# Lab 03: Black Box Test Plan

## Test Overview

To run the tests:

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

The FileChooser for the course catalog will load automatically.

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

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| **Test ID** | **Description** | **Expected Results** | **Actual Results** |
| 1  Add  Empty  Student Record | Preconditions: None  Run StudentDirectoryPanel.  Under Student Controls, press Add Student Button.  *Check Results.*  Click OK on pop-up dialog.  *Check Results.*  Close GUI. | StudentDirectoryPanel loads.  Pop-up dialog states: “Max credits must be a positive number between 3 and 18.”  Pop-up disappears. No values entered either on Student Directory or Student Information panes. | StudentDirectoryPanel loads.  Pop-up dialog states: “Max credits must be a positive number between 3 and 18.”    Pop-up disappeared. No change. |
| 2  Add  Valid  Student  Record | Preconditions: None  Run StudentDirectoryPanel.  Under Student Information, enter:  First Name: Barbara  Last Name: McClintock  ID: bmcclintock  Email: [bmcclintock@ncsu.edu](mailto:bmcclintock@ncsu.edu)  Password: jumpinggenes  Repeat Password: jumpinggenes  Max Credits: 16  Click Add Student.  *Check Results*  Close GUI. | Entry appears under Student Directory:   * First Name: Barbara * Last Name: McClintock * Student ID: bmcclintock   Fields under Student Information have cleared. | Entry appears under Student Directory:   * First Name: Barbara * Last Name: McClintock * Student ID: bmcclintock   Fields under Student Information have cleared. |
| 3  Add multiple Students to Directory | Preconditions: Test 2 has passed.  Under Student Information enter:  First Name: Dorothy  Last Name: Hodgkin  ID: dhodgkin  Email: [dhodgkin@ncsu.edu](mailto:dhodgkin@ncsu.edu)  Password: protein  Repeat Password: protein  Max Credits: 12  Click Add Student.  Under Student Information enter:  First Name: Grace  Last Name: Hopper  ID: ghopper  Email: ghopper@ncsu.edu  Password: compiler  Repeat Password: compiler  Max Credit: 18  Click Add Student button.  *Check Results.*  Close GUI. | 2 Additional Rows have appeared under Student Directory, 3 in total:   * Dorothy, Hodgkin, dhodgkin * Grace, Hopper, ghopper * Barbara, McClintock, bmcclintock   Student Information fields are blank. | Under Student Directory, fields have been added, with students correctly sorted:   * Dorothy, Hodgkin, dhodgkin * Grace, Hopper, ghopper * Barbara, McClintock, bmcclintock   Student Information fields are empty. |
| 4  Attempt to add duplicate student record | Precondition: Tests 2 & 3 have passed.  Under Student Information enter:  First Name: Dorothy  Last Name: Hodgkin  ID: dhodgkin  Email: [dhodgkin@ncsu.edu](mailto:dhodgkin@ncsu.edu)  Password: protein  Repeat Password: protein  Max Credits: 12  Click Add Student button.  *Check Results.*  Click Ok on pop-up dialog.  *Check Results.*  Close GUI. | Pop-up dialog states, “Student already in system.”  Pop-up disappears. Student Information still displays typed input. No addition to Student Directory. | Pop-up dialog states, “Student already in system.”    Pop-up disappears. Student Information still displays typed input. No addition to Student Directory. |
