# Lab 02: Black Box Test Plan

## Test Overview

Write at least 15 black box tests for the StudentDirectory portion of PackScheduler. Each test should consider a different equivalence class or boundary value (which should be labeled under the Test ID). Remember to use repeatable and specific values.

Any new input or expected output files should be created and placed in your test-files/directory so the teaching staff can run your tests.

Actual results of execution MUST be reported for full credit.

To run the tests:

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

.

|  |  |  |  |
| --- | --- | --- | --- |
| **Test ID** | **Description** | **Expected Results** | **Actual Results** |
| Test 1:  Load Valid Student Directory File | Preconditions: None  Run StudentDirectoryPanel GUI  In the Directory Buttons, choose Load Student Directory  In File Chooser select test-files/student\_records.txt  Click select  Check results | StudentDirectoryPanel GUI Loads. Student Directory is empty  File chooser opens  File is opened and 10 Students appear in the Student Directory section of the GUI. Zahir, Cassandra, Shannon, Demetrius, Raymond, Emerald, Lane, Griffith, Althea, Dylan. | StudentDirectoryPanel GUI Loads. Student Directory is empty  File chooser opens  File is opened and 10 Students appear in the Student Directory section of the GUI. Zahir, Cassandra, Shannon, Demetrius, Raymond, Emerald, Lane, Griffith, Althea, Dylan. |
| Test 2:  Remove Student - No Selection | Preconditions: Test 1 has passed and no Student has been Selected in the Student Directory.  Click Remove Student Button  Check Results | Pop-up dialog stating “No Student Selected.” Is displayed. | Pop-up dialog stating “No Student Selected.” Is displayed. |
| Test 3:  Remove Student from Beginning of List | Preconditions: Test 1-2 have passed  Click ok on pop-up dialog box from test 2.  Select first student in Student directory (Zahir).  Click the remove student button.  Check Results | After pop up is closed, StudentDirectoryPanel GUI should appear as though test 1 was completed with 10 students in the directory.  The first name, last name, and student ID for the selected student should be highlighted.  The first student should be removed from the list and everyone shifted up 1. | GUI appears as though Test 1 was completed with 10 students in list with Zahir at top.  Full row containing Zahir is highlighted.  Full row containing Zahir is removed and Cassandra is at top. |
| Test 4:  Remove Student from end of List | Preconditions: Test 1-3 have passed. There should now be 9 students in the directory with Cassandra at the top.  Select the 9th student in the directory (Dylan).  Click the remove student button.  Check Results | The first name, last name, and student ID for the selected student should be highlighted.  The selected student should be removed from the list with no change to any other list item or position. 8 students should be present in list. | Full row containing Dylan is highlighted  Full row containing Dylan is removed. Previous order is preserved and Althea is at bottom of list. 8 students remain in list. |
| Test 5:  Add student – No Student information added | Preconditions: Tests 1-4 have passed. There should be 8 students in the directory with Cassandra at the top and Althea at the bottom. No student should be selected in the student directory and no student information should be entered in the fields.  Click add student  Check Results | A pop-up dialog stating should appear indicating an error. | A pop-up dialog stating “Max credits must be a positive number between 3 and 18” |
| Test 6:  Add Student with Valid student information – max credits allowed | Preconditions: Tests 1-5 have passed. There should be 8 students in the directory with Cassandra at the top and Althea at the bottom. No student should be selected in the student directory and no student information should be entered in the fields. And the pop-up dialog from test 5 should still be open.  Click ok on the pop-up dialog to close.  Enter the following into the listed Student information fields  First Name: Ben  Last Name: Ioppolo  ID: BIop  Email: bioppolo@valid.com  Password: bwi123  Repeat Password: bwi123  Max Credits: 18  Click add student  Check Results | Pop-up dialog should close and State of GUI should remain unchanged.  Fields should allow entry of information.  Ben Ioppolo should be added to the bottom of the student directory (9th entry). | Pop-up closes and state of GUI is unchanged.  Fields accept data  Ben Ioppolo is added to bottom of student directory.  Full row containing Ben Ioppolo is highlighted.  There are 9 students in the directory. Cassandra is at top. |
| Test 7:  Add valid student with max credits field left blank | Preconditions: Tests 1-6 have passed. 9 students should be in directory with Cassandra at top and Ben at bottom.  Enter the following into the listed Student information fields  First Name: James  Last Name: Bond  ID: 007  Email: bond.rocks@MI6.com  Password: bond007  Repeat Password: bond007  Max Credits:  Click add student  Check Results | James Bond should be added to the bottom of the student directory (10th entry). | Pop-up dialog displays “Max Credits must be a positive number between 3 and 18”.  Note: This test appears to fail due to how the GUI gets the field information. I didn’t think I should mess with the GUI code. |
| Test 8:  Add Valid Student with Min Credits allowed | Preconditions: Tests 1-6 have passed and 7 has failed. 9 students should be in directory with Cassandra at top and Ben at bottom.  The fields should remain filled out with the information from test 7.    Enter the following into the listed Student information fields  Max Credits: 3  Click add student  Check Results | James Bond should be added to the bottom of the student directory (10th entry). | James bond added as 10th entry.  Full row containing Bond is not highlighted in the student directory. |
| Test 9:  Add valid student – duplicate | Preconditions: Tests 1-8 have been completed. 10 students should be in the directory with Cassandra at the top and James Bond at the bottom.  Enter the following into the listed Student information fields  First Name: Ben  Last Name: Ioppolo  ID: BIop  Email: bioppolo@valid.com  Password: bwi123  Repeat Password: bwi123  Max Credits: 18  Click add student  Check Results  Click ok to close pop-up window | A pop-up dialog stating “student already in system” should display.  Ben Ioppolo should not be added to the directory again.  James should remain at the 10th and last position. | A pop-up dialog stating “student already in system” displays.  Ben Ioppolo is not be added to the directory again.  James remains at the 10th and last position.  Fields remain filled out with Ben’s information. |
