# Lab 03: Black Box Test Plan

## Test Overview

To run the tests:

1. Right click on StudentDirectoryPanel class in the Package Explorer
2. Select Run As > Java Application

The GUI for StudentDirectory should come up automatically.

All test files are in the test-files/ folder.

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| **Test ID** | **Description** | **Expected Results** | **Actual Results** |
| Test 1:  Invalid File | Preconditions: None  Run StudentDirectoryPanel  Click **Load Student Directory**  In the **Load Course Catalog** FileChooser dialog select: test-files/invalid\_student\_records.txt  Click **Select**  *Check results*  Close GUI | StudentDirectoryPanel loads  Student Directory is empty | StudentDirectoryPanel loads  Student Directory is empty |
| Test 2:  Valid File  (Modified) | Preconditions: None  Run StudentDirectoryPanel  Click **Load Student Directory**  In the **Load Course Catalog** FileChooser dialog select: test-files/student\_records.txt  Click **Select**  *Check results*  Close GUI | StudentDirectoryPanel loads  Student Directory contains 10 students:   * Demetrius, Austin, daustin * Lane, Berg, lberg * Raymond, Brennan, rbrennan * Emerald, Frost, efrost * Shannon, Hansen, shansen * Althea, Hicks, ahicks * Zahir, King, zking * Dylan, Nolan, dnolan * Cassandra, Scwartz, cschwartz * Griffith, Stone, gstone | StudentDirectoryPanel loads  Student Directory contains 10 students:   * Demetrius, Austin, daustin * Lane, Berg, lberg * Raymond, Brennan, rbrennan * Emerald, Frost, efrost * Shannon, Hansen, shansen * Althea, Hicks, ahicks * Zahir, King, zking * Dylan, Nolan, dnolan * Cassandra, Scwartz, cschwartz * Griffith, Stone, gstone |
| Test 3:  Add Student – No max credits | Preconditions: Test 2 has passed  Enter the following under Student Information, leaving Max Credits empty:   * First Name: John * Last Name: Doe * ID: jdoe * Email: jdoe@ncsu.edu * Password: pw * Repeat Password: pw * Max Credits:   Click **Add Student**  *Check results*  Click **OK**  Close GUI | A pop-up dialog stating “Max credits must be a positive number between 3 and 18.” | A pop-up dialog stating “Max credits must be a positive number between 3 and 18.” |
| Test 4:  Remove Student – No selection | Preconditions: Test 2 has passed  Make sure no students are selected from the Student Directory  Click **Remove Student**  *Check results*  Click **OK**  Close GUI | A pop-up dialog stating “No student selected.” | A pop-up dialog stating “No student selected.” |
| Test 5:  Add student – with valid info | Preconditions: None  Run StudentDirectoryPanel  Enter the following under Student Information:   * First Name: John * Last Name: Doe * ID: jdoe * Email: jdoe@ncsu.edu * Password: pw * Repeat Password: pw * Max Credits: 15   Click **Add Student**  *Check results*  Close GUI | Student Directory Contains 1 student:   * John, Doe, jdoe | Student Directory Contains 1 student:   * John, Doe, jdoe |
| Test 6:  Remove student – valid selection | Preconditions: Test 5 has passed  Select John, Doe, jdoe in the Student Directory  Click **Remove Student**  *Check Results*  Close GUI | Student Directory is empty | Student Directory is empty |
| Test 7:  New Student Directory | Preconditions: Test 2 has passed  Click **New Student Directory**  *Check Results*  Close GUI | Student Directory is empty | Student Directory is empty |
| Test 8:  Adding duplicate student | Preconditions: Test 5 has passed  Enter the following under Student Information:   * First Name: John * Last Name: Doe * ID: jdoe * Email: jdoe@ncsu.edu * Password: pw * Repeat Password: pw * Max Credits: 15   Click **Add Student**  *Check results*  Close GUI | A pop-up dialog stating “Student already in system.” | A pop-up dialog stating “Student already in system.” |
| Test 9:  Saving a directory | Preconditions: Test 5 has passed  Click **Save Student Directory**  Select test-files folder. Enter the filename new\_student\_records.txt  Click **Save** (it’s ok to overwrite old results)  *Check results*  Close GUI | In Eclipse, right click on the PackScheduler project and select **Refresh**.  Open the test-files folder and open new\_student\_records.txt in the editor.  The contents should be:  John,Doe,jdoe,jdoe@ncsu.edu,0ÉRú±"ÃùuŸ\_¦Ù\7X²F´þâ9•{-OîFâapÄ,15 | In Eclipse, right click on the PackScheduler project and select **Refresh**.  Open the test-files folder and open new\_student\_records.txt in the editor.  The contents should be:  John,Doe,jdoe,jdoe@ncsu.edu,0ÉRú±"ÃùuŸ\_¦Ù\7X²F´þâ9•{-OîFâapÄ,15 |