| 5  Attempt to add duplicate student record, differing capitalization | Precondition: Tests 2 & 3 have passed.  Under Student Information enter:  First Name: DOROTHY  Last Name: HODGKIN  ID: DHODGKIN  Email: DHODGKIN@NCSU.EDU  Password: PROTEIN  Repeat Password: PROTEIN  Max Credits: 12  Click Add Student button.  *Check Results.*  Click Ok on pop-up dialog.  *Check Results.*  Close GUI. | Pop-up dialog states, “Student already in system.”  Pop-up disappears. Student Information still displays typed input. No addition to Student Directory. | Pop-up disappears. Typed info still in Student Information. Nothing added to Student Directory. |
| 6  Remove student records, unselected and selected. | Preconditions: Tests 2 & 3 have passed.  With no entry selected in Student Directory, click Remove Student button.  Check Results.  Click OK on Pop-up dialog.  Select Row 1 of Student Directory: Dorothy, Hodgkin, dhodgkin.  Click Remove Student Button.  *Check Results.*  Close GUI. | 1. Pop-up dialog states, “No student selected.” 2. Row 1 is removed from Student Directory.   Student Directory:   * Grace, Hopper, ghopper * Barbara, McClintock, bmcclintock | 1)  2)  Student Directory:   * Grace, Hopper, ghopper * Barbara, McClintock, bmcclintock |
| 7  Empty Directory | Preconditions: Tests 2 & 3 have passed.  Click New Student Directory Button.  *Check Results.* | Student Directory is empty on all fields. | Empty Directory |
| 8  Load Student Directory from file – valid Student Records | Preconditions: none  Open StudentDirectoryPanel.  Click Load Student Directory button.  From test-files, open student\_record.txt  *Check results.*  Don’t close GUI. | 10 records appear in Student Directory.   * 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 | 10 records appear, in correct alphabetical order and with proper formatting. |
| 9  Save Student Records to valid file. | Preconditions: Test 8 has passed.  Click Save Student Directory.  From test-files, choose student\_records.txt. Click Save button.  *Check results*.  Close GUI. | Demetrius,Austin,daustin,Curabitur.egestas.nunc@placeratorcilacus.co.uk,0ÉRú±"ÃùuŸ\_¦Ù\7X²F´þâ9•{-OîFâapÄ,18  Lane,Berg,lberg,sociis@non.org,0ÉRú±"ÃùuŸ\_¦Ù\7X²F´þâ9•{-OîFâapÄ,14  Raymond,Brennan,rbrennan,litora.torquent@pellentesquemassalobortis.ca,0ÉRú±"ÃùuŸ\_¦Ù\7X²F´þâ9•{-OîFâapÄ,12  Emerald,Frost,efrost,adipiscing@acipsumPhasellus.edu,0ÉRú±"ÃùuŸ\_¦Ù\7X²F´þâ9•{-OîFâapÄ,3  Shannon,Hansen,shansen,convallis.est.vitae@arcu.ca,0ÉRú±"ÃùuŸ\_¦Ù\7X²F´þâ9•{-OîFâapÄ,14  Althea,Hicks,ahicks,Phasellus.dapibus@luctusfelis.com,0ÉRú±"ÃùuŸ\_¦Ù\7X²F´þâ9•{-OîFâapÄ,11  Zahir,King,zking,orci.Donec@ametmassaQuisque.com,0ÉRú±"ÃùuŸ\_¦Ù\7X²F´þâ9•{-OîFâapÄ,15  Dylan,Nolan,dnolan,placerat.Cras.dictum@dictum.net,0ÉRú±"ÃùuŸ\_¦Ù\7X²F´þâ9•{-OîFâapÄ,5  Cassandra,Schwartz,cschwartz,semper@imperdietornare.co.uk,0ÉRú±"ÃùuŸ\_¦Ù\7X²F´þâ9•{-OîFâapÄ,4  Griffith,Stone,gstone,porta@magnamalesuadavel.net,0ÉRú±"ÃùuŸ\_¦Ù\7X²F´þâ9•{-OîFâapÄ,17 | student\_records.txt contains correct information with proper formatting:  Demetrius,Austin,daustin,Curabitur.egestas.nunc@placeratorcilacus.co.uk,0ÉRú±"ÃùuŸ\_¦Ù\7X²F´þâ9•{-OîFâapÄ,18  Lane,Berg,lberg,sociis@non.org,0ÉRú±"ÃùuŸ\_¦Ù\7X²F´þâ9•{-OîFâapÄ,14  Raymond,Brennan,rbrennan,litora.torquent@pellentesquemassalobortis.ca,0ÉRú±"ÃùuŸ\_¦Ù\7X²F´þâ9•{-OîFâapÄ,12  Emerald,Frost,efrost,adipiscing@acipsumPhasellus.edu,0ÉRú±"ÃùuŸ\_¦Ù\7X²F´þâ9•{-OîFâapÄ,3  Shannon,Hansen,shansen,convallis.est.vitae@arcu.ca,0ÉRú±"ÃùuŸ\_¦Ù\7X²F´þâ9•{-OîFâapÄ,14  Althea,Hicks,ahicks,Phasellus.dapibus@luctusfelis.com,0ÉRú±"ÃùuŸ\_¦Ù\7X²F´þâ9•{-OîFâapÄ,11  Zahir,King,zking,orci.Donec@ametmassaQuisque.com,0ÉRú±"ÃùuŸ\_¦Ù\7X²F´þâ9•{-OîFâapÄ,15  Dylan,Nolan,dnolan,placerat.Cras.dictum@dictum.net,0ÉRú±"ÃùuŸ\_¦Ù\7X²F´þâ9•{-OîFâapÄ,5  Cassandra,Schwartz,cschwartz,semper@imperdietornare.co.uk,0ÉRú±"ÃùuŸ\_¦Ù\7X²F´þâ9•{-OîFâapÄ,4  Griffith,Stone,gstone,porta@magnamalesuadavel.net,0ÉRú±"ÃùuŸ\_¦Ù\7X²F´þâ9•{-OîFâapÄ,17 |
