

# Chapter Seven: Build

## 7.1 Build Process Overview

The build process compiles the Java source code into executable bytecode, executes unit tests to validate functionality, and generates the application output. This phase is crucial for ensuring the system is ready for deployment and use, providing a final verification step before release.

## 7.2 Build Tools and Steps

- **Tool:** Eclipse IDE, with its built-in compiler and run configurations, or the command-line interface (CLI) for manual builds.
- **Steps:**
  1. Open the project in Eclipse and select "Build Project" from the menu to compile all source files.
  2. Run all JUnit test cases to verify each component's behavior, checking for pass/fail results.
  3. Execute the application using the configured run settings, generating output in the console or GUI window.
  4. Review the output for errors or unexpected behavior, making adjustments as needed.

## Appendix

- **Source Code Repository:** Available on GitHub (optional link or clone instructions).
- **Screenshots:** Includes all class diagrams, sequence diagrams, code snippets, JUnit test results, Git activity, and build outputs for comprehensive documentation.