# Lab 11: 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.  
  
test-files/student\_records.txt  
Zahir,King,zking,orci.Donec@ametmassaQuisque.com,MMlS+rEiw/l1nwKm2Vw3WLJGtP7iOZV7LU/uRuJhcMQ=,15

Cassandra,Schwartz,cschwartz,semper@imperdietornare.co.uk,MMlS+rEiw/l1nwKm2Vw3WLJGtP7iOZV7LU/uRuJhcMQ=,4

Shannon,Hansen,shansen,convallis.est.vitae@arcu.ca,MMlS+rEiw/l1nwKm2Vw3WLJGtP7iOZV7LU/uRuJhcMQ=,14

Demetrius,Austin,daustin,Curabitur.egestas.nunc@placeratorcilacus.co.uk,MMlS+rEiw/l1nwKm2Vw3WLJGtP7iOZV7LU/uRuJhcMQ=,18

Raymond,Brennan,rbrennan,litora.torquent@pellentesquemassalobortis.ca,MMlS+rEiw/l1nwKm2Vw3WLJGtP7iOZV7LU/uRuJhcMQ=,12

Emerald,Frost,efrost,adipiscing@acipsumPhasellus.edu,MMlS+rEiw/l1nwKm2Vw3WLJGtP7iOZV7LU/uRuJhcMQ=,3

Lane,Berg,lberg,sociis@non.org,MMlS+rEiw/l1nwKm2Vw3WLJGtP7iOZV7LU/uRuJhcMQ=,14

Griffith,Stone,gstone,porta@magnamalesuadavel.net,MMlS+rEiw/l1nwKm2Vw3WLJGtP7iOZV7LU/uRuJhcMQ=,17

Althea,Hicks,ahicks,Phasellus.dapibus@luctusfelis.com,MMlS+rEiw/l1nwKm2Vw3WLJGtP7iOZV7LU/uRuJhcMQ=,11

Dylan,Nolan,dnolan,placerat.Cras.dictum@dictum.net,MMlS+rEiw/l1nwKm2Vw3WLJGtP7iOZV7LU/uRuJhcMQ=,5

test-files/course\_records.txt  
CSC116,Intro to Programming - Java,001,3,jdyoung2,10,MW,0910,1100

CSC116,Intro to Programming - Java,002,3,spbalik,10,MW,1120,1310

CSC116,Intro to Programming - Java,003,3,tbdimitr,10,TH,1120,1310

CSC116,Intro to Programming - Java,002,3,jtking,10,TH,0910,1100

CSC216,Software Development Fundamentals,001,3,sesmith5,10,TH,1330,1445

CSC216,Software Development Fundamentals,002,3,ixdoming,10,MW,1330,1445

CSC216,Software Development Fundamentals,601,3,jctetter,10,A

CSC217,Software Development Fundamentals Lab,202,1,sesmith5,10,M,1040,1230

CSC217,Software Development Fundamentals Lab,211,1,sesmith5,10,T,830,1020

CSC217,Software Development Fundamentals Lab,223,1,sesmith5,10,W,1500,1650

CSC217,Software Development Fundamentals Lab,601,1,sesmith5,10,A

CSC226,Discrete Mathematics for Computer Scientists,001,3,tmbarnes,10,MWF,935,1025

CSC230,C and Software Tools,001,3,dbsturgi,10,MW,1145,1300

CSC316,Data Structures and Algorithms,001,3,jtking,10,MW,830,945

test-files/faculty\_records.txt  
Ashely,Witt,awitt,mollis@Fuscealiquetmagna.net,MMlS+rEiw/l1nwKm2Vw3WLJGtP7iOZV7LU/uRuJhcMQ=,2

Fiona,Meadows,fmeadow,pharetra.sed@et.org,MMlS+rEiw/l1nwKm2Vw3WLJGtP7iOZV7LU/uRuJhcMQ=,3

Brent,Brewer,bbrewer,sem.semper@orcisem.co.uk,MMlS+rEiw/l1nwKm2Vw3WLJGtP7iOZV7LU/uRuJhcMQ=,1

Halla,Aguirre,haguirr,Fusce.dolor.quam@amalesuadaid.net,MMlS+rEiw/l1nwKm2Vw3WLJGtP7iOZV7LU/uRuJhcMQ=,3

Kevyn,Patel,kpatel,risus@pellentesque.ca,MMlS+rEiw/l1nwKm2Vw3WLJGtP7iOZV7LU/uRuJhcMQ=,1

