# Lab 02: Black Box Test Plan

## StudentDirectoryPanel Testing

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Created: September 6th, 2017

Last Tested: September 6th, 2017

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| **Test ID** | **Description** | **Expected Results** | **Actual Results** |
| **Test 1:**  testLoadExistingDirectory | Preconditions: None  Run StudentDirectoryPanel  Select **Load Student Directory**  In the menu that pops up, select:  test-files/student\_records.txt  Click **Select**  *Check results*  Close GUI | PackScheduler GUI loads  File selection menu pops up  Contents of file are imported and show up in the Student Directory section of the GUI as follows:   * Zahir,King,zking * Cassandra,Schwartz,cschwartz * Shannon,Hansen,shansen * Demetrius,Austin,daustin * Raymond,Brennan,rbrennan * Emerald,Frost,efrost * Lane,Berg,lberg * Griffith,Stone,gstone * Althea,Hicks,ahicks * Dylan,Nolan,dnolan | PackScheduler GUI loads  File selection menu pops up  Contents of file are imported and show up in the Student Directory section of the GUI as follows:   * Zahir,King,zking * Cassandra,Schwartz,cschwartz * Shannon,Hansen,shansen * Demetrius,Austin,daustin * Raymond,Brennan,rbrennan * Emerald,Frost,efrost * Lane,Berg,lberg * Griffith,Stone,gstone * Althea,Hicks,ahicks * Dylan,Nolan,dnolan |
| **Test 2:**  testNewStudentDirectory | Precondition: Test 1 has passed.  Run StudentDirectoryPanel  Select **Load Student Directory**  In the pop-up menu, select:  test-files/student\_records.txt  *Check results*  Select **New Student Directory**  *Check results*  Close GUI | Contents of student\_records.txt are displayed as in Test 1  Contents are cleared in the Student Directory section of the GUI | Contents of student\_records.txt are displayed as in Test 1  Contents are cleared in the Student Directory section of the GUI |
| **Test 3:**  testAddValidStudent | Precondition: none  Run StudentDirectoryPanel  In the bottom of the panel fill in the fields as follows:   * First Name: Kevin * Last Name: Hildner * ID: 1234 * Email:kevin@email.com * Password: Password * Repeat Password: Password * Max Credits: 5   Select **Add Student**  Check results | Under Student Directory there is one student listed with  First Name: “Kevin”  Last Name: “Hildner”  Student ID: “1234” | Under Student Directory there is one student listed with  First Name: “Kevin”  Last Name: “Hildner”  Student ID: “1234” |
| **Test 4:**  testSaveStudentDirectory | Precondition: Test 1 and 3 have passed.  Run StudentDirectoryPanel  In the Student Information panel, fill in the fields as follows:   * First Name: Kevin * Last Name: Hildner * ID: 1234 * Email:kevin@email.com * Password: Password * Repeat Password: Password * Max Credits: 5   Select **Add Student**  Select **Save Student Directory**  Select the /test-files/ directory.  Enter test4\_output.txt for the filename.  Select **Save**  Open the created file /test-files/test4\_output.txt in an editor.  *Check results*  Close GUI | /test-files/Test4\_output.txt is created and contains:  Kevin,Hildner,1234,kevin@email.com,çÏ>ôñ|9™©O,oa.ŠˆŽ[&‡ŽN9‹#½8ì",5 | /test-files/Test4\_output.txt is created and contains:  Kevin,Hildner,1234,kevin@email.com,çÏ>ôñ|9™©O,oa.ŠˆŽ[&‡ŽN9‹#½8ì",5 |
| **Test 5:**  testRemoveStudent | Precondition: Test 3 has passed  Run StudentDirectoryPanel  In the bottom of the panel fill in the fields as follows:  First Name: Kevin  Last Name: Hildner  ID: 1234  Email:kevin@email.com  Password: Password  Repeat Password: Password  Max Credits: 5  Click **Add Student**  Select student Kevin Hildner in the Student Directory section of the GUI  Click **Remove Student**  *Check results*  Close GUI | In the Student Directory section of the GUI, a new row is created containing information for student Kevin Hildner  The student is removed from the menu, leaving the Student Directory section empty | In the Student Directory section of the GUI, a new row is created containing information for student Kevin Hildner  The student is removed from the menu, leaving the Student Directory section empty |
| **Test 6:**  testInvalidEmail1  Tests an invalid input for the Email equivalence class | Precondition: None  Run StudentDirectoryPanel  In the bottom of the panel fill in the fields as follows:   * First Name: Kevin * Last Name: Hildner * ID: 1234 * Email:kevin#email.com * Password: Password * Repeat Password: Password * Max Credits: 5   Select **Add Student**  Check results | A pop up window shows up and displays a message that reads “Invalid Email”. No new student is added to the Student Directory. | A pop up window shows up and displays a message that reads “Invalid Email”. No new student is added to the Student Directory. |
| **Test 7:**  testInvalidEmail2  Tests an invalid input for the Email equivalence class | Precondition: None  Run StudentDirectoryPanel  In the bottom of the panel fill in the fields as follows:   * First Name: Kevin * Last Name: Hildner * ID: 1234 * Email:kevin@emaildotcom * Password: Password * Repeat Password: Password * Max Credits: 5   Select **Add Student**  Check results | A pop up window shows up and displays a message that reads “Invalid Email”. No new student is added to the Student Directory. | A pop up window shows up and displays a message that reads “Invalid Email”. No new student is added to the Student Directory. |
