# Lab 06: 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 test files should be located in the test-files/ folder.

The registrar’s information is provided in 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 message shows “User doesn’t exist”. The User ID and password text fields are cleared.** |
| T2: Registrar Login | Preconditions: PackSchedulerGUI has loaded  User ID: name as provided in registrar.properties  Password: password as provided in registrar.properties  Click **Login** | View switches to Registrar panel with Student Directory functionality displayed | **View switches to Registrar panel and the Student Directory functionality is displayed** |
| 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 students are listed in alphabetical order by their last name. The list starts with Demetrius Austin and ends 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 | **It shows an error 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 | **It displays error 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 | **It shows error 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 error message displays : 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 error message displays : 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 error message displays:**  **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** | Patience Wilkins is added to the Student Directory and is the last student in the list. Max credits is set to 18. | **After pressing add student , Patience Wilkins is added to the Student Directory and is the last student in the list. Also , the max credits is set to 18.** |
| T11: Add Invalid Student - 19 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: **Alice** * Last Name: **Adams** * ID: **aadams** * Email: **aadams@ncsu.edu** * Password: **pw** * Repeat Password: **pw** * Max Credits: **19**   Click **Add Student**  Click **OK** | Alice Adams is added to the Student Directory and is the first student in the list. Max credits is set to 18. | **After pressing add student, Alice Adams is added to the Student Directory and is the first student in the list. With max credits set to 18.** |
| 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: **Mikayla** * Last Name: **William** * ID: **mwilliam** * Email: **mwilliam@ncsu.edu** * Password: **pw** * Repeat Password: **pw** * Max Credits: **15**   Click **Add Student**  Click **OK** | Mikayla William is added to the Student Directory and is the last student in the list. | **After add student , Mikayla William is added to the Student Directory with being the last student in the 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 | **After add student , Rylee Puckett is added to the Student Directory 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. | **After add student , Melvin Acevedo is added to the Student Directory and is the first 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 error message displays : 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 | **After pressing remove student : Shannon Hansen is removed. Athea Hicks follows Emerald Frost in the list** |
| 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 | **After pressing remove , Melvin Acevedo is removed. Demetrius Austin is front of the directory** |
| T18: Remove Student - back | Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T12 has run.  Select **Mikayla William**  Click **Remove student** | Mikayla William is removed. Griffith Stone is last in the directory | **After pressing remove , Mikayla William is removed. Griffith Stone is last in the directory** |
| 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):  Alice,Adams,aadams,aadams@ncsu.edu,0ÉRú±"ÃùuŸ¦Ù\7X²F´þâ9•{-OîFâapÄ,18  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  Patience,Wilkins,pwilkins,pwilkins@ncsu.edu,0ÉRú±"ÃùuŸ¦Ù\7X²F´þâ9•{-OîFâapÄ,18 | **After saving directory , and selecting t19\_student\_directory.txt., it shows the contents :**  **Alice,Adams,aadams,aadams@ncsu.edu,0ÉRú±"ÃùuŸ¦Ù\7X²F´þâ9•{-OîFâapÄ,18**  **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**  **Patience,Wilkins,pwilkins,pwilkins@ncsu.edu,0ÉRú±"ÃùuŸ¦Ù\7X²F´þâ9•{-OîFâapÄ,18** |
| 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. | **After clicking New Student Directory , an Empty student directory is shown** |
| 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. | **After pressing Add Student, Patience Wilkins is added to the Student Directory and is 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 | **After clicking course catalog, the Course Catalog functionality is displayed** |
| 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 CSC116-001 and ending with CSC316-001 | **After selecting load courses,**  **13 courses are listed starting with CSC116-001 and ending with CSC316-001** |