Elton,Briggs,ebriggs,arcu.ac@ipsumsodalespurus.edu,MMlS+rEiw/l1nwKm2Vw3WLJGtP7iOZV7LU/uRuJhcMQ=,3

Norman,Brady,nbrady,pede.nonummy@elitfermentum.co.uk,MMlS+rEiw/l1nwKm2Vw3WLJGtP7iOZV7LU/uRuJhcMQ=,1

Lacey,Walls,lwalls,nascetur.ridiculus.mus@fermentum.net,MMlS+rEiw/l1nwKm2Vw3WLJGtP7iOZV7LU/uRuJhcMQ=,2

A registrar.properties file contains a username and password. Use the values in your registrar.properties for testing. We will use registrar.properties.id or registrar.properties.pw to designate those strings.

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. | Test passed, actual results match expected results.   A pop up message is displayed on the screen with text saying “User doesn’t exist”  User ID and password are cleared after OK is clicked. |
| 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 | Test passes expected results.   View is switched from Registrar Panel to Student Directory with functionality 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. | Test passes expected results. All 10 students are displayed in alphabetical order after clicking Load Student Directory. |
| 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 | Test passes expected results. A pop up message “Invalid first name” is displayed on the screen when Add Student is clicked. |
| 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 | Test passes expected results. A pop up message “Invalid last name” is displayed on the screen when Add Student is clicked. |
| 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 | Test passes expected results. A pop up message “Invalid id” is displayed on the screen when Add Student is clicked. |
| 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 | Test passes expected results. A pop up message “Invalid email” is displayed on the screen when Add Student is clicked. |
| 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 | Test passes expected results. A pop up message “Invalid email” is displayed on the screen when Add Student is clicked. |
| 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 | Test passes expected results. A pop up message “Passwords do not match” is displayed on the screen when Add Student is clicked. |
| 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** | User is added with max credits of 18. User is the last student in the list. | Test passes expected results. Student is added to Student Directory with max credits of 18. |
| 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: **Patrick** * Last Name: **Wilkins** * ID: **pwilkins2** * Email: **pwilkins2@ncsu.edu** * Password: **pw** * Repeat Password: **pw** * Max Credits: **19**   Click **Add Student**  Click **OK** | User is added with max credits of 18. User is the last student in the list. | Test passes expected results. Student is added to Student Directory with max credits of 18. |
| 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 | Test passes expected results. Student is added to the bottom of Student Directory in correct order. |
| 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. | Test passes expected results. Student is added to Student Directory between Dylan Nolan and Cassandra Schwartz. |
| T15: Remove Student - no selection | Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2).  Click **Remove Student** | Error Message: No student selected | Test passes expected results. Student is added to Student Directory at the top of the list before Demetrius Austin. |
| 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 | Test passes expected results. A pop up message is displayed with correct text stating “No student selected” |
| 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 | Test passes expected results. Shannon Hansen is removed from Student Directory. Althea Hicks is directly after Emerald Frost in Student Directory list. |
| T18: Remove Student - back | Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T12 has run.  Select **Patience Wilkins**  Click **Remove student**  Select **Patrick Wilkins**  Click **Remove student** | Patience Wilkins is removed. Patrick Wilkins remains as the last in the directory  Patrick Wilkins is removed. Griffith Stone is the last student in the directory. | Test passes expected results. Melvin Acevedo is removed from Student Directory. Demetrius Austin is moved to the front of the Student Directory list. |
| 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 | Test passes expected results. Mikayla William is removed from Student Directory. Griffith Stone is moved to the last of the Student Directory list. |
| 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. | Test passes expected results. Students are as listed in file in alphabetical order. |
| 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. | Test passes expected results. Student Directory is cleared once New Student Directory is pressed. |
| T22: Course Catalog view | Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2).  Click **Course Catalog** | Course Catalog functionality displayed | Test passes expected results. Patience Wilkins is added to the empty Student Directory and is the only Student in list. |
