## Lab 09: 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.

**Description Expected Results Actual Results** Test ID T1: Preconditions: PackSchedulerGUI has loaded Pop up with message "User doesn't exist." Invalid User ID: Iberg User ID and password text Login Password: pw fields are cleared. Pop up with message "User Click Login doesn't exist." Click OK User ID and password text Click Clear fields are cleared. T2: Preconditions: PackSchedulerGUI has loaded View switches to Registrar panel with Student Directory Registrar User ID: registrar.properties.id functionality displaye Login

	Password: registrar.properties.pw Click Login	View switches to Registrar 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	Preconditions: PackSchedulerGUI has loaded and		Error Message: Invalid last

	T		
Invalid Student - no last name	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	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 -	Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T3 has run.		Error Message: Invalid email

no email	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	
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	Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T3 has run.  Enter the following in the Student Information section:		Error Message: Passwords do not match

match	<ul> <li>First Name: Patience</li> <li>Last Name: Wilkins</li> <li>ID: pwilkins</li> <li>Email: pwilkins@ncsu.edu</li> <li>Password: pw1</li> <li>Repeat Password: pw</li> <li>Max Credits: 15</li> <li>Click Add Student</li> </ul>	Error 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	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		Error Message: Invalid max credits

	<ul> <li>ID: pwilkins</li> <li>Email: pwilkins@ncsu.edu</li> <li>Password: pw</li> <li>Repeat Password: pw</li> <li>Max Credits: 19</li> <li>Click Add Student</li> </ul>	Error Message: Invalid 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.	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		Rylee Puckett is added to the Student Directory between Dylan Nolan and Cassandra Schwartz

	<ul> <li>Password: pw</li> <li>Repeat Password: pw</li> <li>Max Credits: 15</li> <li>Click Add Student</li> </ul> Click OK	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.	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 <b>Shannon Hansen</b>		Shannon Hansen is removed. Athea Hicks follows Emerald Frost in the list

	Click 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		Melvin Acevedo is removed.  Demetrius Austin is front of the directory
	Click Remove student	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		Patience Wilkins is removed. Griffith Stone is last in the directory
	Click Remove student	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	Contents should be (note that the password hash may be different due to encoding):	Contents should be (note that the password hash may be different due to encoding):
,	Select <b>test-files</b> directory and name the file <b>t19_student_directory.txt</b> .	Demetrius, Austin, daustin, Curab itur. egestas. nunc@placeratorcil acus.co.uk, 0 ÉRú±"ÃùuŸ¦Ù\7X² F´þâ9•{-OîFâapÄ, 18 Lane, Berg, Iberg, sociis@non.or g, 0 ÉRú±"ÃùuŸ¦Ù\7X²F´þâ9•{-Oî	Demetrius, Austin, daustin, Cura bitur.egestas.nunc@placerator cilacus.co.uk, 0 ÉRú±"ÃùuŸ¦Ù\7 X²F′þâ9•{-OîFâapÄ, 18 Lane, Berg, Iberg, sociis@non.or g, 0 ÉRú±"ÃùuŸ¦Ù\7X²F′þâ9•{-

## FâapÄ,14 Raymond, Brennan, rbrennan, lito ra.torquent@pellentesquemass alobortis.ca,0ÉRú±"ÃùuŸ¦Ù\7X2 F'pâ9•{-OîFâapÄ,12 Emerald, Frost, efrost, adipiscing @acipsumPhasellus.edu,0ÉRú ±"ÃùuŸ¦Ù\7X2F'bâ9•{-OîFâapÄ, Althea. Hicks. ahicks. Phasellus.d apibus@luctusfelis.com,0ÉRú± "ÃùuŸ¦Ù\7X2F′þâ9•{-OîFâapÄ,1 Zahir, King, zking, orci. Donec@a metmassaQuisque.com,0ÉRú±" ÃùuŸ¦Ù\7X²F′þâ9•{-OîFâapÄ,1 Dylan, Nolan, dnolan, placerat. Cr as.dictum@dictum.net,0ÉRú±" ÃùuŸ¦Ù\7X²F′þâ9•{-OîFâapÄ.5 Rylee, Puckett, rpuckett, rpuckett @ncsu.edu,0ÉRú±"ÃùuŸ¦Ù\7X2 F'pâ9•{-OîFâapÄ,15 Cassandra, Schwartz, cschwartz ,semper@imperdietornare.co.u k,0ÉRú±"ÃùuŸ¦Ù\7X2F7þâ9•{-Oî FâapÄ.4 Griffith, Stone, gstone, porta@ma gnamalesuadavel.net.0ÉRú±"Ã ùuŸ¦Ù\7X2F′bâ9•{-OîFâapÄ,17

OîFâapÄ,14 Raymond.Brennan.rbrennan.lit ora.torquent@pellentesquema ssalobortis.ca,0ÉRú±"ÃùuŸ¦Ù\ 7X<sup>2</sup>F′bâ9•{-OîFâapÄ,12 Emerald.Frost.efrost.adipiscin g@acipsumPhasellus.edu,0É Rú±"ÃùuŸ¦Ù\7X2F′þâ9•{-OîFâ apÄ.3 Althea. Hicks. ahicks. Phasellus. dapibus@luctusfelis.com,0ÉR ú±"ÃùuŸ¦Ù\7X2F′þâ9•{-OîFâap Ä,11 Zahir,King,zking,orci.Donec@ ametmassaQuisque.com,0ÉR ú±"ÃùuŸ¦Ù\7X2F′þâ9•{-OîFâap Ä.15 Dylan, Nolan, dnolan, placerat. C ras.dictum@dictum.net,0ÉRú± "ÃùuŸ¦Ù\7X2F´þâ9•{-OîFâapÄ, Rylee, Puckett, rpuckett, rpucket t@ncsu.edu,0ÉRú±"ÃùuŸ¦Ù\7 X<sup>2</sup>F′þâ9•{-OîFâapÄ,15 Cassandra.Schwartz.cschwart z,semper@imperdietornare.co. uk,0ÉRú±"ÃùuŸ¦Ù\7X2F7bâ9•{-OîFâapÄ,4 Griffith, Stone, gstone, porta@m agnamalesuadavel.net,0ÉRú±" ÃùuŸ¦Ù\7X²F′þâ9•{-OîFâapÄ,1

