2. Click on the "Verify" button.

1. Enter a text input with fewer than 50 words.

2. Click on the "Verify" button.

Navigate to the "Search History" tab.

The user is on the "About Us" tab.

Navigate to the "Contact" tab.

1. Execute the machine learning model on a test dataset.

2. Record the accuracy of the model.

1. Generate the confusion matrix using the model on a test dataset.

2. Calculate the overall accuracy from the confusion matrix.

1. Execute the machine learning model on a test dataset.

2. Calculate the F1 score for each class.

3. Verify that the F1 score is near 1 for each class.



## Test Script (Step-by-Step) - Test Data

Valid username: []Valid password: []

Invalid username: [provide an invalid username]Valid password: [provide a valid password]

Valid username: [provide a valid username]Invalid password: [provide an invalid password]

Blank usernameBlank password

Locked account username: [provide a username with a locked account]Valid password: [provide a valid password]

First Name: JohnLast Name: DoeEmail Address: john.doe@example.comPassword: StrongP@ssword123

First Name: JaneLast Name: SmithEmail Address: invalidemailPassword: Secure123!

Email Address: john.doe@example.comPassword: StrongP@ssword123

ext Input: "Lorem ipsum dolor sit amet, consectetur adipiscing elit..."

Text Input: "Lorem ipsum dolor sit amet."

Test dataset with labeled samples.

Test dataset with labeled samples.

Test dataset with labeled samples.

#### Precondition

1. The application is installed and accessible.
2. A valid user account exists in the system with the provided test data.

1. The application is accessible.
2. The username provided in the test data does not exist in the system.

1. The application is accessible.
2. Precondition: A valid user account exists in the system with the username provided in the test data.
3. Precondition: The password provided in the test data is not the correct password for the specified username.

The application is accessible.

1. The application is accessible.
2. A user account exists in the system with the username provided in the test data.
3. The account associated with the provided username is locked.

1. The registration page is accessible.
2. The system is in a clean state with no previous registrations using the test data.

The registration page is accessible.

The user has successfully registered using the test data.

1. The user is on the "verify news" tab.
- 2, The system is functioning correctly.

The user is on the "verify news" tab.

Website is working

Website is working

Website is working

1. The machine learning model is trained and deployed.

The confusion matrix is generated for the machine learning model.

The machine learning model is trained and deployed.