| **Test 8:**  TestNonUniqueIDNumber  Tests an invalid input for the ID equivalence class | Precondition: Test 3 has passed, there is a student “Kevin Hildner” with ID: 1234 in the Student Directory  In the bottom of the panel fill in the fields as follows:   * First Name: Evin * Last Name: Gildner * ID: 1234 * Email:evin@email.com * Password: Password1 * Repeat Password: Password1 * Max Credits: 6   Select **Add Student**  Check Results | A pop up menu appears and displays the message “Student already in system.” No new student is added to the student directory. | A pop up menu appears and displays the message “Student already in system.” No new student is added to the student directory. |
| **Test 9:**  testNonMatchingPasswords  Tests an invalid input for the Password equivalence class | Precondition: Tests 1 and 3 have passed.  Run StudentDirectoryPanel  Enter the following fields in the Student Information section:   * First Name: Kevin * Last Name: Hildner * ID: 1234 * Email:kevin@email.com * Password: blue * Repeat Password: green * Max Credits: 5   Select **Add Student**  *Check results*  Close GUI | A pop-up message reading  “Passwords do not match” appears.  No student records are displayed in the Student Directory section. | A pop-up message reading  “Passwords do not match” appears.  No student records are displayed in the Student Directory section. |
| **Test 10:**  testEmptyPasswordField  Tests an invalid input for the Password equivalence class | Precondition: Tests 1 and 3 have passed.  Run StudentDirectoryPanel  Enter the following fields in the Student Information section (password fields are blank):   * First Name: Kevin * Last Name: Hildner * ID: 1234 * Email:kevin@email.com * Password: * Repeat Password: * Max Credits: 5   Select **Add Student**  *Check results*  Close GUI | A pop-up message reading  “Invalid password” appears.  No student records are displayed in the Student Directory section. | A pop-up message reading  “Invalid password” appears.  No student records are displayed in the Student Directory section. |
| **Test 11:**  testMaxCreditsValidUpperBound  Tests a valid input for the upper boundary of the Max Credits equivalence class | Precondition: Tests 1 and 3 have passed  Run StudentDirectoryPanel  Enter the following fields in the Student Information section (password fields are blank):   * First Name: Kevin * Last Name: Hildner * ID: 1234 * Email:kevin@email.com * Password: pw * Repeat Password: pw * Max Credits: 18   Select **Add Student**  *Check results*  Close GUI | Student is successfully created and added to the Student Directory section of the GUI | Student is successfully created and added to the Student Directory section of the GUI |
| **Test 12:**  testMaxCreditsInvalidUpperBound  Tests an invalid input for the upper boundary of the Max Credits equivalence class | Precondition: Tests 1 and 3 have passed  Run StudentDirectoryPanel  Enter the following fields in the Student Information section (password fields are blank):   * First Name: Kevin * Last Name: Hildner * ID: 1234 * Email:kevin@email.com * Password: pw * Repeat Password: pw * Max Credits: 19   Select **Add Student**  *Check results*  Close GUI | A pop-up message reading “Invalid max credits” appears.  No student records are displayed in the Student Directory section of the GUI. | A pop-up message reading “Invalid max credits” appears.  No student records are displayed in the Student Directory section of the GUI. |
| **Test 13:**  testMaxCreditsValidLowerBound  Tests a valid input for the lower bound of the Max Credits equivalence class | Precondition: Tests 1 and 3 have passed  Run StudentDirectoryPanel  Enter the following fields in the Student Information section (password fields are blank):   * First Name: Kevin * Last Name: Hildner * ID: 1234 * Email:kevin@email.com * Password: pw * Repeat Password: pw * Max Credits: 3   Select **Add Student**  *Check results*  Close GUI | Student is successfully created and added to the Student Directory section of the GUI | Student is successfully created and added to the Student Directory section of the GUI |
| **Test 14:**  testMaxCreditsInvalidLowerBound  Tests an invalid input for the lower bound of the Max Credits equivalence class | Precondition: Tests 1 and 3 have passed  Run StudentDirectoryPanel  Enter the following fields in the Student Information section (password fields are blank):   * First Name: Kevin * Last Name: Hildner * ID: 1234 * Email:kevin@email.com * Password: pw * Repeat Password: pw * Max Credits: 2   Select **Add Student**  *Check results*  Close GUI | A pop-up message reading “Invalid max credits” appears.  No student records are displayed in the Student Directory section of the GUI. | A pop-up message reading “Invalid max credits” appears.  No student records are displayed in the Student Directory section of the GUI. |
| **Test 15:**  testRemoveStudentNoStudentSelected | Precondition: Test 5 has passed  Run StudentDirectoryPanel  Select **Remove Student**  *Check results*  Close GUI | A pop-up message reading “No student selected.” appears. | A pop-up message reading “No student selected.” appears. |
| **Test 16:**  testLoadingInvalidStudentDirectory | Preconditions: None  Run StudentDirectoryPanel  Select **Load Student Directory**  In the menu that pops up, select:  test-files/invalid\_student\_records.txt  Click **Select**  *Check results*  Close GUI | No error messages appear, the file explorer closes and no new students are added to the Student Directory | No error messages appear, the file explorer closes and no new students are added to the Student Directory |