| 10  Save Student Records to invalid file | Precondition: Test 8 has passed.  In Eclipse, under test-files folder of PackScheduler project, right click on read\_only\_file.txt. Click on Properties. Check box beside Read Only. Click Apply. Click Ok.  Return to StudentDirectoryPanel.  Click Save Student Directory button.  From test-files/ choose read\_only\_file.txt Click Save button.  *Check Results.*  Close GUI. | Pop-up dialog states, “Unable to write to file “ and local path for test-files\read\_only\_file.txt |  |
| 11  Attempt to load invalid Student records | Preconditions: None.  Open StudentDirectoryPanel.  If Student Directory is not clear, click New Student Directory to clear.  Click Load Student Directory button.  From test-files/ select invalid\_student\_records.txt  *Check results.*  Close GUI. | Student Directory pane remains empty. | Student Directory remains empty. |
| 12  Load Student Directory from mixed file | Preconditions: None.  Open StudentDirectoryPanel.  If Student Directory is not clear, click New Student Directory to clear.  From test-files/ select mixed\_valid\_and\_invalid\_student\_records.txt  *Check results.*  Close GUI. | Student Directory displays 4 lines:   * Shannon, Hansen, shansen * Althea, Hicks, ahicks * Dylan, Nolan, dnolan * Griffith, Stone, gstone | Correct four records load with proper formatting and in alphabetical order. |
| 13  Load Student Directory from file with errors | Preconditions: none.  Open StudentDirectoryPanel.  Click Load Student Directory button.  From test-files/ choose nse\_exception\_student\_records.txt.  *Check results.*  Close GUI. | 5 rows display in Student Directory pane:   * Demetrius, Austin, daustin * Raymond, Brennan, rbrennan * Emerald, Frost, efrost * Shannon, Hansen, shansen * Zahir, King, zking | Correct 5 records load, with proper formatting and in alphabetical order. |
| 14  Attempt to load Student Directory from file with incorrect data type | Preconditions: none.  Open StudentDirectoryPanel.  Click Load Student Directory button.  From test-files/ chose numeric.txt.  *Check results.*  Close GUI. | Student Directory remains empty. | Student Directory is empty. |
| 15  Delete Student Records from Student Directory and Save to valid file. | Preconditions: Test 8 passed.  If student\_record.txt is not open in GUI, open it.  Select 1st row: Demetrius, Austin, daustin.  Click Remove Student button.  Select 9th row: Griffith, Stone, gstone.  Click Remove Student button.  Select 4th row: Shannon, Hansen, shansen.  Click Remove Student button.  Click Save Student Directory button.  In test-files/ choose to save to student\_records.txt.  Check results.  Close GUI. | In Eclipse, open student\_records.txt. Should contain 7 rows of Student records:   * Lane,Berg,lberg,sociis@non.org,0ÉRú±"ÃùuŸ\_¦Ù\7X²F´þâ9•{-OîFâapÄ,14 * Raymond,Brennan,rbrennan,litora.torquent@pellentesquemassalobortis.ca,0ÉRú±"ÃùuŸ\_¦Ù\7X²F´þâ9•{-OîFâapÄ,12 * Shannon,Hansen,shansen,convallis.est.vitae@arcu.ca,0ÉRú±"ÃùuŸ\_¦Ù\7X²F´þâ9•{-OîFâapÄ,14 * Althea,Hicks,ahicks,Phasellus.dapibus@luctusfelis.com,0ÉRú±"ÃùuŸ\_¦Ù\7X²F´þâ9•{-OîFâapÄ,11 * Zahir,King,zking,orci.Donec@ametmassaQuisque.com,0ÉRú±"ÃùuŸ\_¦Ù\7X²F´þâ9•{-OîFâapÄ,15 * Dylan,Nolan,dnolan,placerat.Cras.dictum@dictum.net,0ÉRú±"ÃùuŸ\_¦Ù\7X²F´þâ9•{-OîFâapÄ,5 * Cassandra,Schwartz,cschwartz,semper@imperdietornare.co.uk,0ÉRú±"ÃùuŸ\_¦Ù\7X²F´þâ9•{-OîFâapÄ,4 | student\_records.txt has 7 records with proper contents and formatting:  Lane,Berg,lberg,sociis@non.org,0ÉRú±"ÃùuŸ\_¦Ù\7X²F´þâ9•{-OîFâapÄ,14  Raymond,Brennan,rbrennan,litora.torquent@pellentesquemassalobortis.ca,0ÉRú±"ÃùuŸ\_¦Ù\7X²F´þâ9•{-OîFâapÄ,12  Emerald,Frost,efrost,adipiscing@acipsumPhasellus.edu,0ÉRú±"ÃùuŸ\_¦Ù\7X²F´þâ9•{-OîFâapÄ,3  Althea,Hicks,ahicks,Phasellus.dapibus@luctusfelis.com,0ÉRú±"ÃùuŸ\_¦Ù\7X²F´þâ9•{-OîFâapÄ,11  Zahir,King,zking,orci.Donec@ametmassaQuisque.com,0ÉRú±"ÃùuŸ\_¦Ù\7X²F´þâ9•{-OîFâapÄ,15  Dylan,Nolan,dnolan,placerat.Cras.dictum@dictum.net,0ÉRú±"ÃùuŸ\_¦Ù\7X²F´þâ9•{-OîFâapÄ,5  Cassandra,Schwartz,cschwartz,semper@imperdietornare.co.uk,0ÉRú±"ÃùuŸ\_¦Ù\7X²F´þâ9•{-OîFâapÄ,4 |
| 16  Attempt to add Student with incorrect email format | Preconditions: None.  Open StudentDirectoryPanel.  Enter in Student Information:  First Name: Grace  Last Name: Hopper  ID: ghopper  Email: ghopper@ncsuDOTedu  Password: compiler  Password: compiler  Max Credits: 16  Click Add Student.  *Check results.*  Click OK on pop-up.  Enter in Email field of Student Information:  ghopperATncsu.edu  Click Add Student.  *Check results.*  Enter in Email field of Student Information:  ghopperATncsuDOTedu  Click Add Student.  *Check results.*  Close GUI. | 1st check:  Pop-up dialog states, “Invalid email.”  After clicking ok, all fields in Student Directory retain previously typed information.  2nd check:  Pop-up dialog states, “Invalid email.”  After clicking Ok, all fields in Student Directory retain previously typed information.  3rd check:  Pop-up dialog states, “Invalid email.”  After clicking Ok, all fields in Student Directory retain previously typed information. | Appears for all three checks. |
| 17  Attempt to add Student with mismatched passwords | Preconditions: None.  Open PackScheduler.  Under Student Information enter:  First Name: Barbara  Last Name: McClintock  ID: bmcclintock  Email: [bmcclintock@ncsu.edu](mailto:bmcclintock@ncsu.edu)  Password: apples  Password: oranges  Max Credits: 4  Click Add Student button.  Check results.  Close GUI. | Pop-up dialog states, “Passwords do not match.” |  |
| 18  Add partial duplicate Student, different ID | Preconditions: Tests 2 & 3 have passed.  Under Student Information, enter:  First Name: Grace  Last Name: Hopper  ID: gmurray  Email: [ghopper@ncsu.edu](mailto:ghopper@ncsu.edu)  Password: compiler  Repeat Password: compiler  Max Credits: 18 | New Student Record is added to Student Directory:   * Dorothy, Hodgkin, dhodgkin * Grace, Hopper, ghopper * Grace, Hopper, gmurray * Barbara, McClintock, bmcclintock | Student record is added accurately. |
| 19  Add student with multiple errors and correct errors sequentially | Preconditions: None  Open fresh session of StudentDirectoryPanel.  Under Student Information, enter:  First Name: <leave blank>  Last Name: <leave blank>  ID:<leave blank>  Email: ghopperATncsuDOTedu  Password: apples  Repeat Password: oranges  Max Credits: 1042  Click Add Student button  *Check results*.  Click Ok on pop-up.  Change Repeat Password: apples.  Click Add Student button.  *Check results*.  Click Ok.  Change First Name: Grace  Click Add Student button  *Check results*.  Click Ok on pop-up.  Change Last Name: Hopper  Click Add Student button  *Check results*.  Click Ok on pop-up.  Change ID: ghopper  Click Add Student button  *Check results*.  Click Ok on pop-up.  