| 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 | Test passes expected results. Course Catalog functionality is displayed on the window when Course Catalog is clicked. |
| 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: **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 | Test passes expected results. List of courses are accurately displayed on the Course Catalog list. |
| 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: **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 | Test passes expected results. A pop up with the appropriate message “Invalid course name” is displayed on the screen when Add Course is pressed. |
| 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: **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 | Test passes expected results. A pop up with the appropriate message “Invalid title” is displayed on the screen when Add Course is pressed. |
| 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: **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 | Test passes expected results. A pop up with the appropriate message “Invalid section number” is displayed on the screen when Add Course is pressed. |
| 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: **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 | Test passes expected results. A pop up with the appropriate message “Invalid section number” is displayed on the screen when Add Course is pressed. |
| 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: * 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 | Test passes expected results. A pop up with the appropriate message “Invalid section number” is displayed on the screen when Add Course is pressed. |
| 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: **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 | Test passes expected results. A pop up with the appropriate message “Invalid instructor id” is displayed on the screen when Add Course is pressed. |
| 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: **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 | Test passes expected results. A pop up with the appropriate message “Invalid meeting days and time” is displayed on the screen when Add Course is pressed. |
| 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: **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 at the end following CSC230-001 | Test passes expected results. A pop up with the appropriate message “Invalid meeting days and time” is displayed on the screen when Add Course is pressed. |
| 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: **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. | Test passes expected results. Course is added after CSC316 in the Course Catalog 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: **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. | Test passes expected results. Course CSC113 is added to Course Catalog at top of list before CSC116. |
| T35: Remove Course - no selection | Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2).  Click **Remove Course** | Error Message: No course selected | Test passes expected results. Course CSC116 is added to Course Catalog between CSC116-003 and CSC216-001. |
| 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. | Test passes expected results. Pop up message is displayed on screen with appropriate message stating “No course selected”  OK is clicked and pop-up window is closed. |
| 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 | Test passes expected results. CSC216-001 is removed from Course Catalog list. CSC116-006 is followed by CSC216-002. |
| T38: Remove Course - back | Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T32 has run.  Select **CSC236-001**  Click **Remove Course** | CSC236-001 is removed.  CSC316-001 is the last course in the catalog | Test passes expected results. CSC113-001 and CSC236-001 is removed from Course Catalog list. CSC116-001 is first listed in the Course Catalog list, and CSC316-001 is last in list. |
| 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,jdyoung2,10,MW,910,1100  CSC116,Intro to Programming - Java,002,3,spbalik,10,MW,1120,1310  CSC116,Intro to Programming - Java,003,3,tbdimitr,10,TH,1120,1310  CSC116,Introduction to Programming - Java,006,3,jdyoung2,33,TH,1040,1230  CSC216,Software Development Fundamentals,001,3,sesmith5,10,TH,1330,1445  CSC216,Software Development Fundamentals,002,3,ixdoming,10,MW,1330,1445  CSC216,Software Development Fundamentals,601,3,jctetter,10,A  CSC217,Software Development Fundamentals Lab,202,1,sesmith5,10,M,1040,1230  CSC217,Software Development Fundamentals Lab,211,1,sesmith5,10,T,830,1020  CSC217,Software Development Fundamentals Lab,223,1,sesmith5,10,W,1500,1650  CSC217,Software Development Fundamentals Lab,601,1,sesmith5,10,A  CSC226,Discrete Mathematics for Computer Scientists,001,3,tmbarnes,10,MWF,935,1025  CSC230,C and Software Tools,001,3,dbsturgi,10,MW,1145,1300  CSC316,Data Structures and Algorithms,001,3,jtking,10,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. | Test passes expected results. Course Catalog is accurately exported and saved in text file in correct order. |
