# Lab 02: System Test Plan

## Test Overview

There are 15 system-level tests that we created to validate that packScheduler is working properly.

To run the tests:

1. Right click on StudentDirectoryPanel in the package explorer.
2. Select Run As > Java Application

Follow the instructions for each individual test

Note: Tests 8-13 can be ran on the same GUI.

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| **Test ID** | **Description** | **Expected Results** | **Actual Results** |
| Test 1:  Invalid File | Preconditions: None   1. Run StudentDirectoryPanel. 2. Click **Load Student Directory** 3. In the **Load Student Directory** FileChooser dialog select: test-files/invalid\_student\_records.txt 4. Click **Select** 5. *Check results*   6. Close GUI | * StudentDirectoryPanel loads * Student Directory is empty * Student Information only shows labels | * **StudentDirectoryPanel starts** * **The Load Student Directory opens a FileChooser once clicked** * **There are no students in Student Directory** * **There are only labels in the Student Information section** |
| Test 2:  Valid File  (Modified) | Preconditions: None   1. Run StudentDirectoryPanel. 2. In the **Load Student Directory** FileChooser dialog select: test-files/student\_records.txt 3. Click **Select** 4. *Check results* 5. *Close GUI* | StudentDirectoryPanel loads  The list should contain 10 students as follows:   * 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, Schwartz, cschwartz * Griffith, Stone, gstone   Student Information only shows labels | * **StudentDirectoryPanel starts** * **The Load Student Directory opens a FileChooser once clicked** * **10 students are listed in the order:**  1. **Demetrius, Austin, daustin** 2. **Lane, Berg, lberg** 3. **Raymond, Brennan, rbrennan** 4. **Emerald, Frost, efrost** 5. **Shannon, Hansen, shansen** 6. **Althea, Hicks, ahicks** 7. **Zahir, King, zking** 8. **Dylan, Nolan, dnolan** 9. **Cassandra, Schwartz, cschwartz** 10. **Griffith, Stone, gstone**  * **There are only labels in the Student Information section** * **Students are sorted alphabetically by last name, then first name, and then id.** |
| Test 3:  Remove Student – None selected | Preconditions: Test 2 has passed   1. Make sure no row in Student Directory is selected (if there is a row selected, restart the GUI) 2. *Click Remove Student* 3. *Check results* 4. *Click* ***OK*** 5. *Close GUI* | A pop-up dialog stating “No student selected.” is displayed. | * **The message “No student selected.” Is displayed through a pop-up window.** * **After clicking OK, the program is still running, and the students are still in the student directory.** |
| Test 4:  Add Same Student | Preconditions: Test 2 has passed  1. Enter the following in the Student Information section:   * First Name: Emerald * Last Name: Frost * ID: efrost * Email: efrost@ncsu.com * Password: password * Repeat Password: password * Max Credits: 12   2. Click **Add Student**  3. Check results  4. Click **OK** | A pop-up dialog stating “Student already in system.” is displayed. | * **The message “Student already in system.” Is displayed through a pop-up window.** * **After clicking OK, the program is still running, and there are still 10 students in the Student Directory.** |
| Test 5:  Add Student With Same ID | Preconditions: Test 2 has passed  1. Enter the following in the Student Information section:   * First Name: Zack * Last Name: Kingston * ID: zking * Email: zking@abc.com * Password: pw * Repeat Password: pw * Max Credits: 15   2. Click **Add Student**  3. Check results  4. Click **OK** | A pop-up dialog stating “Student already in system.” is displayed. | * **The message “Student already in system.” Is displayed through a pop-up window.** * **After clicking OK, the program is still running, and there are still 10 students in the Student Directory.** |
