

Test Plan

Bisect Test Coverage

- Overall: 87.85%
- Modules:
 - Table.ml: Achieves 85% bisect coverage.
 - Task.ml: Achieves an impressive 98% bisect coverage.

Automated Testing (OUnit)

- **Number of Tests:** 67 OUnit tests are conducted, ensuring a robust testing suite.
- **Approach:** Utilizes both BlackBox and GlassBox testing methodologies.
 - Task.ml: Tests setters, getters, creator, input validity, edge cases (e.g., invalid times or dates), and exception handling.
 - Table.ml: Tests creation, loaders, exception handling, sorting, setters, and filtering functionalities.

Integration Testing

- **Integration_test.ml:** Located in the tests folder, automatically runs with `dune test`, performing integration testing on the Table module.
 - **Operations:** Executes multiple chained table operations to test the module's functionality.
 - **Validation:** The OUnit test passes if no exceptions are raised, providing a basic level of validation.
 - **Output Inspection:** Prints outputs, facilitating manual inspection to verify correctness.

Demonstration of Correctness

- **Comprehensive Testing:** The test suite thoroughly covers the Table and Task modules, ensuring expected behavior.
- **Scenarios and Edge Cases:** Tests various scenarios and edge cases, including invalid inputs and exceptions.
- **Robustness:** Demonstrates the modules' correctness and robustness in managing tasks in a table format.
- **Combined Approach:** The combination of automated OUnit tests and manual integration testing provides a holistic validation, ensuring the modules function accurately and effectively.