## Lab 08: 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.

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.

Test ID	Description	Expected Results	Actual Results
T1: Invalid Login	Preconditions: PackSchedulerGUI has loaded  User ID: Iberg Password: pw Click Login  Click OK  Click Clear	Pop up with message "User doesn't exist."  User ID and password text fields are cleared.	Pop up with message "User doesn't exist."  User ID and password text fields are cleared.
T2: Registrar Login	Preconditions: PackSchedulerGUI has loaded  User ID: registrar Password: Regi5tr@r Click Login	View switches to Registrar	View switches to Registrar

		panel with Student Directory functionality displayed	panel with Student Directory 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.	10 students are listed in alphabetical order by 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	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		

	<ul> <li>Last Name:</li> <li>ID: pwilkins</li> <li>Email: pwilkins@ncsu.edu</li> <li>Password: pw</li> <li>Repeat Password: pw</li> <li>Max Credits: 15</li> <li>Click Add Student</li> </ul> Click OK	Error Message: Invalid last name	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	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		

	<ul> <li>Repeat Password: pw</li> <li>Max Credits: 15</li> <li>Click Add Student</li> <li>Click OK</li> </ul>	Error Message: Invalid email	Error 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	Error Message: Invalid email
T9: Add Invalid Student - password s 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	Error Message: Passwords do not match	Error Message: Passwords do not match

	Click <b>OK</b>		
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	Error Message: Invalid max credits	Error Message: Invalid 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	Error Message: Invalid max credits	Error Message: Invalid max credits
T12: Add Student -	Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T3 has run.		

end	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.	Patience Wilkins is added to the Student Directory and is 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	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:		

	<ul> <li>First Name: Melvin</li> <li>Last Name: Acevedo</li> <li>ID: macevedo</li> <li>Email: macevedo@ncsu.edu</li> <li>Password: pw</li> <li>Repeat Password: pw</li> <li>Max Credits: 15</li> <li>Click Add Student</li> </ul>	Melvin Acevedo is added to the Student Directory and is the first student in the list.	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	Error 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	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	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 Patience Wilkins  Click Remove student	Patience Wilkins is removed. Griffith Stone is last in the directory	Patience Wilkins 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):  Demetrius, Austin, daustin, Cura bitur. egestas. nunc@placerator cilacus. co. uk, 0ÉRú±"ÃùuŸ¦Ù\7 X²F′þâ9•{-OîFâapÄ, 18 Lane, Berg, Iberg, sociis@non.or g, 0ÉRú±"ÃùuŸ¦Ù\7X²F′þâ9•{-OîFâapÄ, 14 Raymond, Brennan, rbrennan, lit ora. torquent@pellentesquema ssalobortis. 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@a metmassaQuisque.com, 0ÉRú±"ÃùuŸ¦Ù\7X²F′þâ9•{-OîFâapÄ, 15	Contents should be (note that the password hash may be different due to encoding):  Demetrius, Austin, daustin, Cura bitur. egestas. nunc@placerator cilacus. co. uk, 0ÉRú±"ÃùuŸ¦Ù\7 X²F′þâ9•{-OîFâapÄ,18 Lane, Berg, Iberg, sociis@non.or g, 0ÉRú±"ÃùuŸ¦Ù\7X²F′þâ9•{-OîFâapÄ,14 Raymond, Brennan, rbrennan, Iit ora. torquent@pellentesquema ssalobortis. ca, 0ÉRú±"ÃùuŸ¦Ù\7X²F′þâ9•{-OîFâapÄ,12 Emerald, Frost, efrost, adipiscing@acipsumPhasellus.edu, 0ÉRú±"ÃùuŸ¦Ü\7X²F′þâ9•{-OîFâapÄ,3 Althea, Hicks, ahicks, Phasellus. dapibus@luctusfelis.com, 0ÉRú±"ÃùuŸ¦Ü\7X²F′þâ9•{-OîFâapÄ,11 Zahir, King, zking, orci. Donec@a metmassaQuisque.com, 0ÉRú±"ÃùuŸ¦Ü\7X²F′þâ9•{-OîFâapÄ,15

		Dylan,Nolan,dnolan,placerat.C ras.dictum@dictum.net,0ÉRú± "ÃùuŸ¦Ù\7X²F′þâ9•{-OîFâapÄ,5 Rylee,Puckett,rpuckett,"RùuŸ¦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±"ÂùuŸ¦Ù\7X²F′þâ9•{-OîFâapÄ,17	Dylan,Nolan,dnolan,placerat.C ras.dictum@dictum.net,0ÉRú± "ÃùuŸ¦Ù\7X²F′þâ9•{-OîFâapÄ,5 Rylee,Puckett,rpuckett@ncsu.edu,0ÉRú±"ÃùuŸ¦Ù\7 X²F′þâ9•{-OîFâapÄ,15 Cassandra,Schwartz,cschwartz,semper@imperdietornare.co.uk,0ÉRú±"ÃùuŸ¦Ù\7X²F′þâ9•{-OîFâapÄ,4 Griffith,Stone,gstone,porta@magnamalesuadavel.net,0ÉRú±"ÂùuŸ¦Ù\7X²F′þâ9•{-OîFâapÄ,17
T20: New Student Directory	Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T12-T18 have run.  Click <b>New Student Directory</b>	An empty student directory is shown.	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	Patience Wilkins is added to the Student Directory and is	Patience Wilkins is added to the Student Directory and is

	Click <b>OK</b>	the only student in the list.	the only student in the list.
T22: Course	Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2).		
Catalog view	Click Course Catalog	Course Catalog functionality displayed	Course Catalog functionality 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	8 courses are listed starting with CSC116-001 and ending with CSC230-001	8 courses are listed starting with CSC116-001 and ending with CSC230-001
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:	Error Message: Invalid course name	Error Message: Invalid course name
T25: Add	Preconditions: PackSchedulerGUI has loaded and		

Invalid Course - no title	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 course title	Error 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:	Error Message: Invalid section number	Error Message: Invalid section number
T27: Add Invalid	Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T23 has run.		

