# Lab 05: Black Box Test Plan

## Test Overview

To run the tests:

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

All tests files should be located in the test-files/ folder.

The project should have a registrar.properties file that contain values for the following properties:

first=

last=

id=

email=

pw=

The values should be substituted in the tests below as appropriate for the local copy of the registrar.properties file.

If you run all tests independently, you can close the GUI between each test. However, the tests are structured so that they may be run in order without shutting down the GUI.

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| **Test ID** | **Description** | **Expected Results** | **Actual Results** |
| T1: Invalid Login | Preconditions: PackSchedulerGUI has loaded  User ID: **lberg**  Password: **pw**  Click **Login**  Click **OK**  Click **Clear** | Pop up with message “User doesn’t exist.”  User ID and password text fields are cleared. | **The pop-up dialog box appears with the test “User doesn’t exist”** |
| T2: Registrar Login | Preconditions: PackSchedulerGUI has loaded  User ID: **registrar.properties.id**  Password: **registrar.properties.pw**  Click **Login** | View switches to Registrar panel with Student Directory functionality displayed | **The view switches to the Registrar panel with the modules Directory Buttons, Student Directory, Student Controls, and Student Information.** |
| T3: Load Student Directory | Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2)  Click **Load Student Directory**  Select **test-files/student\_records.txt**  Click **Select** | 10 students are listed in alphabetical order by last name. The list starts with Demetrius Austin and ends with Griffith Stone. | **The 10 student are listed in alphabetical order in the Student Directory module, starting with Demtrius Austin and ending with Griffith Stone.** |
| T4: Add Invalid Student - no first name | Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T3 has run.  Enter the following in the Student Information section:   * First Name: * Last Name: **Wilkins** * ID: **pwilkins** * Email: **pwilkins@ncsu.edu** * Password: **pw** * Repeat Password: **pw** * Max Credits: **15**   Click **Add Student**  Click **OK** | Error Message: Invalid first name | **The pop-up dialog box appears with the message “Invalid first name”.** |
| T5: Add Invalid Student - no last name | Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T3 has run.  Enter the following in the Student Information section:   * First Name: **Patience** * Last Name: * ID: **pwilkins** * Email: **pwilkins@ncsu.edu** * Password: **pw** * Repeat Password: **pw** * Max Credits: **15**   Click **Add Student**  Click **OK** | Error Message: Invalid last name | **The pop-up dialog box appears with the message “Invalid last name”** |
| T6: Add Invalid Student - no id | Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T3 has run.  Enter the following in the Student Information section:   * First Name: **Patience** * Last Name: **Wilkins** * ID: * Email: **pwilkins@ncsu.edu** * Password: **pw** * Repeat Password: **pw** * Max Credits: **15**   Click **Add Student**  Click **OK** | Error Message: Invalid id | **The pop-up dialog box appears with the message “Invalid id”.** |
| T7: Add Invalid Student - no email | Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T3 has run.  Enter the following in the Student Information section:   * First Name: **Patience** * Last Name: **Wilkins** * ID: **pwilkins** * Email: * Password: **pw** * Repeat Password: **pw** * Max Credits: **15**   Click **Add Student**  Click **OK** | Error Message: Invalid email | **The pop-up dialog box appears with the message “Invalid email”.** |
| T8: Add Invalid Student - invalid email | PPreconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T3 has run.  Enter the following in the Student Information section:   * First Name: **Patience** * Last Name: **Wilkins** * ID: **pwilkins** * Email: **pwilkinsncsu.edu** * Password: **pw** * Repeat Password: **pw** * Max Credits: **15**   Click **Add Student**  Click **OK** | Error Message: Invalid email | **The pop-up dialog box appears with the message “Invalid email”.** |