| Test 10:  Password and Repeat Password don’t match | Preconditions: Test 5 has passed  Enter the following under Student Information:   * First Name: Avery * Last Name: Martin * ID: amartin * Email: amartin@ncsu.edu * Password: pw1 * Repeat Password: pw2 * Max Credits: 15   Click **Add Student**  *Check results*  Close GUI | A pop-up dialog stating “Passwords do not match”. | A pop-up dialog stating “Passwords do not match”. |
| Test 11:  Invalid First Name | Preconditions: none  Run StudentDirectoryPanel  Enter the following under Student Information, leaving First Name empty:   * First Name: * Last Name: Batman * ID: iamthenight * Email: bruce.wayne@wayneenterprises.org * Password: bats * Repeat Password: bats * Max Credits: 6   Click **Add Student**  *Check results*  Close GUI | A pop-up dialog stating “Invalid first name” | A pop-up dialog stating “Invalid first name” |
| Test 12:  Invalid Last Name | Preconditions: none  Run StudentDirectoryPanel  Enter the following under Student Information, leaving Last Name empty:   * First Name: Superman * Last Name: * ID: kryptonian * Email: clark.kent@dailyplanet.org * Password: invincible * Repeat Password: invincible * Max Credits: 10   Click **Add Student**  *Check results*  Close GUI | A pop-up dialog stating “Invalid last name” | A pop-up dialog stating “Invalid last name” |
| Test 13:  Invalid id | Preconditions: none  Run StudentDirectoryPanel  Enter the following under Student Information, leaving ID empty:   * First Name: Two * Last Name: Face * ID: * Email: harvey.dent@gotham.gov * Password: headsortails * Repeat Password: headsortails * Max Credits:11   Click **Add Student**  *Check results*  Close GUI | A pop-up dialog stating “Invalid id” | A pop-up dialog stating “Invalid id” |
| Test 14:  Invalid email – empty | Preconditions: none  Run StudentDirectoryPanel  Enter the following under Student Information, leaving email empty:   * First Name: Poison * Last Name: Ivy * ID: pisley * Email: * Password: greenthumb * Repeat Password: greenthumb * Max Credits:8   Click **Add Student**  *Check results*  Close GUI | A pop-up dialog stating “Invalid email” | A pop-up dialog stating “Invalid email” |
| Test 15:  Invalid email – last “.” before first “@” | Preconditions: none  Run StudentDirectoryPanel  Enter the following under Student Information, leaving email empty:   * First Name: Poison * Last Name: Ivy * ID: pisley * Email: plant.enthusiast@greenpeace * Password: greenthumb * Repeat Password: greenthumb * Max Credits:8   Click **Add Student**  *Check results*  Close GUI | A pop-up dialog stating “Invalid email” | A pop-up dialog stating “Invalid email” |
| Test 16:  Invalid password | Preconditions: none  Run StudentDirectoryPanel  Enter the following under Student Information, leaving both passwords empty:   * First Name: Harley * Last Name: Quinn * ID: hquinzel * Email: crazyjokerlover@hahaha.com * Password: * Repeat Password: * Max Credits:14   Click **Add Student**  *Check results*  Close GUI | A pop-up dialog statin “Invalid password” | A pop-up dialog statin “Invalid password” |
| Test 17: Invalid max credits - high | Preconditions: none  Run StudentDirectoryPanel  Enter the following under Student Information:   * First Name: Lex * Last Name: Luthor * ID: lluthor * Email: Lex.Luthor@mockingbird.org * Password: mostbrilliant * Repeat Password: mostbrilliant * Max Credits: 19   Click **Add Student**  *Check results*  Close GUI | A pop-up dialog statin “Invalid max credits” | A pop-up dialog statin “Invalid max credits” |
| Test 18: Invalid max credits - low | Preconditions: none  Run StudentDirectoryPanel  Enter the following under Student Information:   * First Name: Superboy * Last Name: Prime * ID: overpowered * Email: killsuperman@soangry.com * Password: l33t * Repeat Password: l33t * Max Credits:2   Click **Add Student**  *Check results*  Close GUI | A pop-up dialog statin “Invalid max credits” | A pop-up dialog statin “Invalid max credits” |