| 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: **jep** * Start Time: * End Time: * Meeting Days: **Arranged**   Click **Add Course**  Click **OK** | CSC216-601 is added to the list | Test passes expected results. Course Catalog is empty upon clicking New Course Catalog. |
| T42: Logout | Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2).  Click **Logout** | User is returned to the Login view | Test passes expected results. Course is successfully added as Arranged to the Course Catalog. |
| T42: Login Student | Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T21 has run  User ID: **pwilkins**  Password: **pw**  Click: **Login** | pwilkins is logged in and is switched to the user view. The user can see the course catalog and register for courses. | Test passes Logout view and User is successfully logged out and returned to main login view. |
| Test 44: Set Schedule Title | Preconditions: Test 1 or Test 2 have passed   1. Enter “My Super Awesome Schedule” into the Schedule Title text field 2. Click **Set Title** 3. *Check results* 4. Close GUI | The label on the third section of the GUI now contains the text “My Super Awesome Schedule” instead of “My Schedule” | Test case passes all expected results. Schedule Title is updated with the following text “My Super Awesome Schedule.” |
| Test 45:  Set Schedule Title (Invalid) | Preconditions: Test 1 or Test 2 have passed  Remove any text in Schedule Title text field   1. Click **Set Title** 2. *Check results* 3. Close GUI | A pop-up dialog stating “Invalid Title.” is displayed. | Test case does not pass. Pop-up dialog is not present. Schedule Title text field remains empty. |
| Test 46: Finalize | Preconditions: Test 2 and Tests 8-10 have passed  Click **Display Final Schedule**  *Check results*  Close GUI | Schedule Title: “My Super Awesome Schedule”  Schedule Table   * CSC 216, 601, Software Development Fundamentals, 3, jctetter, Arranged, “” * CSC 217, 601, Software Development Fundamentals Lab, 1, sesmith5, Arranged, “” * CSC 230, 001, C and Software Tools, 3, dbsturgi, MW 11:45AM-1:00PM, “” * “”, “”, Exercise, “”, “”, UMTHF 8:30AM-9:00AM, Cardio days   CSC 226, 001, Discrete Mathematics for Computer Scientists, 3, tmbarnes, MWF 9:35AM-10:25AM, “” | Test case passes all expected results. GUI displays “My Super Awesome Schedule” with accurate course content listed below. |
| Test 47: Reset | Preconditions: Test 2 and Test 4 have passed   1. Click **Reset Schedule** 2. *Check results*   Close GUI | My Schedule table is empty | Test case passes all expected results. Contents under My Schedule are cleared and empty. |
| Test 48: Add –  Schedule Conflict | Preconditions: Test 2 has passed   1. Select the 1st row of the Course Catalog table (CSC 116, 001, Intro to Programming – Java, MW 9:10AM-11:00AM) 2. Click **Add Course** 3. Select the 7th row of the Course Catalog table (CSC 217, 202, Software Development Fundamental Lab, M 10:40AM-12:30PM) 4. Click **Add Course**   *4. Check results*  *5.* Close GUI | Course Catalog contains 1 class   * CSC 116, 001, Intro to Programming - Java, MW 9:10AM-11:00AM   A pop-up dialog stating “The course cannot be added due to a conflict.” is displayed. | Test case does not pass expected results. Pop-up dialog is not present.   Both courses are added to schedule regardless of schedule conflict. |
| Test 49: Add Course to Waitlist | Preconditions: PackSchedulerGUI has loaded and student user is logged in (User ID: ahicks, Password: pw). Course CSC216-001 is at max enrollment.  1. Select CSC216-001, Software Development Fundamentals, MW 1:30PM-2:45PM.  2. Click **Add Course**  3. Click OK  4. Check results  5. Close GUI | The student is added to the waitlist. | Test passes expected results. Student is added to course waitlist. |
| Test 50: Waitlist Full | PackSchedulerGUI has loaded and student user is logged in. Test 49 has passed.  1. Select CSC226-001, Discrete Mathematics for Computer Scientists, MWF 9:35AM-10:25AM.  2. Click **Add Course**  3. Click OK  4. Check results  5. Close GUI | A pop-up message "The course cannot be added” is displayed. | Test passe expected results, pop-up message is present with correct text. |
| Test 51: Remove Student from Waitlist | PackSchedulerGUI has loaded and student user is logged in (User ID: ahicks, Password: pw). Test 49 passes.  1. Select CSC216-001, Software Development Fundamentals, MW 1:30PM-2:45PM.  2. Click **Add Course**  3. Click **Remove Course**  3. Click OK  4. Check results  5. Close GUI | The student is removed from the waitlist. Course has additional waitlist spot. | Test passes expected results. Student is removed from waitlist and course waitlist is updated to show open waitlist spots. |
| Test 52: Create Faculty Directory | PackSchedulerGUI has loaded and registrar is logged in. (Test 2 passes)  1. Select **New Faculty Directory**  2. Check results  3. Close GUI | A new empty Faculty Directory is created. Any exiting faculty in the directory are cleared. | Test passes expected results. A new faculty directory is created and is empty. |