| T9: Add Invalid Student - passwords don’t match | Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T3 has run.  Enter the following in the Student Information section:   * First Name: **Patience** * Last Name: **Wilkins** * ID: **pwilkins** * Email: **pwilkins@ncsu.edu** * Password: **pw1** * Repeat Password: **pw** * Max Credits: **15**   Click **Add Student**  Click **OK** | Error Message: Passwords do not match | **The pop-up dialog box appears with the message “Passwords do not match”.** |
| T10: Add Invalid Student - zero max credits | Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T3 has run.  Enter the following in the Student Information section:   * First Name: **Patience** * Last Name: **Wilkins** * ID: **pwilkins** * Email: **pwilkins@ncsu.edu** * Password: **pw** * Repeat Password: **pw** * Max Credits: **0**   Click **Add Student**  Click **OK** | Student added with max credits of 18. | **The Student Patience Wilkins is added to the bottom of the list that shows in Student Directory. When I save the student directory to a new file, I see that the student was added with 18 max credits.** |
| T11: Add Invalid Student - 11 max credits | Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T3 has run.  Enter the following in the Student Information section:   * First Name: **Patience** * Last Name: **Wilkins** * ID: **pwilkins** * Email: **pwilkins@ncsu.edu** * Password: **pw** * Repeat Password: **pw** * Max Credits: **19**   Click **Add Student**  Click **OK** | Student added with max credits of 18 | **The Student Patience Wilkins is added to the bottom of the list that shows in Student Directory. When I save the student directory to a new file, I see that the student was added with 18 max credits.** |
| T12: Add Student - end | Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T3 has run.  Enter the following in the Student Information section:   * First Name: **Patience** * Last Name: **Wilkins** * ID: **pwilkins** * Email: **pwilkins@ncsu.edu** * Password: **pw** * Repeat Password: **pw** * Max Credits: **15**   Click **Add Student**  Click **OK** | Patience Wilkins is added to the Student Directory and is the last student in the list. | **The student Patience Wilkins is added to the bottom of the Student Directory list** |
| T13: Add Student - middle | Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T3 has run.  Enter the following in the Student Information section:   * First Name: **Rylee** * Last Name: **Puckett** * ID: **rpuckett** * Email: **rpuckett@ncsu.edu** * Password: **pw** * Repeat Password: **pw** * Max Credits: **15**   Click **Add Student**  Click **OK** | Rylee Puckett is added to the Student Directory between Dylan Nolan and Cassandra Schwartz | **The student Rylee Puckett is added to the Student Directory as the 9th student, in between Dylan Nolan and Cassandra Schwartz** |
| T14: Add Student - front | Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T3 has run.  Enter the following in the Student Information section:   * First Name: **Melvin** * Last Name: **Acevedo** * ID: **macevedo** * Email: **macevedo@ncsu.edu** * Password: **pw** * Repeat Password: **pw** * Max Credits: **15**   Click **Add Student**  Click **OK** | Melvin Acevedo is added to the Student Directory and is the first student in the list. | **The student Malvin Acevedo is added to the Student Directory as the 1st student in the list.** |
| T15: Remove Student - no selection | Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2).  Click **Remove Student** | Error Message: No student selected | **The pop-up dialog box appears with the message “No student selected.”.** |
| T16: Remove Student - middle | Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2).  Select **Shannon Hansen**  Click **Remove student** | Shannon Hansen is removed. Athea Hicks follows Emerald Frost in the list | **The student Shannon Hansen is removed from the list. The Student Directory list now shows Emerald Frost following Athea Hicks.** |
| T17: Remove Student - front | Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T14 has run.  Select **Melvin Acevedo**  Click **Remove student** | Melvin Acevedo is removed. Demetrius Austin is front of the directory | **The student Melvin Acevedo is removed from the Student Directory list, which now starts with Demetrius Austin.** |
