# Lab 02: System Test Plan

## Test Overview.

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| **Test ID** | **Description** | **Expected Results** | **Actual Results** |
| Test1:  Load Student directory | Run the StudentDirectoryPanel.java  Click on “Load Student Directory”  Select “student\_records.txt” from the test-files folder. | The student directory gets populated with the following 10 student records:  Althea,Hicks,ahicks,Phasellus.dapibus@luctusfelis.com,MMlS+rEiw/l1nwKm2Vw3WLJGtP7iOZV7LU/uRuJhcMQ=,11  Cassandra,Schwartz,cschwartz,semper@imperdietornare.co.uk,MMlS+rEiw/l1nwKm2Vw3WLJGtP7iOZV7LU/uRuJhcMQ=,4  Demetrius,Austin,daustin,Curabitur.egestas.nunc@placeratorcilacus.co.uk,MMlS+rEiw/l1nwKm2Vw3WLJGtP7iOZV7LU/uRuJhcMQ=,18  Dylan,Nolan,dnolan,placerat.Cras.dictum@dictum.net,MMlS+rEiw/l1nwKm2Vw3WLJGtP7iOZV7LU/uRuJhcMQ=,5  Emerald,Frost,efrost,adipiscing@acipsumPhasellus.edu,MMlS+rEiw/l1nwKm2Vw3WLJGtP7iOZV7LU/uRuJhcMQ=,3  Griffith,Stone,gstone,porta@magnamalesuadavel.net,MMlS+rEiw/l1nwKm2Vw3WLJGtP7iOZV7LU/uRuJhcMQ=,17  Lane,Berg,lberg,sociis@non.org,MMlS+rEiw/l1nwKm2Vw3WLJGtP7iOZV7LU/uRuJhcMQ=,14  Raymond,Brennan,rbrennan,litora.torquent@pellentesquemassalobortis.ca,MMlS+rEiw/l1nwKm2Vw3WLJGtP7iOZV7LU/uRuJhcMQ=,12  Shannon,Hansen,shansen,convallis.est.vitae@arcu.ca,MMlS+rEiw/l1nwKm2Vw3WLJGtP7iOZV7LU/uRuJhcMQ=,14  Zahir,King,zking,orci.Donec@ametmassaQuisque.com,MMlS+rEiw/l1nwKm2Vw3WLJGtP7iOZV7LU/uRuJhcMQ=,15 | **After the “student\_records.txt” file is selected the Student Directory fills up with the contents of the student\_records file in alphabetical order based on the first name:**  Althea,Hicks,ahicks,Phasellus.dapibus@luctusfelis.com,MMlS+rEiw/l1nwKm2Vw3WLJGtP7iOZV7LU/uRuJhcMQ=,11  Cassandra,Schwartz,cschwartz,semper@imperdietornare.co.uk,MMlS+rEiw/l1nwKm2Vw3WLJGtP7iOZV7LU/uRuJhcMQ=,4  Demetrius,Austin,daustin,Curabitur.egestas.nunc@placeratorcilacus.co.uk,MMlS+rEiw/l1nwKm2Vw3WLJGtP7iOZV7LU/uRuJhcMQ=,18  Dylan,Nolan,dnolan,placerat.Cras.dictum@dictum.net,MMlS+rEiw/l1nwKm2Vw3WLJGtP7iOZV7LU/uRuJhcMQ=,5  Emerald,Frost,efrost,adipiscing@acipsumPhasellus.edu,MMlS+rEiw/l1nwKm2Vw3WLJGtP7iOZV7LU/uRuJhcMQ=,3  Griffith,Stone,gstone,porta@magnamalesuadavel.net,MMlS+rEiw/l1nwKm2Vw3WLJGtP7iOZV7LU/uRuJhcMQ=,17  Lane,Berg,lberg,sociis@non.org,MMlS+rEiw/l1nwKm2Vw3WLJGtP7iOZV7LU/uRuJhcMQ=,14  Raymond,Brennan,rbrennan,litora.torquent@pellentesquemassalobortis.ca,MMlS+rEiw/l1nwKm2Vw3WLJGtP7iOZV7LU/uRuJhcMQ=,12  Shannon,Hansen,shansen,convallis.est.vitae@arcu.ca,MMlS+rEiw/l1nwKm2Vw3WLJGtP7iOZV7LU/uRuJhcMQ=,14  Zahir,King,zking,orci.Donec@ametmassaQuisque.com,MMlS+rEiw/l1nwKm2Vw3WLJGtP7iOZV7LU/uRuJhcMQ=,15 |
| Test 2: Reset Student Directory | Precondition: Test 1 passes  Click on ” New Student Directory” | The student directory table gets empty i.e., all the 10 student record inputs are gone. | **The “New Student Directory” button helps us reset the “Student Directory” table as a result after clicking this button the table has no contents.** |
| Test 3:  Add new student to the directory | Enter the following in the student information section:  First name: Zoe  Last name: Williams  ID: zwilliams  Email: [zwilliam@ncsu.edu](mailto:zwilliam@ncsu.edu)  Password: zoe891  Repeat password: zoe891  Max Credits: 12  Click “Add student”. | The student directory table gets updated with the following information and places :  Zoe,Williams,zwilliams | **After typing in the given information in the Student Information section and clicking the “Add Student” button we see that the student with their first name, last name, and Student ID appears in the Student Directory table.**  Zoe,Williams,zwilliams |