Course - section too short	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 number	Error Message: Invalid section number
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:	Error Message: Invalid section number	Error Message: Invalid section number
T29: Add Invalid	Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T23 has run.		

Course - no instructor id	Enter the following in the Course Information section:	Error Message: Invalid instructor unity id	Error Message: Invalid instructor unity 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:	Error Message: Invalid meeting times	Error Message: Invalid course times
T31: Add Invalid	Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T23 has run.		

Course - no meeting days	Enter the following in the Course Information section:	Error Message: Invalid meeting days	Error Message: Invalid meeting days
T32: Add Course – end (Modified)	Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T23 has run.  Enter the following in the Course Information section:	CSC236-001 is added to the list at the end following CSC230-001	CSC236-001 is added to the list at the end following CSC230-001
T33: Add	Preconditions: PackSchedulerGUI has loaded and		

Course – front (Modified)	registrar user is logged in (T2). T23 has run.  Enter the following in the Course Information section:  • Course Name: CSC113 • 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 • Enrollment Cap: 10  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.
T34: Add Course – middle (Modified)	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 • Enrollment Cap: 10  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.

T35: Remove Course -	Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2).  Click Remove Course	Error Message: No course	Error Message: No course
selection		selected	selected
T36: Remove Course –	Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2).		
middle	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.
T37: Remove Course –	Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T33 has run.		
front	Select CSC113-001		
	Click Remove Course	CSC113-001 is removed. CSC116-001 is the first course in the catalog	CSC113-001 is removed. CSC116-001 is the first course in the catalog
T38: Remove Course –	Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T32 has run.		
back	Select CSC236-001		
	Click Remove Course	CSC236-001 is removed. CSC230-001 is the last course in the catalog	CSC236-001 is removed. CSC230-001 is the last course in the catalog
T39: Save	Preconditions: PackSchedulerGUI has loaded and	Contents should be:	Contents should be:
Course	registrar user is logged in (T2). T32-T38 have run.	CSC116,Intro to Programming	CSC116,Intro to Programming

Catalog	Click Save Course Catalog	-	-
(Modified)	Select <b>test-files</b> directory and name the file <b>t39_course_catalog.txt</b> .	Java,001,3,jdyoung2,10,MW,9 10,1100 CSC116,Intro to Programming	Java,001,3,jdyoung2,10,MW,9 10,1100 CSC116,Intro to Programming
		Java,002,3,spbalik,10,MW,112 0,1310 CSC116,Intro to Programming	Java,002,3,spbalik,10,MW,112 0,1310 CSC116,Intro to Programming
		Java,003,3,tbdimitr,10,TH,112 0,1310 CSC116,Java,006,3,jdyoung2, 10,TH,1040,1230 CSC216,Programming Concepts - Java,002,4,jtking,10,MW,1330, 1445 CSC216,Programming Concepts - Java,601,4,jep,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,1 145,1300	Java,003,3,tbdimitr,10,TH,112 0,1310 CSC116,Java,006,3,jdyoung2, 10,TH,1040,1230 CSC216,Programming Concepts - Java,002,4,jtking,10,MW,1330, 1445 CSC216,Programming Concepts - Java,601,4,jep,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,1 145,1300
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	An empty course catalog is
	<u> </u>	shown.	shown.
T41: Add Course –	Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T20 has run.		

first (Modified)	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 • Enrollment Cap: 10 Click Add Course  Click OK	CSC216-601 is added to the list	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	User is returned to the Login view
T43: Login Student	Preconditions: PackSchedulerGUI has loaded (T2). T21 has 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.	pwilkins is logged in and is switched to the user view. All that is shown is a Logout button.
T44: Add Course	Preconditions: PackSchedulerGUI has loaded and student user is logged in (T43).		

as Student	Select CSC216		
	Click Add Course	CSC216 is shown in the schedule. Course details are shown at the bottom of the panel.	CSC216 is shown in the schedule. Course details are shown at the bottom of the panel.
T45: Remove Course as Student –	Preconditions: PackSchedulerGUI has loaded and student user is logged in (T43). T44 has run.  Click Remove Course		
Selection		popup shows "No item selected in the schedule."	popup shows "No item selected in the schedule."
T46: Set Title	Preconditions: PackSchedulerGUI has loaded and student user is logged in (T43). T44 has run.  Enter "New Schedule" in title field		
		Title field shows "New Schedule"	Title field shows "New Schedule"
T46: Remove Course as	Preconditions: PackSchedulerGUI has loaded and student user is logged in (T43). T46 has run.  Select CSC216		
Student	Click Remove Course	Schedule is empty. Title shows "New Schedule"	Schedule is empty. Title shows "New Schedule"

T47: Reset Schedule	Preconditions: PackSchedulerGUI has loaded and student user is logged in (T43). T44 has run.		
as Student	Select CSC216		
Student	Click Reset Schedule		
		Schedule is empty. Title shows "My Schedule"	Schedule is empty. Title shows "My Schedule