# Scope and Objectives

Note: Turn on comments.

## Scope

Application under test: <https://ensekautomationcandidatetest.azurewebsites.net/>

* **User Registration:**
  + Testing the complete flow of new user registration, including form submission and user feedback mechanisms (such as confirmation messages or emails).
  + Validation of input fields for correctness and error handling for incorrect inputs.
* **Sign In:**
  + Testing the sign-in process with valid and invalid credentials.
  + Ensuring appropriate error messages are displayed for incorrect inputs.
  + Verification of security measures like session management and account lockout after multiple failed attempts.
* **Purchasing Energy Fuels:**
  + Testing the process of selecting, quantifying, and purchasing different types of energy fuels.
* **External Links:**
  + Ensuring all external links are functional and lead to the correct websites.
  + Testing for security issues like data leakage when transitioning to external sites.

## Objectives

* **Functionality Verification:**
  + To ensure that all listed features work as per the specifications and intended design.
* **Usability Testing:**
  + To assess the ease of use and intuitiveness of the website interface, particularly for new users.
* **Error Handling:**
  + To verify that the website handles errors gracefully and provides helpful feedback to the user.

# General Test Scenarios

* **Register New User:**
  + Test valid and invalid inputs (like email formats, password strength).
  + Check response to duplicate user details.
  + Ensure successful registration leads to the appropriate confirmation e.g. email.
* **Sign In:**
  + Test with valid and invalid credentials.
  + Check the behaviour with locked accounts or after multiple failed attempts.
  + Ensure secure session management (like session timeouts).
* **Buy Different Energy Fuels:**
  + Test purchasing process with different quantities and fuel types.
    - Check that a user cannot buy more than the available quantity.
    - Check that a user cannot buy negative quantities of energy.
    - Negative inputs into fields e.g. letters or special characters.
    - User cannot buy a zero quantity of fuel.
  + Validate calculations (quantity remaining).
* **Links to Different Websites:**
  + Verify that all links are functional and lead to the correct external or internal websites.

# Test Cases

See “Test cases and results.xlsx” spreadsheet located in the “Task 2/Test cases and results” folder.

# Test Execution

## Manual Testing

All testing of the site will be manually executed. This will be carried out on a Windows 11 laptop using Google Chrome. Test scenarios will be executed manually, and the tester will also make use of exploratory testing.

Due to time constraints, these manual test cases will not be automated. In a usual project, key user workflows would be automated using an appropriate tool such as Cypress, Playwright or Selenium.

## Performance

There are no explicit requirements for performance. Therefore, load and stress testing will not be carried out. However, any obvious performance issues (e.g. page loading time) will be recorded as bugs/defects and passed on to Ensek for investigation and fixing.

## UX Testing

There are no explicit requirement for user experience. However, any obvious issues such as border misalignment, navigation issues, readability will be noted as bugs/defects and passed on to Ensek for fixing.

## Defect Management

All defects will be recorded and handed over to Ensek to decide upon next steps.

# Risks

|  |  |
| --- | --- |
| Risk | Consequence |
| Tester only has access to the site and not the code. | Cannot verify unit and integration testing. Therefore, they cannot be included in my testing plan. |
| Tester doesn’t have access to any other systems except the website page itself. | If a back-end system or system that the site id dependent upon goes offline, this may block testing for several sections of the application. |
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