| Test 19:  Add Student – top of list  (New) | Precondition: Test 5 has passed  Enter the following under Student Information:   * First Name: Mark * Last Name: Crabtree * ID: markc * Email: markc@ncsu.edu * Password: pass * Repeat Password: pass * Max Credits: 9   Click **Add Student**  *Check results*  Close GUI | Student Directory Contains 2 students:   * Mark, Crabtree, markc * John, Doe, jdoe | Student Directory Contains 2 students:   * Mark, Crabtree, markc * John, Doe, jdoe |
| Test 20:  Add Student – bottom of list  (New) | Precondition: Test 5 & 19 have passed  Enter the following under Student Information:   * First Name: Devonta * Last Name: Smith * ID: devontas * Email: devontas@ncsu.edu * Password: word * Repeat Password: word * Max Credits: 6   Click **Add Student**  *Check results*  Close GUI | Student Directory Contains 3 students:   * Mark, Crabtree, markc * John, Doe, jdoe * Devonta, Smith, devontas | Student Directory Contains 3 students:   * Mark, Crabtree, markc * John, Doe, jdoe * Devonta, Smith, devontas |
| Test 21:  Add Student – middle of list  (New) | Precondition: Test 5, 19 & 20 have passed  Enter the following under Student Information:   * First Name: Peter * Last Name: Larew * ID: peterl * Email: peterl@ncsu.edu * Password: access * Repeat Password: doh * Max Credits: 16   Click **Add Student**  *Check results*  Close GUI | Student Directory Contains 4 students:   * Mark, Crabtree, markc * John, Doe, jdoe * Peter, Larew, peterl * Devonta, Smith, devontas | Student Directory Contains 4 students:   * Mark, Crabtree, markc * John, Doe, jdoe * Peter, Larew, peterl * Devonta, Smith, devontas |
| Test 22:  Add Student – same last name  (New) | Precondition: Test 5, 19, 20 & 21 have passed  Enter the following under Student Information:   * First Name: Sally * Last Name: Larew * ID: sallyl * Email: sallyl@ncsu.edu * Password: nope * Repeat Password: nope * Max Credits: 12   Click **Add Student**  *Check results*  Close GUI | Student Directory Contains 5 students:   * Mark, Crabtree, markc * John, Doe, jdoe * Peter, Larew, petrel * Sally, Larew, sallyl * Devonta, Smith, devontas | Student Directory Contains 5 students:   * Mark, Crabtree, markc * John, Doe, jdoe * Peter, Larew, petrel * Sally, Larew, sallyl * Devonta, Smith, devontas |
| Test 23:  Add Student – same first name & last name  (New) | Precondition: Test 5, 19, 20, 21 & 22 have passed  Enter the following under Student Information:   * First Name: Sally * Last Name: Larew * ID: lsally * Email: lsally@ncsu.edu * Password: okay * Repeat Password: okay * Max Credits: 14   Click **Add Student**  *Check results*  Close GUI | Student Directory Contains 6 students:   * Mark, Crabtree, markc * John, Doe, jdoe * Peter, Larew, petrel * Sally, Larew, lsally * Sally, Larew, sallyl * Devonta, Smith, devontas | Student Directory Contains 6 students:   * Mark, Crabtree, markc * John, Doe, jdoe * Peter, Larew, petrel * Sally, Larew, lsally * Sally, Larew, sallyl * Devonta, Smith, devontas |
| Test 24:  Saving sorted directory  (New) | Precondition: Test 5, 19 & 20 have passed  Click **Save Student Directory**  Select test-files folder. Enter the filename more\_student\_records.txt  Click **Save** (it’s ok to overwrite old results)  *Check results*  Close GUI | In Eclipse, right click on the PackScheduler project and select **Refresh**.  Open the test-files folder and open more\_student\_records.txt in the editor.  The contents should be:  Mark,Crabtree,markc,markc@ncsu.edu,×Oðî?£¹€k\_ÈwÛò›½å\_[ØäÚ×£§%\_\_ë‚èñ,9  John,Doe,jdoe,jdoe@ncsu.edu,0ÉRú±"ÃùuŸ\_¦Ù\7X²F´þâ9•{-OîFâapÄ,15  Devonta,Smith,devontas,devontas@ncsu.edu,˜ÁëNé4vt7c‡?Ë–¢\_¼š\_PtÖ@\_wžËRBöEæ,6 | In Eclipse, right click on the PackScheduler project and select **Refresh**.  Open the test-files folder and open more\_student\_records.txt in the editor.  The contents should be:  Mark,Crabtree,markc,markc@ncsu.edu,×Oðî?£¹€k\_ÈwÛò›½å\_[ØäÚ×£§%\_\_ë‚èñ,9  John,Doe,jdoe,jdoe@ncsu.edu,0ÉRú±"ÃùuŸ\_¦Ù\7X²F´þâ9•{-OîFâapÄ,15  Devonta,Smith,devontas,devontas@ncsu.edu,˜ÁëNé4vt7c‡?Ë–¢\_¼š\_PtÖ@\_wžËRBöEæ,6 |