**Automation Testing Main Project**

**Test Plan for Energym Website**

**Test Executed by:**

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**Test Period:**

**27th May 2025 to 30th June 2025**

**1. Project Overview**

* **Website URL:** [Energym](https://fitnessproject.pythonanywhere.com/)
* **Purpose:** A fitness tracking website where users can purchase electronic items such as mobiles, laptops and monitors.
* **Target Audience:** General users looking to browse and purchase electronic items.

**2. Testing Objectives**

The main objective of this test plan is to ensure that the **Energym** website functions correctly across all core modules and offers a smooth and secure user experience. This includes functional modules (Signup, Login, Set Goal, Leaderboard), as well as non-functional aspects like UI/UX, responsiveness, performance, and security.

**3. Types of Testing**

* **Functional Testing**: Ensure all modules (e.g., Login, Register, Goal Setting) behave as expected.
* **UI/UX Testing**: Validate interface consistency and intuitive navigation.
* **Usability Testing**: Assess ease of use and layout clarity.
* **Compatibility Testing**: Test across browsers (Chrome, Firefox, Edge) and devices (desktop, mobile, tablet).
* **Security Testing**: Ensuring user data is secure, especially during login/register and also check for vulnerabilities (e.g : password protection, data Integrity).
* **Performance Testing**: Use JMeter to measure speed, load handling, and responsiveness.
* **Regression Testing**: Verifying that new changes don't affect existing functionalities.
* **Acceptance Testing**: Ensure the system meets business and user requirements.

**4. Testing Scope**

The following modules will be tested:

* **Compatibility / Cross browser testing**
* **Home Page**
* **Register (Sign up)**
* **Login**
* **Logout**
* **Set Goal**
* **Leaderboard**
* **Performance and responsiveness testing**
* **Error Handling**
* **Security (Authentication & Input Validation)**

**5. Test Deliverables**

* **Test Plan**: Document outlining the scope, approach, and objectives (This document).
* **Test Cases**: Detailed steps covering functional and non-functional scenarios.
* **Test Log**: Record of testing activities.
* **RTM**: Mapping of features or requirements to test cases.
* **Test Execution Report**: Documenting the outcome of the test execution or result summary of executed tests
* **Defects Report**: Document with issues found, their severity, and resolution status.
* **Test Summary Report**: Final summary with pass/fail count and release readiness

**Test Management and Reporting**: Jira boards are used for Sprint management, allowing the team to monitor progress and collaborate effectively on issue resolution.

**Test Case Report:** [**https://docs.google.com/spreadsheets/d/1nhrf4FRfqOVPYfsSt9pMNuqU8RDk8GYk/edit?usp=drivesdk&ouid=104586634166496743984&rtpof=true&sd=true**](https://docs.google.com/spreadsheets/d/1nhrf4FRfqOVPYfsSt9pMNuqU8RDk8GYk/edit?usp=drivesdk&ouid=104586634166496743984&rtpof=true&sd=true)

**Screenshot and Screen Recordings Links:** [**https://docs.google.com/presentation/d/1\_1gKM0zY3wlufuZ6uSqCsFZblDHRZk-l/edit?usp=drivesdk&ouid=104586634166496743984&rtpof=true&sd=true**](https://docs.google.com/presentation/d/1_1gKM0zY3wlufuZ6uSqCsFZblDHRZk-l/edit?usp=drivesdk&ouid=104586634166496743984&rtpof=true&sd=true)

**6. Resource Requirements**

* **Testing Tools**: Eclipse (with Selenium) and JMeter.
* **Testers**: Automation + Manual Tester
* **Devices/Browsers**: Multiple devices (desktop, mobile and tablet) including Windows Laptop, Android Phone and browsers (Chrome, Firefox, Edge) for compatibility testing.