Change Email: [ghopper@ncsu.edu](mailto:ghopper@ncsu.edu)  Click Add Student button  *Check results*.  Click Ok on pop-up.  Change Max Credits to 5.  Click Add Student button  *Check results*. | 1st check: Pop-up dialog states, “Passwords do not match”  2nd check: Pop-up dialog states, “Invalid first name”  3rd check: Pop-up dialog states, “Invalid last name”  4th check: Pop-up dialog states, “Invalid id”  5th check: Pop-up dialog states, “Invalid email”  6th check: Pop-up dialog states, “Invalid max credits”  7th check: Row added to Student Directory:   * Grace, Hopper, ghopper | All pop-ups appear in correct order:              After errors are corrected, student record is properly added to Student Directory.   * Grace, Hopper, ghopper |
| 20 - Attempt to add Student with totally empty Student Information fields and correct sequentially. | Preconditions: Empty Student Directory and Empty Student Information fields.  Open fresh session of StudentDirectoryPanel  Click Add Student button.  *Check Results (1).*  Click Ok on pop-up.  Change Max Credits to 6.  Click Add Student button.  *Check results (2).*  Click OK on pop-up.  Change Password to “protein”. Leave Repeat Password field empty.  Click Add Student button.  *Check results (3).*  Click OK on pop-up.  Change Repeat Password to “protein”.  Click Add Student button.  *Check results (4).*  Click OK on pop-up.  Change First Name to “Dorothy”.  Click Add Student button.  *Check results(5).*  Click OK on pop-up.  Change Last Name to “Hodgkin”.  Click Add Student button.  *Check results (6).*  Click OK on pop-up.  Change id to “dhodgkin”.  Click Add Student button.  *Check results(7).*  Click OK on pop-up.  Change Email to [dhodgkin@ncsu.edu](mailto:dhodgkin@ncsu.edu).  Click Add Student button.  *Check results(8).*  Close GUI. | 1st check: Pop-up states, “Max credits must be a positive number between 3 and 18”  2nd check: Pop-up states, “Invalid password”  3rd check: Pop-up states, “Invalid password”  4th check: Pop-up states, “Invalid first name”  5th check: Pop-up states,  “Invalid last name”  6th check: Pop-up states, “Invalid id”  7th check: Pop-up states,  “Invalid email”  8th check: Row added to Student Directory:   * Dorothy, Hodgkin, dhodgkin | 1st    2nd  3rd    4th    5th    6th    7th    8th Student properly added to Student Directory. |
| 21 – Check if adding whitespace in ID field allows for unintentional duplicates | Precondition: Tests 4, 5, 18, & 20 passed.  Under Student Information, enter:  First Name: “Dorothy”  Last Name: “Hodgkin”  ID: “ dhodgkin” (note leading whitespaces)  Email: [dhodgkin@ncsu.edu](mailto:dhodgkin@ncsu.edu)  Password: protein  Repeat Password: protein  Max Credits: 6  Click Add Student button.  *Check results.*  Click OK on pop-up.  Change ID to “dhodgkin “ (Note whitespaces at end)  Click Add Student button.  *Check results.* | 1st check: Pop-up states, “Student already in system.”  Row not added to Student Directory.  2nd check: Pop-up states, “Student already in system.”  Row not added to Student Directory. | 1st check:    2nd check: |