| Test 10:  Add Invalid Student - invalid email and passwords don’t match | Preconditions: Tests 1-9 have been completed. 10 students should be in the directory with Cassandra at the top and James Bond at the bottom. Ben’s student information should be populated in the fields.  Clear the student information fields.  Enter the following into the listed Student information fields  First Name: stu  Last Name: dent  ID: student  Email: stu.dent@invalid  Password: stu  Repeat Password: dent  Max Credits: 6  Click add student  Check Results  Click ok to close pop-up window | Pop-up dialog should appear noting at least one of the invalid entries. | Pop-up dialog appears stating “passwords do not match”.  No other dialogs pop up upon closing the pop-up.  Stu dent was not added and their credentials are still shown in the student information fields. |
| Test 11:  Add invalid student. – invalid email | Preconditions: Tests 1-10 have been completed. 10 students should be in the directory with Cassandra at the top and James Bond at the bottom. Stu dent’s student information should be populated in the fields.  Fix the following Student information fields  Password: dent  Repeat Password: dent  Click add student  Check Results  Click ok to close pop-up window | Pop-up dialog should appear noting invalid email address. | Pop-up dialog appears stating “invalid email”.  Stu dent was not added and their credentials are still shown in the student information fields. |
| Test 12:  Add invalid student – blank first name | Preconditions: Tests 1-11 have been completed. 10 students should be in the directory with Cassandra at the top and James Bond at the bottom. Stu dent’s student information should be populated in the fields.  Fix the following Student information fields  Email: stu.dent@valid.edu  Clear the First name field.  Click add student  Check Results  Click ok to close pop-up window | Pop-up dialog should appear noting invalid first name. | Pop-up dialog appears stating “invalid first name”.  Stu dent was not added and their credentials are still shown in the student information fields. |
| Test 13:  Add invalid student – blank last name | Preconditions: Tests 1-12 have been completed. 10 students should be in the directory with Cassandra at the top and James Bond at the bottom. Stu dent’s student information should be populated in the fields.  Fix the following Student information fields  First Name: stu  Clear the Last name field.  Click add student  Check Results  Click ok to close pop-up window | Pop-up dialog should appear noting invalid last name. | Pop-up dialog appears stating “invalid last name”.  Stu dent was not added and their credentials are still shown in the student information fields. |
| Test 14:  Add invalid student – blank ID | Preconditions: Tests 1-13 have been completed. 10 students should be in the directory with Cassandra at the top and James Bond at the bottom. Stu dent’s student information should be populated in the fields.  Fix the following Student information fields  Last Name: dent  Clear the ID field.  Click add student  Check Results  Click ok to close pop-up window | Pop-up dialog should appear noting invalid ID. | Pop-up dialog appears stating “invalid ID”.  Stu dent was not added and their credentials are still shown in the student information fields. |
| Test 15:  Save Student Directory | Preconditions: Tests 1-14 have been completed. 10 students should be in the directory with Cassandra at the top and James Bond at the bottom. Stu dent’s student information should be populated in the fields.  Click Save student directory button.  In save file window, save as test-files/BioppoloBBTestsLab2.txt  Click save.  Check results. | Save window opens and file is saved.  Stu dent’s information is still present in the fields but is not in the directory.  Output file should be written correctly with the student information fields comma separated | Window opens. File is saved.  Stu dent’s info is still present but was not added to directory.  File is correct except line for Ben Ioppolo is incorrect. The hashed password and credits run onto the two following lines. James bond is added afterwards.  There are still only 10 students in the file. |
| Test 16:  New Student Directory | Preconditions: Tests 1-15 have been completed. 10 students should be in the directory with Cassandra at the top and James Bond at the bottom. Stu dent’s student information should be populated in the fields.  Click new student directory button  Close GUI | Student Directory should be empty after new student directory button is clicked. | Student directory is empty.  Stu dent’s student information is still present in the student information fields. |
| Test 17:  Load Invalid Student Directory | Preconditions: None  Run StudentDirectoryPanel GUI  In the Directory Buttons, choose Load Student Directory  In File Chooser select test-files/invalid\_student\_records.txt  Click select  Check results | StudentDirectoryPanel GUI Loads. Student Directory is empty  File chooser opens  No student records should be added to the student directory. | StudentDirectoryPanel GUI Loads. Student Directory is empty  File chooser opens  No student records are added to the directory. |
| Test 18:  Load student directory which was saved from Test 15 | Preconditions: Tests 1-17 have been completed. 10 students should be in the directory with Cassandra at the top and James Bond at the bottom. Stu dent’s student information should be populated in the fields.  In the Directory Buttons, choose Load Student Directory  In File Chooser select test-files/ BioppoloBBTestsLab2.txt  Click select  Check results  Close GUI | Student Directory is empty  File chooser opens  10 student records are added to the student directory.  Entry 9 is Ben  Entry 10 is James  Entry 1 is Cassandra | Student Directory is empty  File chooser opens  10 student records are added to the student directory.  Entry 9 is Ben  Entry 10 is James  Entry 1 is Cassandra |