**5. Testing( Ensuring the Project Works Correctly)**

**Unit Testing:**

Test individual JavaScript functions or small code modules in isolation to ensure they perform as expected.

Focus on the logic and correctness of specific components.

**Integration Testing:**

Verify that different parts of your website work together seamlessly (e.g., form submission correctly updates data displayed on the dashboard, navigation links function properly).

Ensure data flows correctly between modules.

**User Testing:**

Have potential users interact with your website to gather feedback on usability, identify pain points, and uncover unexpected issues.

Observe how users navigate and perform key tasks (logging activity, viewing progress, setting goals).

**Key Activities:**

Develop Test Cases: Create specific scenarios to test different features and functionalities (e.g., "Submitting a valid activity log updates the dashboard," "Navigation links redirect to the correct pages," "The website displays correctly on a mobile device").

Execute Test Cases: Systematically go through your test cases and record the results (pass or fail).

Bug Reporting: Log any identified issues (bugs, errors, unexpected behavior) in GitHub Issues with clear descriptions and steps to reproduce.

Issue Resolution: Address the reported bugs by debugging and fixing the code. Retest the fixed issues to ensure they are resolved.

Cross-Browser and Cross-Device Testing: Test your website on different web browsers (Chrome, Firefox, Safari, Edge) and various devices (desktops, laptops, tablets, smartphones) to ensure consistent functionality and appearance**.**

**Deliverables of this Phase:**

A set of documented test cases.

Records of test execution results (pass/fail).

A list of identified and logged bugs in GitHub Issues.

Evidence of bug fixes and retesting.

Feedback from user testing sessions. (Ensuring the Project Works Correctly)