# Lab 02: Black Box Test Plan

## Test Overview

To run the tests:

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

All test files are located in the test-files/ folder.

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| **Test ID** | **Description** | **Expected Results** | **Actual Results** |
| Test 1: Invalid File | Preconditions: None  Run StudentDirectoryPanel.  Click **Load Student Directory**. In the FileChooser dialog, select test-files/invalid\_student\_records.txt  Click **Select**  *Check results*  Close GUI | StudentDirectoryPanel loads  Student Directory is empty  Student Information is empty in all fields | **StudentDirectoryPanel loads**  **Student Directory is empty**  **Student Information is empty in all fields** |
| Test 2: Valid File | Preconditions: None  Run StudentDirectoryPanel.  Click **Load Student Directory**. In the FileChooser dialog, select test-files/student\_records.txt  Click **Select**  *Check results*  Close GUI | StudentDirectoryPanel loads  Student Directory contains 10 students:   * 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 | **StudentDirectoryPanel loads**  **Student Directory contains 10 students:**   * **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 3: Add Student – No Selection | Preconditions: Test 2 has passed  Make sure that no row in the Student Information table is filled in  Click **Add Student**  *Check results*  Click **OK**  Close GUI | A pop-up dialog stating “Max credits must be a positive number between 3 and 18.” is displayed. | A pop-up dialog stating “Max credits must be a positive number between 3 and 18.” is displayed. |
| Test 4: Add Student (New) | Precondition: Test 2 has passed.  Enter the following in the Student Information section:   * First Name: Shalini * Last Name: Balagopal * ID: sbalago * Email: sbalago@ncsu.edu * Password: pw * Repeat Password: pw * Max Credits: 18   Click **Add Student**  *Check results*  Close GUI | Student Directory now contains 11 students:   * Demetrius,Austin,daustin * Balagopal,Shalini,sbalago * 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 Directory now contains 11 students:**   * **Demetrius,Austin,daustin** * **Balagopal,Shalini,sbalago** * **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 5: Add Student (Duplicate ID) | Precondition: Tests 2 and 4 have passed.  Enter the following in the Student Information section:   * First Name: Shalini * Last Name: Balagopal * ID: sbalago * Email: sbalago@ncsu.edu * Password: pw * Repeat Password: pw * Max Credits: 18   Click **Add Student**  *Check results*  Click **OK**  Close GUI | A pop-up dialog stating “Student already in system.” is displayed. | **A pop-up dialog stating “Student already in system.” Is displayed.** |
| Test 6: Add Several Students | Precondition: Tests 2 and 4 have passed.  Enter the following in the Student Information section:   * First Name: Nick * Last Name: Macon * ID: namacon * Email: namacon@ncsu.edu * Password: pw * Repeat Password: pw * Max Credits: 18   Click **Add Student**  Enter the following in the Student Information section:   * First Name: Andrew * Last Name: Lountzis * ID: ajlountz * Email: ajlountz@ncsu.edu * Password: pw * Repeat Password: pw * Max Credits: 18   Click **Add Student**  *Check results*  Click **OK**  Close GUI | Student Directory now contains 13 students:   * Demetrius,Austin,daustin * Balagopal,Shalini,sbalago * Lane,Berg,lberg * Raymond,Brennan,rbrennan * Emerald,Frost,efrost * Shannon,Hansen,shansen * Althea,Hicks,ahicks * Zahir,King,zking * Andrew,Lountzis,ajlountz * Nick,Macon,namacon * Dylan,Nolan,dnolan * Cassandra,Schwartz,cschwartz * Griffith,Stone,gstone | **Student Directory now contains 13 students:**   * **Demetrius,Austin,daustin** * **Balagopal,Shalini,sbalago** * **Lane,Berg,lberg** * **Raymond,Brennan,rbrennan** * **Emerald,Frost,efrost** * **Shannon,Hansen,shansen** * **Althea,Hicks,ahicks** * **Zahir,King,zking** * **Andrew,Lountzis,ajlountz** * **Nick,Macon,namacon** * **Dylan,Nolan,dnolan** * **Cassandra,Schwartz,cschwartz** * **Griffith,Stone,gstone** |