| T18: Remove Student - back | Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T12 has run.  Select **Patience Wilkins**  Click **Remove student** | Patience Wilkins is removed. Griffith Stone is last in the directory | **The student Patience Wilkins is removed and the Student Directory list now ends with Griffith Stone.** |
| T19: Save Student Directory | Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T12-T18 have run.  Click **Save Student Directory**  Select **test-files** directory and name the file **t19\_student\_directory.txt**. | Contents should be (note that the password hash may be different due to encoding):  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  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  Rylee,Puckett,rpuckett,rpuckett@ncsu.edu,0ÉRú±"ÃùuŸ¦Ù\7X²F´þâ9•{-OîFâapÄ,15  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 | **The contents of the file t19\_student\_directory.txt are as follows:  Demetrius,Austin,daustin,Curabitur.egestas.nunc@placeratorcilacus.co.uk,MMlS+rEiw/l1nwKm2Vw3WLJGtP7iOZV7LU/uRuJhcMQ=,18**  **Lane,Berg,lberg,sociis@non.org,MMlS+rEiw/l1nwKm2Vw3WLJGtP7iOZV7LU/uRuJhcMQ=,14**  **Raymond,Brennan,rbrennan,litora.torquent@pellentesquemassalobortis.ca,MMlS+rEiw/l1nwKm2Vw3WLJGtP7iOZV7LU/uRuJhcMQ=,12**  **Emerald,Frost,efrost,adipiscing@acipsumPhasellus.edu,MMlS+rEiw/l1nwKm2Vw3WLJGtP7iOZV7LU/uRuJhcMQ=,3**  **Althea,Hicks,ahicks,Phasellus.dapibus@luctusfelis.com,MMlS+rEiw/l1nwKm2Vw3WLJGtP7iOZV7LU/uRuJhcMQ=,11**  **Zahir,King,zking,orci.Donec@ametmassaQuisque.com,MMlS+rEiw/l1nwKm2Vw3WLJGtP7iOZV7LU/uRuJhcMQ=,15**  **Dylan,Nolan,dnolan,placerat.Cras.dictum@dictum.net,MMlS+rEiw/l1nwKm2Vw3WLJGtP7iOZV7LU/uRuJhcMQ=,5**  **Rylee,Puckett,rpuckett,rpuckett@ncsu.edu,MMlS+rEiw/l1nwKm2Vw3WLJGtP7iOZV7LU/uRuJhcMQ=,15**  **Cassandra,Schwartz,cschwartz,semper@imperdietornare.co.uk,MMlS+rEiw/l1nwKm2Vw3WLJGtP7iOZV7LU/uRuJhcMQ=,4**  **Griffith,Stone,gstone,porta@magnamalesuadavel.net,MMlS+rEiw/l1nwKm2Vw3WLJGtP7iOZV7LU/uRuJhcMQ=,17** |
| T20: New Student Directory | Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T12-T18 have run.  Click **New Student Directory** | An empty student directory is shown. | **The Student Directory is now blank** |
| T21: Add Student - first | Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T20 has run.  Enter the following in the Student Information section:   * First Name: **Patience** * Last Name: **Wilkins** * ID: **pwilkins** * Email: **pwilkins@ncsu.edu** * Password: **pw** * Repeat Password: **pw** * Max Credits: **15**   Click **Add Student**  Click **OK** | Patience Wilkins is added to the Student Directory and is the only student in the list. | **The student Patience Wilkins is added to the Student Directory as the only student in the list.** |
| T22: Course Catalog view | Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2).  Click **Course Catalog** | Course Catalog functionality displayed | **The display changes to the Course Catalog view, with the modules Catalog Buttons, Coruse Catalog, Course Controls, and Course Information** |
| T23: Load Course Catalog | Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2)  Click **Load Course Catalog**  Select **test-files/course\_records.txt**  Click **Select** | 13 courses are listed starting with CSC 116-001 and ending with CSC 316-001 as provided in the course\_records.txt file (minus the one duplicate course) | **The FileLoader pops up, I select the course\_records file, then the CourseCatalog GUI loads. Now the Course Catalog is populated by the 13 classes listed in expected results, showing the name, section, title, and meeting info for each** |
| T24: Add Invalid Course - no name | Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T23 has run.  Enter the following in the Course Information section:   * Course Name: * Course Title: **Computer Organization and Assembly Language** * Course Section: **001** * Credits: **3** * Instructor Id: **lasher** * Start Time: **10:15 AM** * End Time: **11:30 AM** * Meeting Days: **Tuesday & Thursday**   Click **Add Course**  Click **OK** | Error Message: Invalid course name | **The pop-up dialog box appears with the message “Invalid course name”.** |