| 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 error message displays, “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: **CSC236** * 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 title. | **The error message displays “Invalid 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: **CSC236** * 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 | **The error message displays , “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: **CSC236** * 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 | **The error message displays : 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: **CSC236** * 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 | **The error message displays : 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: **CSC236** * 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 id. | **The error message displays, 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: **CSC236** * 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 meeting days and times. | **The error message displays : 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: **CSC236** * 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 and times. | **The error message displays , 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: **CSC492** * Course Title: **Senior Design** * Course Section: **001** * Credits: **3** * Instructor Id: **heil** * Start Time: **9:30AM** * End Time: **11:20AM** * Meeting Days: **Monday & Wednesday**   Click **Add Course**  Click **OK** | CSC492-001 is added to the list after CSC316-001 | **After clicking add course , CSC492-001 is added to the list after CSC316-001** |
| 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: **CSC113** * Course Title: **Introduction to Computing - 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** | CSC113-001 is added to the list at the front and is followed by CSC116-001. | **After adding course, CSC113-001 is added to the list at the front and is followed by CSC116-001** |
| 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: **CSC116** * 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** | CSC116-006 is added to the list between CSC116-003 and CSC216-001. | **After add course , CSC116-006 is added to the list between CSC116-003 and CSC216-001.** |
| 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 error message displays : No course selected** |
| T36: Remove Course - middle | Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2).  Select **CSC216-001**  Click **Remove Course** | CSC216-001 is removed. CSC116-006 is followed by CSC216-002. | **After pressing remove course , CSC216-001 is removed. CSC116-006 is followed by CSC216-002.** |
| T37: Remove Course - front | Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T33 has run.  Select **CSC113-001**  Click **Remove Course** | CSC113-001 is removed. CSC116-001 is the first course in the catalog | **After pressing remove course , CSC113-001 is removed. CSC116-001 is the first course in the catalog** |
| T38: Remove Course - back | Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T32 has run.  Select **CSC492-001**  Click **Remove Course** | CSC492-001 is removed.  CSC316-001 is the last course in the catalog | **After pressing remove course, CSC492-001 is removed.**  **CSC316-001 is the last course in the catalog** |
| 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 be:  CSC116,Intro to Programming - Java,001,3,jdyoung2,MW,910,1100  CSC116,Intro to Programming - Java,002,3,spbalik,MW,1120,1310  CSC116,Intro to Programming - Java,003,3,tbdimitr,TH,1120,1310  CSC116,Introduction to Programming - Java,006,3,jdyoung2,TH,1040,1230  CSC216,Software Development Fundamentals,002,3,ixdoming,MW,1330,1445  CSC216,Software Development Fundamentals,601,3,jctetter,A  CSC217,Software Development Fundamentals Lab,202,1,sesmith5,M,1040,1230  CSC217,Software Development Fundamentals Lab,211,1,sesmith5,T,830,1020  CSC217,Software Development Fundamentals Lab,223,1,sesmith5,W,1500,1650  CSC217,Software Development Fundamentals Lab,601,1,sesmith5,A  CSC226,Discrete Mathematics for Computer Scientists,001,3,tmbarnes,MWF,935,1025  CSC230,C and Software Tools,001,3,dbsturgi,MW,1145,1300  CSC316,Data Structures and Algorithms,001,3,jtking,MW,830,945 | **After pressing Save Course Catalog , the contents in t39\_course\_catalog.txt display, CSC116,Intro to Programming - Java,001,3,jdyoung2,MW,910,1100**  **CSC116,Intro to Programming - Java,002,3,spbalik,MW,1120,1310**  **CSC116,Intro to Programming - Java,003,3,tbdimitr,TH,1120,1310**  **CSC116,Introduction to Programming - Java,006,3,jdyoung2,TH,1040,1230**  **CSC216,Software Development Fundamentals,002,3,ixdoming,MW,1330,1445**  **CSC216,Software Development Fundamentals,601,3,jctetter,A**  **CSC217,Software Development Fundamentals Lab,202,1,sesmith5,M,1040,1230**  **CSC217,Software Development Fundamentals Lab,211,1,sesmith5,T,830,1020**  **CSC217,Software Development Fundamentals Lab,223,1,sesmith5,W,1500,1650**  **CSC217,Software Development Fundamentals Lab,601,1,sesmith5,A**  **CSC226,Discrete Mathematics for Computer Scientists,001,3,tmbarnes,MWF,935,1025**  **CSC230,C and Software Tools,001,3,dbsturgi,MW,1145,1300**  **CSC316,Data Structures and Algorithms,001,3,jtking,MW,830,945** |
| 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. | **After pressing New Course Catalog , An empty course catalog is shown** |
| 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: **CSC216** * Course Title: **Programming Concepts - Java** * Course Section: **601** * Credits: **4** * Instructor Id: **jctetter** * Start Time: * End Time: * Meeting Days: **Arranged**   Click **Add Course**  Click **OK** | CSC216-601 is added to the list | **After Add Course, CSC216-601 is added to the list** |
| T42: Logout | Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2).  Click **Logout** | User is returned to the Login view | **After clicking Logout , User is returned to the Login view** |
| T42: Login Student | Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T21 and T42 have run.  User ID: **pwilkins**  Password: **pw**  Click: **Login** | pwilkins is logged in and is switched to the user view. All that is shown is a Logout button. | **After clicking login , pwilkins is logged in and is switched to the user view. All that is shown is a Logout button.** |