| Test 4:  Adding the same student again | Precondition: Test 3 passes  Enter the following in the student information section:  First name: Zoe  Last name: Williams  ID: zwilliams  Email: [zwilliam@ncsu.edu](mailto:zwilliam@ncsu.edu)  Password: zoe891  Repeat password: zoe891  Max Credits: 12  Click “Add student”. | A message shows up saying “Student already exists in system.” | **After typing in the following information in the Student Information section and trying to add it to the student directory table we see that it does not get added because we already have a student in the table with the same first & last name.** |
| Test 5:  Adding multiple students | Precondition: Test 4 passes  Enter the following in the student information section:  First name: Brent  Last name: Holland  ID: bHolland  Email: [bHolland@ncsu.edu](mailto:bHolland@ncsu.edu)  Password: brent872  Repeat password: brent872  Max Credits: 14  Click “Add student”.  First name: Lily  Last name: Beth  ID: lBeth  Email: [lBeth@ncsu.edu](mailto:lBeth@ncsu.edu)  Password: lily872  Repeat password: lily872  Max Credits: 10  Click “Add student”. | The student directory is now filled up with the following information:  Brent, Holland, bHolland  Lily, Beth, lBeth  Zoe, Williams, zwilliams | **Even though the name zoe is entered before brent the student directory places the name brent before zoe because of alphabetical order of first name and hence the Student Directory has the following contents:**  Brent, Holland, bHolland  Lily, Beth, lBeth  Zoe, Williams, zwilliams |
| Test 6:  Incorrect repeat password | Enter the following in the student information section:  First name: Robert  Last name: Davis  ID: rDavis  Email: [rDavis@ncsu.edu](mailto:rDavis@ncsu.edu)  Password: robert872  Repeat password: robert870  Max Credits: 16  Click “Add student”. | A message dialog pops up saying “Passwords do not match” | **Since the password and repeat password need to be the same, if the user enters different passwords for both of those inputs then the system gives an error saying that the passwords do not match.** |
| Test 7:  Invalid first name | Enter the following in the student information section:  First name:  Last name: Davis  ID: rDavis  Email: [rDavis@ncsu.edu](mailto:rDavis@ncsu.edu)  Password: robert872  Repeat password: robert872  Max Credits: 12  Click “Add student”. | A message dialog pops up saying “Invalid first name” | **Since no input has been provided for the first name, the input is considered to be null or an empty string as a result of which an error message pops up saying “Invalid first name”.** |
| Test 8:  Invalid email | Enter the following in the student information section:  First name: Robbie  Last name: Charles  ID: rcharles  Email: [rcharles](mailto:rDavis@ncsu.edu)2ncsu  Password: charles  Repeat password: charles  Max Credits: 12  Click “Add student”. | A message dialog pops up saying “Invalid email” | **Since no input has been provided for the email, the input is considered to be null or an empty string as a result of which an error message pops up saying “Invalid email”.** |
| Test 9:  Invalid last name | Enter the following in the student information section:  First name: Robin  Last name:  ID: rWilliams  Email: [rWilliams@ncsu.edu](mailto:rWilliams@ncsu.edu)  Password: robin872  Repeat password: robin872  Max Credits: 17  Click “Add student”. | A message dialog pops up saying “Invalid last name” | **Since no input has been provided for the last name, the input is considered to be null or an empty string as a result of which an error message pops up saying “Invalid last name”.** |
| Test 10:  Invalid ID | Enter the following in the student information section:  First name: Wendy  Last name: Wilson  ID:  Email: [wWilson@ncsu.edu](mailto:wWilson@ncsu.edu)  Password: wendy872  Repeat password: wendy872  Max Credits: 17  Click “Add student”. | A message dialog pops up saying “Invalid id” | **Since no input has been provided for the id, the input is considered to be null or an empty string as a result of which an error message pops up saying “Invalid id”.** |