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.	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.	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	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	8 courses are listed starting with CSC116-001 and ending with CSC230-001

		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:  • Course Name: • 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	Error 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:		Error Message: Invalid course title

	Click Add Course Click OK	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 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		Error Message: Invalid section number

	<ul> <li>End Time: 11:30 AM</li> <li>Meeting Days: Tuesday &amp; Thursday</li> <li>Click Add Course</li> </ul>	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 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		Error Message: Invalid instructor unity id

	<ul> <li>Instructor Id:</li> <li>Start Time: 10:15 AM</li> <li>End Time: 11:30 AM</li> <li>Meeting Days: Tuesday &amp; Thursday</li> <li>Click Add Course</li> <li>Click OK</li> </ul>	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 meeting 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		Error Message: Invalid meeting days

	<ul> <li>Course Section: 001</li> <li>Credits: 3</li> <li>Instructor Id: lasher</li> <li>Start Time: 10:15 AM</li> <li>End Time: 11:30 AM</li> <li>Meeting Days:</li> <li>Click Add Course</li> </ul>	Error Message: Invalid meeting days	
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:	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 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		CSC113-001 is added to the list at the front and is followed by CSC116-001.

	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	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:	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 - no	Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2).  Click Remove Course	Error Message: No course	Error Message: No course selected

selection		selected	
T36: Remove Course - middle	Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2).  Select CSC216-001		CSC216-001 is removed. CSC116-006 is followed by CSC216-002.
	Click 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		CSC113-001 is removed. CSC116-001 is the first course in the catalog
	Click 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 CSC236-001		CSC236-001 is removed. CSC230-001 is the last course in the catalog
	Click Remove Course	CSC236-001 is removed. CSC230-001 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	Contents should be:  CSC116,Intro to Programming - Java,001,3,jdyoung2,MW,910,1	Contents should be: CSC116,Intro to Programming -
		100	Java,001,3,jdyoung2,MW,910,

	Select test-files directory and name the file t39_course_catalog.txt.	CSC116,Intro to Programming - Java,002,3,spbalik,MW,1120,1 310 CSC116,Intro to Programming - Java,003,3,tbdimitr,TH,1120,13 10 CSC116,Java,006,3,jdyoung2,TH,1040,1230 CSC216,Programming Concepts - Java,002,4,jtking,MW,1330,144 5 CSC216,Programming Concepts - Java,601,4,jep,A CSC226,Discrete Mathematics for Computer Scientists,001,3,tmbarnes,MWF,935,1025 CSC230,C and Software Tools,001,3,dbsturgi,MW,1145,1300	1100 CSC116,Intro to Programming Java,002,3,spbalik,MW,1120,1 310 CSC116,Intro to Programming Java,003,3,tbdimitr,TH,1120,1 310 CSC116,Java,006,3,jdyoung2, TH,1040,1230 CSC216,Programming Concepts - Java,002,4,jtking,MW,1330,14 45 CSC216,Programming Concepts - Java,601,4,jep,A CSC226,Discrete Mathematics for Computer Scientists,001,3,tmbarnes,MW F,935,1025 CSC230,C and Software Tools,001,3,dbsturgi,MW,1145 ,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 shown.
T41: Add	Preconditions: PackSchedulerGUI has loaded and	shown.	CSC216-601 is added to the
Course -	registrar user is logged in (T2). T20 has run.		list

	Enter the following in the Course Information section:	CSC216-601 is added to the list	
T42: Logout	Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2).		User is returned to the Login view
	Click Logout	User is returned to the Login view	
T42: Login Student	Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T21 has run  User ID: pwilkins Password: pw		pwilkins is logged in and is switched to the user view. All that is shown is a Logout button.
	Click: Login	pwilkins is logged in and is switched to the user view. All that is shown is a Logout button.	
T43: Load	Preconditions: None Select "load Course catalog"	COurses open up in the course catalog view with a	COurses open up in the course catalog view with a

course catalog with open seats	Browse for Course_records.txt Select the file	new row for open seats	new row for open seats
Test 44 Enrollme nt cap	Preconditions: test 43 Go to add course display type the following info COurse name: java COurse title: CSC101 Section: 001 Credits: 2 Instructor ID: sjones Enrollment cap: 9 Start time: 900 End time: 1000 Meeting days: TH	Error box pops up	Error box pops up
Test 45 Login as student	Preconditions:test 43 Select "load student directory" Browse for the files test-files Browses for file student_record.txt select file. Then select logout Login: daustin Password: pw Select the first course csc116 001 Select add course	Course is displayed in schedule view. Course in course catalog view has an open seats number of 9	Course is displayed in schedule view. Course in course catalog view has an open seats number of 9
Test 46 Login as studen t and add same	Preconditions test 43 and 45 Select logout Login: lberg Password: pw Select the first course csc116 001	Course catalog is displayed with csc116 having 9 open seats. When course is added the class drops to 8 open seats	Course catalog is displayed with csc116 having 9 open seats. When course is added the class drops to 8 open seats

class to schedule	Select add course	