Software Testing Address Book

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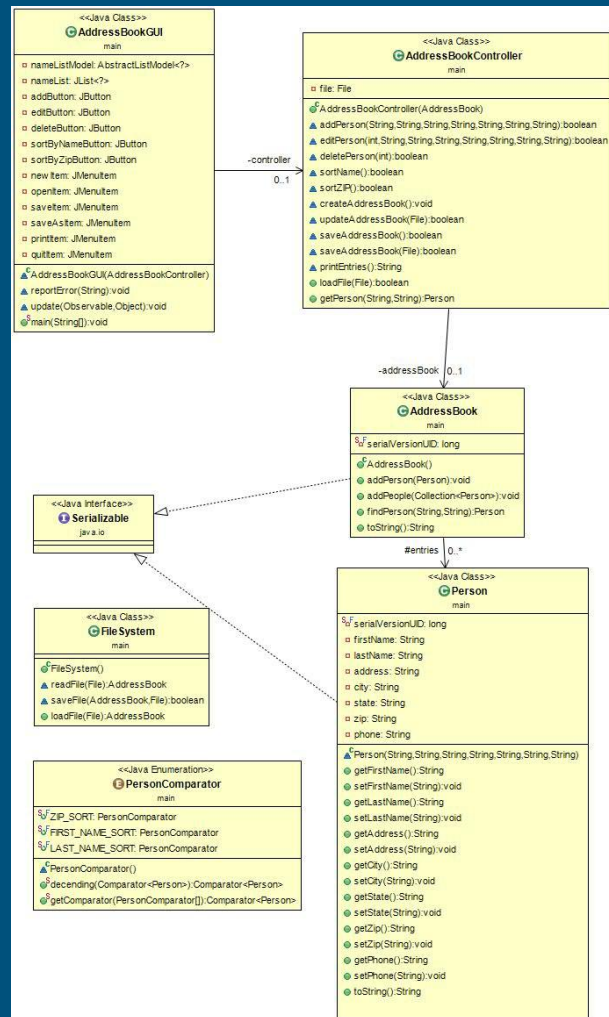Dr. Buckley
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Introduction

- Build a testable address book
- Store contact information
- GIT
- Eclipse
- Maven

Details of the Problem

- Save address book
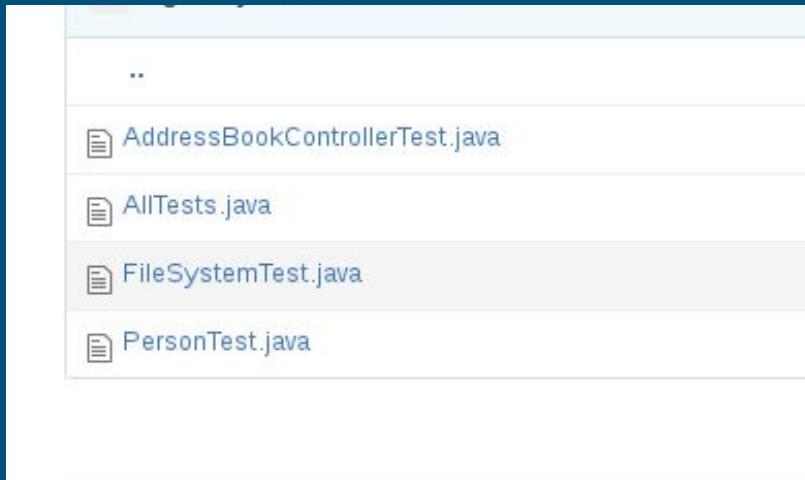- Add/Edit/Delete
- Sort
- Print
- Search

Class Diagram

- GUI
  - filterWindow.java
  - simpleButtonFileDialog.java
  - PersonEdit.java
  - AddressBookWindow.java
- Non-GUI
  - AddressBookController.java
  - AddressBook.java
  - FileSystem.java
  - PersonComparator.java
  - Person.java

Test Plan

- Each class is tested
- JUnit is used
- ecl Emma
  - coverage

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📄 AddressBookControllerTest.java

