# Lab 03: System Test Plan

## Test Overview

There are 15 black box tests for the StudentDirectory portion of PackScheduler. Each test consists of a different equivalence class or boundary value.

To run the tests:

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

All test files are located in the test-files/ folder just in case the test instructions ask to use any of them.

**NOTE: For the previous lab, there were tests where the Student Directory included Students from the *student\_records.txt* file. The tests for this lab were first updated to implement the SortedList functionality. This is indicated in the Test ID column. However, for the rest of the tests, it was best that we use the existing student records from the text file just to test the functionality to have a New Student Directory. The tests 5 and 6 have this functionality tested. So the remaining tests contains only Students that the user creates for the purposes of this System Test Plan.**

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| **Test ID** | **Description** | **Expected Results** | **Actual Results** |
| Test 1: Cancelling to load students from file | Preconditions: Student Directory should be empty   1. Select **Load Student Directory** 2. Click **Cancel** 3. Check pop-up message 4. Click **OK** | Pop-up message reads *Invalid selection.*  Student Directory should be empty | **When I clicked Load Student Directory and then hit Cancel, a message showed up, stating Invalid selection.** |
| Test 2: Removing student with empty directory | Preconditions: Student Directory should be empty   1. Select **Remove Student** 2. Check pop-up message 3. Click **OK** | Pop-up message reads *No student selected.*  Make sure Student Directory is empty | **When I clicked Remove Student, a message showed up, stating No student selected.** |
| Test 3: Cancelling to save Student Directory | Preconditions: None   1. Select **Save** 2. Check pop-up message 3. Click **OK** | Pop-up message reads *Invalid selection.* | **When I clicked Save Student Directory and then hit Cancel, a message showed up, stating Invalid selection.** |
| Test 4: Loading students from a specified file (Updated) | Preconditions: None   1. Select **Load Student Directory** 2. Go to **test-files** folder 3. Select **student\_records.txt** 4. Click **Select** 5. Check Student Directory | Student Directory should contain the following (sorted by last name, then first name, then unity id):   1. Demetrius,Austin,daustin 2. Lane,Berg,lberg 3. Raymond,Brennan,rbrennan 4. Zahir,King,zking 5. Emerald,Frost,efrost 6. Shannon,Hansen,shansen 7. Althea,Hicks,ahicks 8. Dylan,Nolan,dnolan 9. Cassandra,Schwartz,cschwartz 10. Griffith,Stone,gstone | **When I loaded the student\_records.txt file, the following list of students were displayed, but in required order:**   1. **Demetrius,Austin,daustin** 2. **Lane,Berg,lberg** 3. **Raymond,Brennan,rbrennan** 4. **Zahir,King,zking** 5. **Emerald,Frost,efrost** 6. **Shannon,Hansen,shansen** 7. **Althea,Hicks,ahicks** 8. **Dylan,Nolan,dnolan** 9. **Cassandra,Schwartz,cschwartz** 10. **Griffith,Stone,gstone** |
| Test 5:  Create New Student Directory | Preconditions: Test 4   1. Select **New Student Directory** 2. Check Student Directory | Student Directory should be empty | **When I clicked New Student Directory, the area Student Directory contains nothing. It is empty!** |
| Test 6: Add Student (valid inputs) (Updated) | Preconditions: Student Directory area is empty   1. Input the following   **First Name:** Andrew  **Last Name:** Scott  **ID:** arscott  **Email:** [arscott@ncsu.edu](mailto:arscott@ncsu.edu)  **Password:** Arsenal319$  **Repeat Password:** Arsenal319$  **Max Credits:** 16   1. Click **Add Student** 2. Student should show up in the Student Directory | Student Directory contains the following (sorted by last name, then first name, then unity id):   1. Andrew, Scott, arscott | **Student Directory contains the following but in required order:**   1. **Andrew, Scott, arscott** |
| Test 7: Add Student (No password, invalid!) | Preconditions: None   1. Input the following   **First Name:** Caleb  **Last Name:** Arpensan  **ID:** csarpensa  **Email:**  [csarpensa@ncsu.edu](mailto:%20csarpensa@ncsu.edu)  **Password:**  **Repeat Password:**  **Max Credits:** 16   1. Click **Add Student** 2. Check pop-up message 3. Click **OK** | Pop-up message reads *Invalid password* | **When I added the Student with the specified inputs (except password!), I got a message stating “Invalid password”.** |