| Test 6:  Add Student - Valid Student  (Modified) | Preconditions: Test 2 has passed  1. Enter the following in the Student Information section:   * First Name: Jordan * Last Name: Case * ID: jcase * Email: jcase@abc.com * Password: pw * Repeat Password: pw * Max Credits: 9   2. Click **Add Student**  3. Check results  4. Click **OK** | Student Directory contains 11 students as follows:   * Demetrius, Austin, daustin * Lane, Berg, lberg * Raymond, Brennan, rbrennan * Jordan, Case, jcase * Emerald, Frost, efrost * Shannon, Hansen, shansen * Althea, Hicks, ahicks * Zahir, King, zking * Dylan, Nolan, dnolan * Cassandra, Schwartz, cschwartz * Griffith, Stone, gstone | * **After entering the new student information and clicking Add Student, Student Directory now contains 11 students:**  1. **Demetrius, Austin, daustin** 2. **Lane, Berg, lberg** 3. **Raymond, Brennan, rbrennan** 4. **Jordan, Case, jcase** 5. **Emerald, Frost, efrost** 6. **Shannon, Hansen, shansen** 7. **Althea, Hicks, ahicks** 8. **Zahir, King, zking** 9. **Dylan, Nolan, dnolan** 10. **Cassandra, Schwartz, cschwartz** 11. **Griffith, Stone, gstone**  * **The new student was added to the 4th row of Student Directory.** * **The students are correctly sorted by last name, then first name, and then id.** |
| Test 7:  Remove Student  (Modified) | Preconditions: Test 2 has passed   1. Select the 4th row of the Student Directory table (Jordan, Case, jcase) 2. *Click Remove Student* 3. *Check results* 4. *Click* ***OK*** 5. *Close GUI* | Student Directory displays:   * 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, Schwartz, cschwartz * Griffith, Stone, gstone | * **After removing the given student, Student Directory contains 10 students:**  1. **Demetrius, Austin, daustin** 2. **Lane, Berg, lberg** 3. **Raymond, Brennan, rbrennan** 4. **Emerald, Frost, efrost** 5. **Shannon, Hansen, shansen** 6. **Althea, Hicks, ahicks** 7. **Zahir, King, zking** 8. **Dylan, Nolan, dnolan** 9. **Cassandra, Schwartz, cschwartz** 10. **Griffith, Stone, gstone**  * **There were no pop-up windows or error messages.** |
| Test 8:  Add Student – Invalid First Name (Empty String) | Preconditions: Test 2 has passed  1. Enter the following in the Student Information section:   * First Name: * Last Name: Smith * ID: smith * Email: abc@abc.abc * Password: pw * Repeat Password: pw * Max Credits: 11   2. Click **Add Student**  3. Check results  4. Click **OK** | A pop-up dialog stating “Invalid first name” is displayed. | * **The message “Invalid first name” Is displayed through a pop-up window.** * **After clicking OK, the program is still running, and there are still 10 students in the Student Directory.** |
| Test 9: Add Student – Invalid Last Name (Empty String) | Preconditions: Test 2 has passed  1. Enter the following in the Student Information section:   * First Name: John * Last Name: * ID: Doe * Email: [doe@abc.com](mailto:doe@abc.com) * Password: pw * RepeatPassword: pw * Max Credits: 15   2. Click **Add Student**  3. Check results  4. Click **OK** | A pop up dialog stating “Invalid last name” is displayed.  User clicks OK and is returned to the student directory display | * **The pop up dialog box stating “Invalid last name” was displayed** * **After clicking OK, user is returned to student directory display with nothing changed** |
| Test 10:  Add Student – Invalid ID (Empty String) | Preconditions: Test 2 has passed  1. Enter the following in the Student Information section:   * First Name: John * Last Name: Doe * ID: * Email: doe@abc.com * Password: pw * RepeatPassword: pw * Max Credits: 12   2. Click **Add Student**  3. Check results  4. Click **OK** | A pop up dialog box stating “Invalid id” is displayed  User clicks OK and is returned to the student directory display | * **The pop up dialog box stating “Invalid id” was displayed** * **After clicking OK, user is returned to student directory with nothing changed** |
| Test 11:  Add Student – Invalid Email (Does Not Contain @ Character) | Preconditions: Test 2 has passed  1. Enter the following in the Student Information section:   * First Name: John * Last Name: Doe * ID: jdoe * Email: jdoeabc.com * Password: pw * RepeatPassword: pw * Max Credits: 12   2. Click **Add Student**  3. Check results  4. Click **OK** | A pop up dialog box stating “invalid email” is displayed. User clicks OK and is returned to the student directory display | * **The pop up dialog box stating “Invalid email” was displayed** * **After clicking OK, user is returned to student directory with nothing changed** |
