## Lab 05: Black Box Test Plan

## **Test Overview**

To run the tests:

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

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

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

first=Sarah last=Worley id=Sworley email=sw@ncsu.ed pw=password

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

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

Test ID	Description	Expected Results	Actual Results
T1: Invalid Login	Preconditions: PackSchedulerGUI has loaded  User ID: Iberg Password: pw Click Login	Pop up with message "User	Pop up with message "User doesn't exist." User ID and password text fields are cleared.

	Click <b>OK</b> Click <b>Clear</b>	doesn't exist."  User ID and password text fields are cleared.	
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	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		Error Message: Invalid first name

	<ul> <li>Password: pw</li> <li>Repeat Password: pw</li> <li>Max Credits: 15</li> <li>Click Add Student</li> </ul>	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	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		Error Message: Invalid id

	Max Credits: 15 Click Add Student Click OK	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	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	Error Message: Invalid email	Error Message: Invalid email

	Click <b>OK</b>		
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  Click OK	Error Message: Passwords do not match	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 • 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 - 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 -	Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T3 has run.		Rylee Puckett is added to the Student Directory between

middle	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	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	Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2).  Click Remove Student	Error Message: No student	Error Message: No student selected

selection		selected	
T16: Remove Student - middle	Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2).  Select Shannon Hansen		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.	Contents should be (note that the password hash may be different due to encoding):	Demetrius, Austin, daustin, Curabitur. egestas. nunc@placeratorcilacus.co.uk, 0 \& \& \\ \& \& \& \& \& \& \& \& \& \&

## **Click Save Student Directory**

Select **test-files** directory and name the file **t19\_student\_directory.txt**.

Demetrius, Austin, daustin, Curabit ur.egestas.nunc@placeratorcilac us.co.uk,0ÉRú±"ÃùuŸ¦Ù\7X2F′bâ 9•{-OîFâapÄ,18 Lane, Berg, Iberg, sociis@non.org, 0ÉRú±"ÃùuŸ¦Ù\7X2F7bâ9•{-OîFâ apÄ,14 Raymond, Brennan, rbrennan, litor a.torquent@pellentesquemassal obortis.ca,0ÉRú±"ÃùuŸ¦Ù\7X2F′þ â9•{-OîFâapÄ,12 Emerald.Frost.efrost.adipiscing@ acipsumPhasellus.edu.0ÉRú±"Ã ùuŸ¦Ù\7X²F′þâ9•{-OîFâapÄ,3 Althea. Hicks. ahicks. Phasellus.da pibus@luctusfelis.com.0ÉRú±"Ã ùuŸ¦Ù\7X2F′bâ9•{-OîFâapÄ,11 Zahir.King.zking.orci.Donec@am etmassaQuisque.com,0ÉRú±"Ãù uŸ¦Ù\7X2F′þâ9•{-OîFâapÄ,15 Dylan, Nolan, dnolan, placerat. Cra s.dictum@dictum.net,0ÉRú±"Ãù uŸ¦Ù\7X2F′bâ9•{-OîFâapÄ,5 Rylee, Puckett, rpuckett, rpuckett @ncsu.edu,0ÉRú±"ÃùuŸ¦Ù\7X2F 'bâ9•{-OîFâapÄ,15 Cassandra.Schwartz.cschwartz.s emper@imperdietornare.co.uk,0 ÉRú±"ÃùuŸ¦Ù\7X2F 'þâ9•{-OîFâa pÄ,4 Griffith, Stone, gstone, porta@mag namalesuadavel.net.0ÉRú±"Ãùu Ÿ¦Ù\7X2F′bâ9•{-OîFâapÄ,17

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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 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:  • 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	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:  • Course Name: CSC236 • Course Title:		Error Message: Invalid course title

	<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: Tuesday &amp; Thursday</li> <li>Click Add Course</li> </ul>	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:  • 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 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		Error Message: Invalid section number

	<ul> <li>Course Title: Computer Organization and Assembly Language</li> <li>Course Section: 0011</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: 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	Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T23 has run.  Enter the following in the Course Information		Error Message: Invalid instructor unity id

instructor	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 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 course times	Error Message: Invalid course times
T31: Add Invalid	Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T23 has run.		Error Message: Invalid meeting days

Course - no meeting days	Enter the following in the Course Information section:	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:  • 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: Tuesday & Thursday Click Add Course  Click OK	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 • 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		CSC113-001 is added to the list at the front and is followed by CSC116-001.
	Click <b>Add Course</b> Click <b>OK</b>	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	CSC116-006 is added to the list	CSC116-006 is added to the list between CSC116-003 and CSC216-001.

	Click <b>OK</b>	between CSC116-003 and CSC216-001.	
T35: Remove Course -	Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2).		Error Message: No course selected
no selection	Click Remove Course	Error Message: No course 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 -	Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T33 has run.		CSC113-001 is removed. CSC116-001 is the first course in the catalog
front	Select CSC113-001		
	Click Remove Course	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.		CSC236-001 is removed. CSC230-001 is the last course in the catalog
back	Select CSC236-001		
	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  Select test-files directory and name the file t39_course_catalog.txt.	Contents should be:  CSC116,Intro to Programming - Java,001,3,jdyoung2,MW,910,11 00 CSC116,Intro to Programming - Java,002,3,spbalik,MW,1120,131 0 CSC116,Intro to Programming - Java,003,3,tbdimitr,TH,1120,131 0 CSC116,Java,006,3,jdyoung2,T H,1040,1230 CSC216,Programming Concepts - Java,002,4,jtking,MW,1330,1445 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,1145,1 300	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,Programming Concepts - Java,002,4,jtking,MW,1330,1 445 CSC216,Programming Concepts - Java,601,4,jep,A CSC226,Discrete Mathematics for Computer Scientists,001,3,tmbarnes,M WF,935,1025 CSC230,C and Software Tools,001,3,dbsturgi,MW,114 5,1300
T40: New	Preconditions: PackSchedulerGUI has loaded		An empty course catalog is

Course Catalog	and registrar user is logged in (T2). T12-T18 have run.  Click New Course Catalog	An empty course catalog is shown.	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:	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 <b>Logout</b>	User is returned to the Login view	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.

that is shown is a Logout button.
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