| Test 11:  Invalid max credits | Enter the following in the student information section:  First name: Wendy  Last name: Wilson  ID: wWilson  Email: [wWilson@ncsu.edu](mailto:wWilson@ncsu.edu)  Password: wendy872  Repeat password: wendy872  Max Credits: 19  Click “Add student”. | This student record does get added to the “Student Directory” table:  Brent, Holland, bHolland  Lily, Beth, lBeth  Wendy, Wilson, wWilson  Zoe, Williams, zwilliams | **This student record, even though has 19 max credits get added to the Student Directory table since if an invalid integer is entered for the max credits the system sets it default to 18. Hence as a result the table has the following contents:**  Brent, Holland, bHolland  Lily, Beth, lBeth  Wendy, Wilson, wWilson  Zoe, Williams, zwilliams |
| Test 12:  Remove a student | Precondition: Test 11 and 5 pass  Select “Wendy Williams, wWilson” from the student directory table.  Then click “Remove Student”. | The record gets removed and now the table’s contents are as follows:  Brent, Holland, bHolland  Lily, Beth, lBeth  Zoe, Williams, zwilliams | **After selecting the “Wendy Williams” record from the student directory table and clicking the “Remove Student” button we see that the selected student record gets removed. As a result the contents of the student directory table are:**  Brent, Holland, bHolland  Lily, Beth, lBeth  Zoe, Williams, zwilliams |
| Test 13:  Invalid email (with incorrect placement of “.” & @) | Enter the following in the student information section:  First name: Amy  Last name: Jacobs  ID: AJacobs  Email: Amy.Jacobs@ncsuedu  Password: amy872  Repeat password: amy872  Max Credits: 15  Click “Add student”. | A message dialog pops up saying “Invalid email” | **Since an invalid input has been provided for the email i.e., the last index of the “.” Is less than the index of “@” the input is considered to be invalid as a result of which an error message pops up saying “Invalid email”.** |
| Test 14:  Invalid password | Enter the following in the student information section:  First name: Amy  Last name: Jacobs  ID: AJacobs  Email: Amy.Jacobs@ncsuedu  Password:  Repeat password: amy872  Max Credits: 15  Click “Add student”. | A message dialog pops up saying “Invalid password” | **Since no input has been provided for the password, the input is considered to be null or an empty string as a result of which an error message pops up saying “Invalid password”.** |
| Test 15:  Save student directory | Preconditions: Tests 5, 11, and 12 pass  Click on “Save Student Directory”  In the dialog box that pops up save the newly created student directory under the file name “new\_student\_records.txt” in the test-files folder. | The record gets removed and now the table’s contents are as follows:  Brent, Holland, bHolland  Lily, Beth, lBeth  Zoe, Williams, zwilliams | **The “Save Student Directory” button helps us save the current student directory to a new file or overwrite any files that might be already there. After clicking on this button, a dialog box opens up where we can type in the given file name and save it in the test-files folder. The names of the student are arranged in alphabetical order of first name:**  Brent, Holland, bHolland  Lily, Beth, lBeth  Zoe, Williams, zwilliams |
| Test 16: Course Catalog view | PackSchedulerGUI has loaded  Registrar user is logged in (T2).  Click **Course Catalog** | Course Catalog functionality displayed and empty | **Course catalog appears correctly** |