| Test 12:  Add Student – Invalid Password (Empty String) | Preconditions: Test 2 has passed  1. Enter the following in the Student Information section:   * First Name: John * Last Name: Doe * ID: jdoe * Email: jdoeabc.com * Password: * RepeatPassword: pw * Max Credits: 13   2. Click **Add Student**  3. Check results  4. Click **OK** | A pop up dialog box stating “Invalid password” is displayed.  User clicks OK and is returned to the student directory display | * **The pop up dialog box stating “Invalid password” was displayed** * **After clicking OK, user is returned to student directory with nothing changed** |
| Test 13:  Add Student – Invalid Password (Non-Matching Passwords) | Preconditions: Test 2 has passed  1. Enter the following in the Student Information section:   * First Name: John * Last Name: Doe * ID: Jdoe * Email: jdoeabc.com * Password: password * RepeatPassword: pw * Max Credits: 8   2. Click **Add Student**  3. Check results  4. Click **OK** | A pop up dialog box stating “Passwords do not match” is displayed.  User clicks OK and is returned to the student directory display | * **The pop up dialog box stating “Passwords do not match” was displayed** * **After clicking OK, user is returned to student directory with nothing changed** |
| Test 14:  Save Student Directory – Valid File  (Modified) | Preconditions: Test 2 has passed   1. Click Save Student Directory 2. Select test-files folder. Enter the filename actual\_student\_records.txt 3. Click **Save** (it’s ok to overwrite old results) 4. Check results 5. Close GUI | In Eclipse, right click on the PackScheduler project and select **Refresh.**  Open the test-files folder and open actual\_student\_records.txt in the editor.  The contents should be:   * Demetrius,Austin,daustin,Curabitur.egestas.nunc@placeratorcilacus.co.uk,0ÉRú±"ÃùuŸ¦Ù\7X²F´þâ9•{-OîFâapÄ,18 * Lane,Berg,lberg,sociis@non.org,0ÉRú±"ÃùuŸ¦Ù\7X²F´þâ9•{-OîFâapÄ,14 * Raymond,Brennan,rbrennan,litora.torquent@pellentesquemassalobortis.ca,0ÉRú±"ÃùuŸ¦Ù\7X²F´þâ9•{-OîFâapÄ,12 * Emerald,Frost,efrost,adipiscing@acipsumPhasellus.edu,0ÉRú±"ÃùuŸ¦Ù\7X²F´þâ9•{-OîFâapÄ,3 * Shannon,Hansen,shansen,convallis.est.vitae@arcu.ca,0ÉRú±"ÃùuŸ¦Ù\7X²F´þâ9•{-OîFâapÄ,14 * Althea,Hicks,ahicks,Phasellus.dapibus@luctusfelis.com,0ÉRú±"ÃùuŸ¦Ù\7X²F´þâ9•{-OîFâapÄ,11 * Zahir,King,zking,orci.Donec@ametmassaQuisque.com,0ÉRú±"ÃùuŸ¦Ù\7X²F´þâ9•{-OîFâapÄ,15 * Dylan,Nolan,dnolan,placerat.Cras.dictum@dictum.net,0ÉRú±"ÃùuŸ¦Ù\7X²F´þâ9•{-OîFâapÄ,5 * Cassandra,Schwartz,cschwartz,semper@imperdietornare.co.uk,0ÉRú±"ÃùuŸ¦Ù\7X²F´þâ9•{-OîFâapÄ,4 * Griffith,Stone,gstone,porta@magnamalesuadavel.net,0ÉRú±"ÃùuŸ¦Ù\7X²F´þâ9•{-OîFâapÄ,17 | * **“Save Schedule” window opens.** * **After selecting the file to save in (actual\_student\_records.txt), the contents of the schedule were successfully exported to the file.** * **The students were written to the file in the same order they were listed in Student Directory.** * **actual\_student\_records.txt now contains:**  1. **Demetrius,Austin,daustin,Curabitur.egestas.nunc@placeratorcilacus.co.uk,0ÉRú±"ÃùuŸ¦Ù\7X²F´þâ9•{-OîFâapÄ,18** 2. **Lane,Berg,lberg,sociis@non.org,0ÉRú±"ÃùuŸ¦Ù\7X²F´þâ9•{-OîFâapÄ,14** 3. **Raymond,Brennan,rbrennan,litora.torquent@pellentesquemassalobortis.ca,0ÉRú±"ÃùuŸ¦Ù\7X²F´þâ9•{-OîFâapÄ,12** 4. **Emerald,Frost,efrost,adipiscing@acipsumPhasellus.edu,0ÉRú±"ÃùuŸ¦Ù\7X²F´þâ9•{-OîFâapÄ,3** 5. **Shannon,Hansen,shansen,convallis.est.vitae@arcu.ca,0ÉRú±"ÃùuŸ¦Ù\7X²F´þâ9•{-OîFâapÄ,14** 6. **Althea,Hicks,ahicks,Phasellus.dapibus@luctusfelis.com,0ÉRú±"ÃùuŸ¦Ù\7X²F´þâ9•{-OîFâapÄ,11** 7. **Zahir,King,zking,orci.Donec@ametmassaQuisque.com,0ÉRú±"ÃùuŸ¦Ù\7X²F´þâ9•{-OîFâapÄ,15** 8. **Dylan,Nolan,dnolan,placerat.Cras.dictum@dictum.net,0ÉRú±"ÃùuŸ¦Ù\7X²F´þâ9•{-OîFâapÄ,5** 9. **Cassandra,Schwartz,cschwartz,semper@imperdietornare.co.uk,0ÉRú±"ÃùuŸ¦Ù\7X²F´þâ9•{-OîFâapÄ,4** 10. **Griffith,Stone,gstone,porta@magnamalesuadavel.net,0ÉRú±"ÃùuŸ¦Ù\7X²F´þâ9•{-OîFâapÄ,17**  * **After exporting, the GUI is still running and still contains the students in Student Directory.** |
| Test 15:  New Student Directory - Reset | Preconditions: None   1. Run StudentDirectoryPanel. 2. Select New Student Directory 3. *Check results*   Close Panel | Student Directory is now empty | * **The students that were previously inside Student Directory are gone.** * **Student Directory displays an empty table.** |