| Test 7: Remove Student – no selection | Preconditions: Test 2 and Test 4 have passed  Make sure that no row in the Student Information table is selected (if there is a row selected, restart the test)  Click **Remove Student**  *Check results*  Click **OK**  Close GUI | A pop-up dialog stating “No student selected” is displayed. | **A pop-up dialog stating “No student selected” is displayed.** |
| Test 8: Remove Student | Precondition: Tests 2, 3 and 6 have passed.  Click on the 9th student, labeled Andrew  Click **Remove Student**  *Check results*  Click **OK**  Close GUI | Student Directory now contains 12 students:   * Demetrius,Austin,daustin * Balagopal,Shalini,sbalago * Lane,Berg,lberg * Raymond,Brennan,rbrennan * Emerald,Frost,efrost * Shannon,Hansen,shansen * Althea,Hicks,ahicks * Zahir,King,zking * Nick,Macon,namacon * Dylan,Nolan,dnolan * Cassandra,Schwartz,cschwartz * Griffith,Stone,gstone | **Student Directory now contains 12 students:**   * **Demetrius,Austin,daustin** * **Balagopal,Shalini,sbalago** * **Lane,Berg,lberg** * **Raymond,Brennan,rbrennan** * **Emerald,Frost,efrost** * **Shannon,Hansen,shansen** * **Althea,Hicks,ahicks** * **Zahir,King,zking** * **Nick,Macon,namacon** * **Dylan,Nolan,dnolan** * **Cassandra,Schwartz,cschwartz** * **Griffith,Stone,gstone** |
| Test 9: Remove multiple students | Precondition: Tests 2, 3 and 6 have passed.  Click on the 2nd and 9th students, labeled Shalini and Nick respectively  Click **Remove Student**  *Check results*  Click **OK**  Close GUI | Student Directory contains 10 students:   * Demetrius,Austin,daustin * Balagopal,Shalini,sbalago * 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 Directory contains 10 students:   * 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 10: Save Student Directory | Precondition: Tests, 2,3,6, and 9 have passed  Click **Save Student Directory**. In the FileChooser dialog, select test-files/  Enter new\_student\_records.txt  Click **Save**  *Check results*  Close **GUI** | A new file labeled new\_student\_records.txt will be in the test-files folder of the project | **A new file labeled new\_student\_records.txt is in the test-files folder of the project** |
| Test 11: New Student Directory | Precondition: Tests, 2,3,6, and 9 have passed  Click **New Student Directory**  *Check results*  Closes **GUI** | The Student Directory section will be cleared of all students | **The Student Directory section will be cleared of all students** |
| Test 12:  Not Enough Credits | Precondition: Test 11 has passed.  Enter the following in the Student Information section:   * First Name: Shalini * Last Name: Balagopal * ID: sbalago * Email: sbalago@ncsu.edu * Password: pw * Repeat Password: pw * Max Credits: 1   Click **Add Student**  Click **OK**  *Check results*  Close **GUI** | A pop-up dialog stating “Max credits must be a positive number between 3 and 18.” is displayed. | **A pop-up dialog stating “Max credits must be a positive number between 3 and 18.” is displayed.** |
| Test 13:  Invalid Email Address | Precondition: Test 11 has passed.  Enter the following in the Student Information section:   * First Name: Shalini * Last Name: Balagopal * ID: sbalago * Email: sbalago&ncsu.edu * Password: pw * Repeat Password: pw * Max Credits: 18   Click **Add Student**  Click **OK**  *Check results*  Close **GUI** | A pop-up dialog stating “Invalid email.” is displayed. | **A pop-up dialog stating “Invalid email.” is displayed.** |
| Test 14:  Password/ Repeat Password not the same | Precondition: Test 11 has passed.  Enter the following in the Student Information section:   * First Name: Shalini * Last Name: Balagopal * ID: sbalago * Email: sbalago@ncsu.edu * Password: pw * Repeat Password: wp * Max Credits: 18   Click **Add Student**  Click **OK**  *Check results*  Close **GUI** | A pop-up dialog stating “Passwords do not match.” is displayed. | **A pop-up dialog stating “Passwords do not match.” is displayed.** |
| Test 15:  Invalid First Name | Precondition: Test 11 has passed.  Enter the following in the Student Information section:   * First Name: * Last Name: Balagopal * ID: sbalago * Email: sbalago@ncsu.edu * Password: pw * Repeat Password: wp * Max Credits: 18   Click **Add Student**  Click **OK**  *Check results*  Close **GUI** | A pop-up dialog stating “Invalid first name is displayed. | **A pop-up dialog stating “Invalid first name is displayed.** |