| Test 17: Load Course Catalog | Preconditions: Test 16 passes  Click **Load Course Catalog**  Select **test-files/course\_records.txt**  Click **Select** | 13 courses are listed:   * CSC116, 001, Intro to Programming - Java ,MW,0910-1100, 10 open seats * CSC116, 002, Intro to Programming - Java, , MW,1120,1310, 10 open seats * CSC116, 003, Intro to Programming - Java, TH 1120-1310, 10 open seats * CSC216, 001, Software Development Fundamentals, TH 1330-1445, 10 open seats * CSC216, 002, Software Development Fundamentals, MW 1330-1445, 10 open seats * CSC216, 601, Software Development Fundamentals, Arranged, 10 open seats * CSC217, 202, Software Development Fundamentals Lab, M 1040-1230, 10 open seats * CSC217, 211, Software Development Fundamentals Lab, T 830-1020, 10 open seats * CSC217, 223, Software Development Fundamentals Lab, W 1500-1650, 10 open seats * CSC217, 601, Software Development Fundamentals Lab, Arranged, 10 open seats * CSC226, 001, Discrete Mathematics for Computer Scientists, MWF 935-1025, 10 open seats * CSC230, 001, C and Software Tools, MW 145-1300, 10 open seats * CSC316, 001, Data Structures and Algorithms, MW 830-945, 10 open seats | 13 courses are listed starting with CSC116-001 and ending with CSC316-001, all display 10 open seats. |
| Test 18: Add Invalid Course - no name | Preconditions: Test 16 passes  Enter the following in the Course Information section:   * Course Name: * Course Title: **Computer Organization and Assembly Language** * Course Section: **001** * Credits: **3** * Instructor Id: **freeh** * Enrollment Cap: **10** * Start Time: **10:15 AM** * End Time: **11:30 AM** * Meeting Days: **Tuesday & Thursday**   Click **Add Course**  Click **OK** | Error Message: Invalid course name | Error Message: Invalid course name  Course is not added to the catalog. |
| Test 19: Add Invalid Course - no title | Preconditions: Test 16 passes  Enter the following in the Course Information section:   * Course Name: **CSC236** * Course Title: * Course Section: **001** * Credits: **3** * Instructor Id: **freeh** * Enrollment Cap: **10** * Start Time: **10:15 AM** * End Time: **11:30 AM** * Meeting Days: **Tuesday & Thursday**   Click **Add Course**  Click **OK** | Error Message: Invalid course title | Error Message: Invalid course title.  Course is not added to the catalog. |
| Test 20: Add Invalid Course - no section | Preconditions: Test 16 passes  Enter the following in the Course Information section:   * Course Name: **CSC236** * Course Title: **Computer Organization and Assembly Language** * Course Section: * Credits: **3** * Instructor Id: **freeh** * Enrollment Cap: **10** * Start Time: **10:15 AM** * End Time: **11:30 AM** * Meeting Days: **Tuesday & Thursday**   Click **Add Course**  Click **OK** | Error Message: Invalid section number | Error Message: Invalid section.  Course is not added to the catalog. |
| Test 21: Add Invalid Course - section too short | Preconditions: Test 16 passes  Enter the following in the Course Information section:   * Course Name: **CSC236** * Course Title: **Computer Organization and Assembly Language** * Course Section: **0011** * Credits: **3** * Instructor Id: **freeh** * Enrollment Cap: **10** * Start Time: **10:15 AM** * End Time: **11:30 AM** * Meeting Days: **Tuesday & Thursday**   Click **Add Course**  Click **OK** | Error Message: Invalid section number | Error Message: Invalid section.  Course is not added to the catalog. |
| Test 22: Add Invalid Course - section too long | Preconditions: Test 16 passes  Enter the following in the Course Information section:   * Course Name: **CSC236** * Course Title: **Computer Organization and Assembly Language** * Course Section: **01** * Credits: **3** * Instructor Id: **freeh** * Enrollment Cap: **10** * Start Time: **10:15 AM** * End Time: **11:30 AM** * Meeting Days: **Tuesday & Thursday**   Click **Add Course**  Click **OK** | Error Message: Invalid section number | Error Message: Invalid section.  Course is not added to the catalog. |