| T25: Add Invalid Course - no title | Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T23 has run.  Enter the following in the Course Information section:   * Course Name: **CSC 236** * Course Title: * Course Section: **001** * Credits: **3** * Instructor Id: **lasher** * Start Time: **10:15 AM** * End Time: **11:30 AM** * Meeting Days: **Tuesday & Thursday**   Click **Add Course**  Click **OK** | Error Message: Invalid course title | **The pop-up dialog box appears with the message “Invalid course title”.** |
| T26: Add Invalid Course - no section | Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T23 has run.  Enter the following in the Course Information section:   * Course Name: **CSC 236** * Course Title: **Computer Organization and Assembly Language** * Course Section: * Credits: **3** * Instructor Id: **lasher** * Start Time: **10:15 AM** * End Time: **11:30 AM** * Meeting Days: **Tuesday & Thursday**   Click **Add Course**  Click **OK** | Error Message: Invalid section number | **The pop-up dialog box appears with the message “Invalid section.”** |
| T27: Add Invalid Course - section too short | Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T23 has run.  Enter the following in the Course Information section:   * Course Name: **CSC 236** * Course Title: **Computer Organization and Assembly Language** * Course Section: **0011** * Credits: **3** * Instructor Id: **lasher** * Start Time: **10:15 AM** * End Time: **11:30 AM** * Meeting Days: **Tuesday & Thursday**   Click **Add Course**  Click **OK** | Error Message: Invalid section number | **The pop-up dialog box appears with the message “Invalid section.”** |
| T28: Add Invalid Course - section too long | Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T23 has run.  Enter the following in the Course Information section:   * Course Name: **CSC 236** * Course Title: **Computer Organization and Assembly Language** * Course Section: **01** * Credits: **3** * Instructor Id: **lasher** * Start Time: **10:15 AM** * End Time: **11:30 AM** * Meeting Days: **Tuesday & Thursday**   Click **Add Course**  Click **OK** | Error Message: Invalid section number | **The pop-up dialog box appears with the message “Invalid section.”** |
| T29: Add Invalid Course - no instructor id | Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T23 has run.  Enter the following in the Course Information section:   * Course Name: **CSC 236** * Course Title: **Computer Organization and Assembly Language** * Course Section: **001** * Credits: **3** * Instructor Id: * 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 | **The pop-up dialog box appears with the message “Invalid instructor id.”** |
| T30: Add Invalid Course - end time after start time | Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T23 has run.  Enter the following in the Course Information section:   * Course Name: **CSC 236** * Course Title: **Computer Organization and Assembly Language** * Course Section: **001** * Credits: **3** * Instructor Id: **lasher** * Start Time: **11:30 AM** * End Time: **10:15 AM** * Meeting Days: **Tuesday & Thursday**   Click **Add Course**  Click **OK** | Error Message: Invalid course times | **The pop-up dialog box appears with the message “Invalid meeting days and times.”** |
| T31: Add Invalid Course - no meeting days | Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T23 has run.  Enter the following in the Course Information section:   * Course Name: **CSC 236** * Course Title: **Computer Organization and Assembly Language** * Course Section: **001** * Credits: **3** * Instructor Id: **lasher** * Start Time: **10:15 AM** * End Time: **11:30 AM** * Meeting Days:   Click **Add Course**  Click **OK** | Error Message: Invalid meeting days | **The pop-up dialog box appears with the message “Invalid meeting days and times.”** |
| T32: Add Course - end | Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T23 has run.  Enter the following in the Course Information section:   * Course Name: **CSC 236** * Course Title: **Computer Organization and Assembly Language** * Course Section: **001** * Credits: **3** * Instructor Id: **lasher** * Start Time: **10:15 AM** * End Time: **11:30 AM** * Meeting Days: **Tuesday & Thursday**   Click **Add Course**  Click **OK** | CSC 236-001 is added to the list between CSC 230-001 and CSC 316-001 | **The course CSC 236 is added as the 13th course in the list, just before CSC 316** |
