# Lab 03: Black Box Test Plan

## StudentDirectoryPanel Testing

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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 (in lexicographical order by last name, first name and then unity ID):   * 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 | 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 (in lexicographical order by last name, first name and then unity ID):   * 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 |
| **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 | Preconditions: none  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: None  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: None  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: Test 1 has 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 “Kevin Hildner” is successfully created and added to the Student Directory section of the GUI, directly under Althea Hicks and above Zahir King. | Student “Kevin Hildner” is successfully created and added to the Student Directory section of the GUI, directly under Althea Hicks and above Zahir King. |
| **Test 12:**  testMaxCreditsInvalidUpperBound  Tests an invalid input for the upper boundary of the Max Credits equivalence class | Precondition: None  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: Test 1 has 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 “Kevin Hildner” is successfully created and added to the Student Directory section of the GUI, directly under Althea Hicks and above Zahir King. | Student “Kevin Hildner” is successfully created and added to the Student Directory section of the GUI, directly under Althea Hicks and above Zahir King. |
| **Test 14:**  testMaxCreditsInvalidLowerBound  Tests an invalid input for the lower bound of the Max Credits equivalence class | Precondition: Test 3 has 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. |