| Test 23: Add Invalid Course - no instructor id | Preconditions: Test 16 passes  Enter the following in the Course Information section:   * Course Name: **CSC236** * Course Title: **Computer Organization and Assembly Language** * Course Section: **001** * Credits: **3** * Instructor Id: * Enrollment Cap: **10** * Start Time: **10:15 AM** * End Time: **11:30 AM** * Meeting Days: **Tuesday & Thursday**   Click **Add Course**  Click **OK** | Error Message: Invalid instructor unity id | Error Message: Invalid instructor id.  Course is not added to the catalog. |
| Test 24: Add Invalid Course - end time after start time | Preconditions: Test 16 passes  Enter the following in the Course Information section:   * Course Name: **CSC236** * Course Title: **Computer Organization and Assembly Language** * Course Section: **001** * Credits: **3** * Instructor Id: **freeh** * Enrollment Cap: **10** * Start Time: **11:30 AM** * End Time: **10:15 AM** * Meeting Days: **Tuesday & Thursday**   Click **Add Course**  Click **OK** | Error Message: Invalid meeting times | Error Message: Invalid meeting times.  Course is not added to the catalog. |
| Test 25: Add Invalid Course - no meeting days | Preconditions: Test 16 passes  Enter the following in the Course Information section:   * Course Name: **CSC236** * Course Title: **Computer Organization and Assembly Language** * Course Section: **001** * Credits: **3** * Instructor Id: **freeh** * Enrollment Cap: **10** * Start Time: **10:15 AM** * End Time: **11:30 AM** * Meeting Days:   Click **Add Course**  Click **OK** | Error Message: Invalid meeting days | Error Message: Invalid meeting days and times.  Course is not added to the catalog. |
| Test 26: Add Course - end | Preconditions: Test 16 passes  Enter the following in the Course Information section:   * Course Name: **CSC236** * Course Title: **Computer Organization and Assembly Language** * Course Section: **001** * Credits: **3** * Instructor Id: **freeh** * Enrollment Cap: **10** * Start Time: **10:15 AM** * End Time: **11:30 AM** * Meeting Days: **Tuesday & Thursday**   Click **Add Course**  Click **OK** | CSC236-001 is added to the list following CSC230-001, CSC 316 is the last course in the catalog. | CSC236-001 is added to the list following CSC230-001, CSC 316 is the last course in the catalog. |
| T27: Add Course - front | Preconditions: Test 16 passes  Enter the following in the Course Information section:   * Course Name: **CSC113** * Course Title: **MATLAB** * Course Section: **001** * Credits: **3** * Instructor Id: **tbdimitr** * Enrollment Cap: **250** * Start Time: **3:00 PM** * End Time: **3:50 PM** * Meeting Days: **Monday & Wednesday**   Click **Add Course**  Click **OK** | CSC113-001 is added to the list at the front and is followed by CSC116-001. | CSC113-001 is added to the list at the front and is followed by CSC116-001. It has 250 open seats. |
| T34: Add Course - middle | Preconditions: Test 16 passes  Enter the following in the Course Information section:   * Course Name: **CSC116** * Course Title: **Introduction to Programming - Java** * Course Section: **006** * Credits: **3** * Instructor Id: **jdyoung2** * Enrollment Cap: **33** * Start Time: **10:40 AM** * End Time: **12:30 PM** * Meeting Days: **Tuesday & Thursday**   Click **Add Course**  Click **OK** | CSC116-006 is added to the list between CSC116-003 and CSC216-001. | CSC116-006 is added to the list between CSC116-003 and CSC216-001.  It has 33 open seats. |
| T28: Remove Course - no selection | Preconditions: Test 16 passes  Click **Remove Course** | Error Message: No course selected | Error Message: No course selected  Nothing is removed. |
| T29: Remove Course - middle | Preconditions: Test 16 passes  Select **CSC216-001**  Click **Remove Course** | CSC216-001 is removed. CSC116-006 is followed by CSC216-002. | CSC216-001 is removed.  CSC116-006 is followed by CSC216-002. |