| T33: Add Course - front | Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T23 has run.  Enter the following in the Course Information section:   * Course Name: **CSC 113** * Course Title: **Introduction to Computer - MATLAB** * Course Section: **001** * Credits: **3** * Instructor Id: **tbdimitr** * Start Time: **3:00 PM** * End Time: **3:50 PM** * Meeting Days: **Monday & Wednesday**   Click **Add Course**  Click **OK** | CSC 113-001 is added to the list at the front and is followed by CSC 116-001. | **The course CSC 113 is added as the first class to the list** |
| T34: Add Course - middle | Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T23 has run.  Enter the following in the Course Information section:   * Course Name: **CSC 116** * Course Title: **Introduction to Programming - Java** * Course Section: **006** * Credits: **3** * Instructor Id: **jdyoung2** * Start Time: **10:40 AM** * End Time: **12:30 PM** * Meeting Days: **Tuesday & Thursday**   Click **Add Course**  Click **OK** | CSC 116-006 is added to the list between CSC 116-003 and CSC 216-001. | **The class CSC 116 (006) is added to the list as the 4th course, right in between CSC 116 (003) and CSC 216 (001)** |
| T35: Remove Course - no selection | Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2).  Click **Remove Course** | Error Message: No course selected | **The popup dialog box shows the message “No course selected”** |
| T36: Remove Course - middle | Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2).  Select **CSC 216-001**  Click **Remove Course** | CSC 216-001 is removed. CSC 116-006 is followed by CSC 216-002. | **The course CSC 216 (001) is removed from the list and CSC 116 (006) is now followed by CSC 216 (002)** |
| T37: Remove Course - front | Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T33 has run.  Select **CSC 113-001**  Click **Remove Course** | CSC 113-001 is removed. CSC 116-001 is the first course in the catalog | **The course CSC 113 (001) is removed from the list and CSC 116 (001) is now the first course in the list** |
| T38: Remove Course - back | Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T32 has run.  Select **CSC 236-001**  Click **Remove Course** | CSC 236-001 is removed.  CSC 316-001 is the last course in the catalog | **The course CSC 236 (001) is removed and CSC 230 (001) is now followed by CSC 316 (001)** |
| T39: Save Course Catalog | Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T32-T38 have run.  Click **Save Course Catalog**  Select **test-files** directory and name the file **t39\_course\_catalog.txt**. | Contents should contain the courses in the following order with all information as in the original file or entered via earlier tests:  CSC 116-001  CSC 116-002  CSC 116-003  CSC 116-006  CSC 216-002  CSC 216-601  CSC 217-202  CSC 217-211  CSC 217-223  CSC 217-601  CSC 226-001  CSC 230-001  CSC 316-001 | **The Fileloader appears, after saving and opening the file, the contents show the courses listed in the expected results in the same order** |
| T40: New Course Catalog | Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T12-T18 have run.  Click **New Course Catalog** | An empty course catalog is shown. | **The course catalog module is cleared out and no courses are in it** |
| T41: Add Course - first | Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T20 has run.  Enter the following in the Course Information section:   * Course Name: **CSC 216** * Course Title: **Programming Concepts - Java** * Course Section: **601** * Credits: **4** * Instructor Id: **jep** * Start Time: **0** * End Time: **0** * Meeting Days: **Arranged**   Click **Add Course**  Click **OK** | CSC 216-601 is added to the list | **The popup dialog box with the message “Invalid meeting days and times” appears** |
| T42: Login Student | Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T21 has run  Click **Logout**  User ID: **pwilkins**  Password: **pw**  Click: **Login** | User is returned to the Login view  pwilkins is logged in and is switched to the user view. All that is shown is a Logout button. | **The user is return to the Login view**  **The pwilkins login works and all that is shown on screen is the Logout button** |