| Test 8: Add Student (Invalid input!) | Preconditions: None   1. Input the following   **First Name:** Caleb  **Last Name:** Arpensan  **ID:**  **Email:**  [csarpensa@ncsu.edu](mailto:%20csarpensa@ncsu.edu)  **Password:** Arpens$23  **Repeat Password:** Arpens$23  **Max Credits:** 16   1. Click **Add Student** 2. Check pop-up message 3. Click **OK** | Pop-up message reads *Invalid id* | **When I added the Student with the specified inputs (except id!), I got a message stating “Invalid id”.** |
| Test 9: Add Student (password and repeat password don’t match) | Preconditions: None   1. Input the following   **First Name:** Carter  **Last Name:** Bolemsan  **ID:** ctbolems  **Email:**  [ctbolems @ncsu.edu](mailto:%20csarpensa@ncsu.edu)  **Password:** Arpens$23  **Repeat Password:** Arpens$2  **Max Credits:** 16   1. Click **Add Student** 2. Check pop-up message 3. Click **OK** | Pop-up message reads *Passwords do not match* | **When I added the Student with the specified inputs (different password and repeat password), I got a message stating “Passwords do not match”.** |
| Test 10: Add Student (default for max credits)  (Updated) | Preconditions: Test 6   1. Input the following   **First Name:** Carter  **Last Name:** Bolemsan  **ID:** ctbolems  **Email:**  [ctbolems@ncsu.edu](mailto:%20ctbolems@ncsu.edu)  **Password:** Arpens$23  **Repeat Password:** Arpens$23  **Max Credits:**   1. Click **Add Student** 2. Check Student Directory | Student Directory should contain the following (sorted by last name, then first name, then unity id):   1. Carter, Bolemsan, ctbolems 2. Andrew, Scott, arscott | **Student Directory contains the following, but in required order:**   1. **Carter, Bolemsan, ctbolems** 2. **Andrew, Scott, arscott** |
| Test 11: Add Student (custom input for max credits) | Preconditions: Test 10   1. Input the following   **First Name:** Gwen  **Last Name:** Stacy  **ID:** ghstac  **Email:**  [ghstac@ncsu.edu](mailto:%20ghstac@ncsu.edu)  **Password:** Arsents34  **Repeat Password:** Arsents34  **Max Credits:** 12   1. Click **Add Student** 2. Check Student Directory | Student Directory should contain the following (sorted by last name, then first name, then unity id):   1. Carter, Bolemsan, ctbolems 2. Andrew, Scott, arscott 3. Gwen, Stacy, ghstac | **Student Directory contains the following, but in required order:**   1. **Carter, Bolemsan, ctbolems** 2. **Andrew, Scott, arscott** 3. **Gwen, Stacy, ghstac** |
| Test 12: Add Student (invalid input for last name) | Preconditions: None   1. Input the following   **First Name:** Gwendy  **Last Name:**  **ID:** ghstac  **Email:** [ghs.sdf@ncsu.edu](mailto:ghs.sdf@ncsu.edu)  **Password:** Arsents34  **Repeat Password:** Arsents34  **Max Credits:** 22   1. Click **Add Student** 2. Check Pop-Up message 3. Click **OK** | Pop-up message reads *Invalid last name* | **When I added the Student with the specified inputs (invalid last name!), a message pops up, stating Invalid last name.** |
| Test 13:  Remove Student (no selection of students) | Preconditions: Test 9   1. Make sure nothing is selected under Student Directory 2. Select **Remove Student** 3. Check pop-up message 4. Click **OK** | Pop-up message reads *No Student Selected* | **When I selected nothing under Student Directory and hit Remove Student, a pop-up message came up stating No Student Selected** |
| Test 14: Remove Student (1 selection)  (Updated) | Preconditions: Test 9   1. Select the row in Student Directory with the following details (Gwen, Stacy, ghstac); may be in different row number if included Students from student\_records.txt 2. Click **Remove Student** 3. Check Student Directory | Student Directory should contain the following (at least, sorted by last name, then first name, then unity id):   1. Carter, Bolemsan, ctbolems 2. Andrew, Scott, arscott | **Student Directory contains the following, but in required order:**   1. **Carter, Bolemsan, ctbolems** 2. **Andrew, Scott, arscott** |
| Test 15: Save Student Directory  (Updated) | Preconditions: Test 14   1. Select **Save Student Directory** 2. Go to **test-files** 3. Name the file **custom\_student\_directory.txt (overriding is OK!)** 4. Click **Save** | The text file should contain the following (at least, sorted by last name, then first name, then unity id):  Carter,Bolemsan,ctbolems,ctbolems@ncsu.edu,ozoBzQw+0J1bwfWeD07NvOuNdlgm0AbYVY89JQdvQDg=,18  Andrew,Scott,arscott,arscott@ncsu.edu,TnS4ABg4WbW3CKm/ZGKBPxQwl1sA2z/giTtvcQvb3PM=,16 | **The text file includes the following contents:**  Carter,Bolemsan,ctbolems,ctbolems@ncsu.edu,ozoBzQw+0J1bwfWeD07NvOuNdlgm0AbYVY89JQdvQDg=,18  Andrew,Scott,arscott,arscott@ncsu.edu,TnS4ABg4WbW3CKm/ZGKBPxQwl1sA2z/giTtvcQvb3PM=,16 |