| 22 –  Test boundaries and various values for Max Credits | Preconditions: Empty Student Directory  Open StudentDirectoryPanel.  Under Student Directory enter:  First Name: Grace  Last Name: Hopper  ID: ghopper  Email: [ghopper@ncsu.edu](mailto:ghopper@ncsu.edu)  Password: compiler  Repeat Password: compiler  Max Credits: -42  Click Add Student button.  *Check results.* (1)  Click OK on pop-up.  Change Max Credits to -5000  Click Add Student button.  *Check results.* (2)  Click OK on pop-up.  Change Max Credits to -3  Click Add Student button.  *Check results.* (3)  Click OK on pop-up.  Change Max Credits to 5000  Click Add Student button.  *Check results.* (4)  Click OK on pop-up.  Change Max Credits to 0  Click Add Student button.  *Check results.* (5)  Click OK on pop-up.  Change Max Credits to 2  Click Add Student button.  *Check results.* (6)  Click OK on pop-up.  Change Max Credits to 19  Click Add Student button.  *Check results.* (7)  Click OK on pop-up.  Change Max Credits to 3.14159  Click Add Student button.  *Check results.* (8)  Click OK on pop-up.  Change Max Credits to 10.0  Click Add Student button.  *Check results.* (9)  Click OK on pop-up.  Change Max Credits to 2.99  Click Add Student button.  *Check results.* (10)  Click OK on pop-up.  Change Max Credits to 3  Click Add Student button.  *Check results.* (11)  Under Student Information enter:  First Name: Barbara  Last Name: McClintock  ID: bmcclintock  Email: [bmcclintock@ncsu.edu](mailto:bmcclintock@ncsu.edu)  Password: jumpinggenes  Repeat Password: jumpinggenes  Max Credits: 18  Click Add Student Button.  *Check results.* (12)  Close GUI. | 1st check: Pop-up dialog states, “Invalid max credits”  2nd check: Pop-up dialog states, “Invalid max credits”  3rd check: Pop-up dialog states, “Invalid max credits”  4th check: Pop-up dialog states, “Invalid max credits”  5th check: Pop-up dialog states, “Invalid max credits”    6th check: Pop-up dialog states, “Invalid max credits”  7th check: Pop-up dialog states, “Invalid max credits”  8th check: Pop-up dialog states, “Max credits must be a positive number between 3 and 18.”  9th check: Pop-up dialog states, “Max credits must be a positive number between 3 and 18.”  10th check: Pop-up dialog states, “Max credits must be a positive number between 3 and 18.”  11th check: Row added to Student Directory:   * Grace, Hopper, ghopper   12th check: Row added to Student Directory:   * Barbara, McClintock, bmcclintock | 1st – 7th check:    8th-10th check:    11th check:  Student added in correct format:  Grace, Hopper, ghopper  12th check:  Student added in correct format, under Student Directory:  Grace, Hopper, ghopper  Barbara, McClintock, bmcclintock |
| 23 –  Test for short and long passwords | Preconditions: None.  Open fresh version of StudentDirectoryPanel.  Under Student Information enter:  First Name: Grace  Last Name: Hopper  ID: ghopper  Email: [ghopper@ncsu.edu](mailto:ghopper@ncsu.edu)  Password: b  Repeat Password: b  Max Credits: 11  Click Add Student button.  *Check results.*  Clear Student Directory by clicking New Student Directory button.  Under Student Information enter:  First Name: Grace  Last Name: Hopper  ID: ghopper  Email: [ghopper@ncsu.edu](mailto:ghopper@ncsu.edu)  Password:  Blahblahblahblahblahblahblahblahblahblahblahblahblahblahblahblahblahblahblahblahblahblahblahblahblahblahblahblahblahblahblahblahblahblahblahblahblahblahblahblahblahblahblahblahblahblahblahblah  Repeat Password:  Blahblahblahblahblahblahblahblahblahblahblahblahblahblahblahblahblahblahblahblahblahblahblahblahblahblahblahblahblahblahblahblahblahblahblahblahblahblahblahblahblahblahblahblahblahblahblahblah  Max Credits: 11  Click Add Student button.  *Check results.* | In both cases, the Student should be added to the Student Directory:   * Grace, Hopper, ghopper | Student is properly added both times to Student Directory:   * Grace, Hopper, ghopper |