| Test 53: Load Faculty Directory | PackSchedulerGUI has loaded and registrar is logged in. (Test 2 passes)  1. Select **Load Faculty Directory**  2. Click test-files/faculty\_directory.txt  3. Check results  4. Close GUI | A dialog appears and the user can browse the file system for the text file containing faculty information | Test passes expected results. Faculty are added to the faculty directory at the end of the list. |
| Test 54: Save Faculty Directory | PackSchedulerGUI has loaded and registrar is logged in. (Test 2 passes)  1. Select **Load Faculty Directory**  2. Click test-files/faculty\_directory.txt  3. Select **Save Faculty Directory**  4. Check results  5. Close GUI | A dialog appears and the user selects the location to save the list of faculty and provides a name for the file | Test passes expected results. The list of faculty is saved to a text file with a faculty record on each line |
| Test 55: Add Faculty  (invalid) | PackSchedulerGUI has loaded and registrar is logged in. (Test 2 passes)  1. Add faculty information to *Faculty Information*  2. Enter the following in the Faculty Information section:   * First Name: **Rami** * Last Name: **Alaraj** * ID: * Email: **pwilkins@ncsu.edu** * Password: **pw** * Repeat Password: **pw** * Max Courses: **2**   3. Click **Add Faculty**  4**.** Check Results | A dialog appears and an error message “Invalid id” is displayed | Test passes expected results. An error message is displayed on the screen with proper dialog. |
| Test 55: Add Faculty  (invalid) | PackSchedulerGUI has loaded and registrar is logged in. (Test 2 passes)  1. Add faculty information to *Faculty Information*  2. Enter the following in the Faculty Information section:   * First Name: **Rami** * Last Name: **Alaraj** * ID: **ralaraj** * Email: **pwilkins@ncsu.edu** * Password: **pw** * Repeat Password: **pw** * Max Courses: **4**   3. Click **Add Faculty**  4**.** Check Results | A dialog appears and an error message “Invalid max courses” is displayed | Test passes expected results. An error message is displayed on the screen with proper dialog. |
| Test 56: Remove Faculty | PackSchedulerGUI has loaded and registrar is logged in and faculty directory is loaded. (Test 2 and Test 53 pass)  1. Select **Ashley Witt**  2. Click **Remove Faculty**  3. Check Results | The faculty is removed from the Faculty Directory list. | Test passes expected results. Faculty Ashley Witt is removed from Faculty Directory list. |
| Test 57: Assign Faculty to Course | PackSchedulerGUI has loaded and registrar is logged in. (Test 2 passes)  1. Select **Faculty Assignment**  2. Click Course **CSC116-001**  3. Click Instructor **Ashley Witt**  4. Click **Assign Faculty to Course**  5. Click Course **CSC216-001**  6. Click **Assign Faculty to Course**  7. Check Results | The faculty is assigned to the course and the details are updated.   *Overloaded* section in Faculty Details is updated to *false.* | Test passes expected results. Faculty Ashley Witt is successfully assigned to courses and is not overloaded. |
| Test 58: Assign Faculty to Course (Invalid) | PackSchedulerGUI has loaded and registrar is logged in. (Test 2 passes)  1. Select **Faculty Assignment**  2. Click Instructor **Ashley Witt**  3. Click **Assign Faculty to Course**  4. Check Results | An error message “No course selected in the catalog.” is displayed. The user clicks OK and is returned to the faculty assignment display. | Test passes expected results. A pop-up message is present with “No course selected in catalog”.  User is returned to faculty assignment display after pressing OK. |
| Test 58: Assign Faculty to Course (Invalid) | PackSchedulerGUI has loaded and registrar is logged in. (Test 2 and Test 57 have passed)  1. Click Instructor **Fiona Meadows**  2. Select Course **CSC216-001**  3. Click **Assign Faculty to Course**  4. Check Results | An error message “The course already has an instructor.” is displayed. The user clicks OK and is returned to the faculty assignment display. | Test passes expected results. A pop-up message is present with “The course already has an instructor.”  User is returned to faculty assignment display after pressing OK. |
| Test 59: Remove Faculty from Course (Invalid) | PackSchedulerGUI has loaded and registrar is logged in. (Test 2 and Test 57 have passed)  1. Click Instructor **Fiona Meadows**  2. Select Course **CSC216-001**  3. Click **Remove Faculty from Course**  4. Check Results | An error message “Course cannot be removed from faculty’s schedule.” is displayed. The user clicks OK and is returned to the faculty assignment display. | Test passes expected results. A pop-up message is present with “Course cannot be removed from faculty’s schedule.”  User is returned to faculty assignment display after pressing OK. |
| Test 60: Reset Faculty Schedule | PackSchedulerGUI has loaded and registrar is logged in. (Test 2 and Test 57 have passed)  1. Click **Reset Schedule**  2. Check Results | The system removes all courses from the faculty member’s schedule. | Test passes expected results. All courses are removed from instructor’s schedule. |