**7. Risk and Mitigation**

* **Risk**: Broken links or inaccessible goal/leaderboard modules.
  + **Mitigation**: Regular regression testing and exploratory passes.
* **Risk**: Site slowdown during concurrent access.
  + **Mitigation**: Performance testing via JMeter, identify bottlenecks
* **Risk**: Invalid user input leading to crashes.
  + **Mitigation**: Robust input validation + security testing.
* **Risk**: UI inconsistency across browsers/devices.
  + **Mitigation**: Responsive design testing across platforms.

**8. Test Case Categories**

**1. UI and Responsiveness Testing**

* **Test Type**: UI, Compatibility
* **Test Scenario**: Verify layout and usability on various screen sizes and browsers
* **Steps**:
  1. Open site on multiple devices and browsers
  2. Interact with menus, forms, and leaderboard
* **Expected Result**: Consistent and usable interface.
* **Pass/Fail Criteria**: Pass if UI adapts and functions correctly.

**2. Home Page Testing**

* **Test Type**: UI, Usability, Functionality
* **Test Scenario**: Verify Home page is accessible and displays the welcome/info content.
* **Steps**:
  1. Navigate to the homepage.
  2. Check header, navigation, and content
* **Expected Result**: Home page loads correctly with all elements
* **Pass/Fail Criteria**: Pass if all sections are visible and functional

**3. Register (Signup) Testing**

* **Test Type**: Functionality, UI, Security
* **Test Scenario**: Test user registration with valid and invalid data
* **Steps**:
  1. Go to registration page
  2. Fill out form and submit
* **Expected Result**: Successful sign up or appropriate error messages.
* **Pass/Fail Criteria**: Pass if flow works correctly and validations trigger as needed

**4. Login Functionality**

* **Test Type**: Functionality, Security
* **Test Scenario**: Test login with valid and invalid credentials
* **Steps**:
  1. Navigate to login page.
  2. Enter valid or invalid credentials.
  3. Submit credentials.
* **Expected Result**: Redirect on success or error on failure
* **Pass/Fail Criteria**: Pass if authentication works properly

**5. Logout Functionality**

* **Test Type**: Functionality, Security
* **Test Scenario**: Verify session termination after logout
* **Steps**:
  1. Log in to the website.
  2. Click on the "Logout" button.
  3. Verify that the user is logged out.
* **Expected Result**: User is logged out and redirected.
* **Pass/Fail Criteria**: Pass if session ends.

**6. Set Goal Module**

* **Test Type**: Functionality, Validation
* **Test Scenario**: Users can set fitness goals
* **Steps**:
  1. Login
  2. Navigate to “Set Goal”
  3. Enter goal data
* **Expected Result**: Goal saved successfully
* **Pass/Fail Criteria**: Pass if goal can be added and appears in leaderboard

**7. Leaderboard**

* **Test Type**: Functionality, Data Accuracy
* **Test Scenario**: Verify leaderboard ranks and goal visibility
* **Steps**:
  1. Access leaderboard page
  2. Check for correct ordering and data
* **Expected Result**: Accurate user goals displayed
* **Pass/Fail Criteria**: Pass if leaderboard is correct

**9. Test Data for Execution**

* **Valid Credentials**:
  + Username: Raj
  + Email: [delicious123@gmail.com](mailto:delicious123@gmail.com)
  + Password: pass@123
  + Confirm Password: pass@123
* **Invalid Credentials**:
  + Username: abc
  + Email: [aba@a](mailto:xyz@123.com)
  + Password: 123
  + Confirm Password: 123
* **Valid Data**:
  + Goal Name: fituser01
  + Target Value: 25km
* **Invalid Data**:
  + Goal Name: @qwerty
  + Target Value: 10000

**10. Test Schedule and Milestones**

* **Test Planning**: 2 days
* **Test Case Design**: 5 days
* **Manual Test Execution**: 7 days
* **Automation Scripting**: 10 days
* **Performance Testing (JMeter)**: 2 days
* **Defect Reporting and Retesting**: 4 days
* **Final Report Preparation**: 1 day

**11. Conclusion**

This test plan ensures that the **Energym** fitness tracking website meets both functional and non-functional quality standards. By following this strategy, we aim to deliver a stable, secure, and user-friendly product ready for deployment across browsers and devices.