📄 AllTests.java

📄 FileSystemTest.java

📄 PersonTest.java

Results of Tests

- All tests pass
- 93% code coverage for non-gui functions

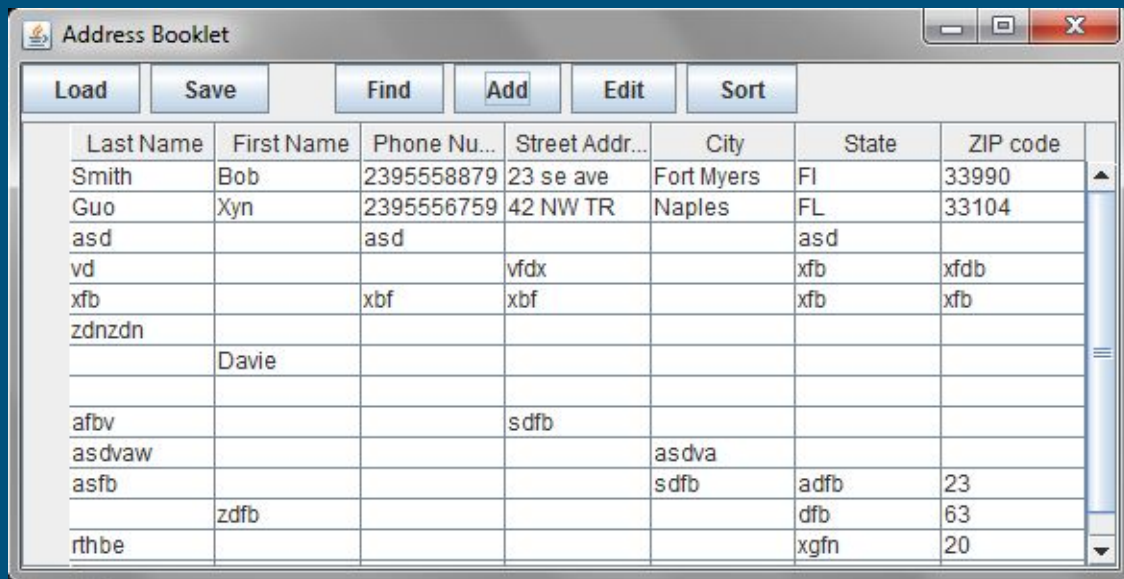|				
src/main	93.0 %	759	57	816
src/test	99.8 %	1,635	3	1,638

Runs: 33/33   Errors: 0   Failures: 0

- unit.AllTests [Runner: JUnit 4] (0.093 s)
  - unit.AddressBookControllerTest (0.082 s)
    - InvalidLoadFileTest (0.013 s)
    - testGetDataPoints (0.006 s)
    - testSortZIPDescending (0.009 s)
    - testSortNameLast (0.002 s)
    - testSortNameFirst (0.003 s)
    - testSortZIPAscending (0.002 s)
    - testUpdateAddressBook (0.005 s)
    - testPrintEntries (0.002 s)
    - testSaveAddressBook (0.004 s)
    - saveAddressBook (0.005 s)
    - testDeletePerson (0.002 s)
    - invalidUpdateBookTest (0.002 s)
    - invalidSortTest (0.002 s)
    - testAddPerson (0.001 s)
    - testSortError (0.003 s)
    - testAddPersonExists (0.002 s)
    - testEditPersonCatch (0.001 s)
    - testEditPersonEmpty (0.004 s)
    - testEditPerson (0.002 s)
    - testGetPerson (0.002 s)
    - testCreateAddressBook (0.002 s)
    - InvalidSaveAddressBook (0.001 s)
    - testDeletePersonCatch (0.002 s)
    - testDeletePersonNoValues (0.005 s)
  - unit.FileSystemTest (0.008 s)
    - IOExceptionSaveFile (0.001 s)
    - IOExceptionLoadAddressBookTest (0.002 s)
    - readTest (0.002 s)
    - IOExceptionReadTest (0.001 s)
    - loadTest (0.002 s)
  - unit.PersonTest (0.003 s)
    - testNumDataPoints (0.001 s)
    - testToString (0.000 s)
    - testNewPerson (0.000 s)
    - testDataPoints (0.002 s)

Conclusion

- More testing for GUI
- Input filtering
- Organization
- GitHub Difficulties
- But it works

Questions?