Lab 07: 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: **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.	Pop up with message "User doesn't exist." **After clicking clear, the fields are cleared**
T2: Registrar Login	Preconditions: PackSchedulerGUI has loaded User ID: **registrar** Password: **Regi5tr@r**		**The panel switches to the student directory**

	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 loaded in alphabetical order by last name. Starting with Austin.**

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:		Error Message: Invalid last name

	● 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	
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:		Error Message: Invalid 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 - 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**	Error Message: Passwords do	Error Message: Passwords do not match

		not match	
	Click **OK**		
T10: Add Invalid Student - zero max credits	Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T3 has run. Enter the following in the Student Information section: ● First Name: **Patience** ● Last Name: **Wilkins** ● ID: **pwilkins** ● Email: **pwilkins@ncsu.edu** ● Password: **pw** ● Repeat Password: **pw** ● Max Credits: **0** Click **Add Student** Click **OK**	Patience Wilkins is added to the Student Directory and is the last student in the list. Max credits is set to 18.	Patience Wilkins is added to the Student Directory and is the last student in the list. The Student ID is shown as well.
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**	Patience Wilkins is added to the Student Directory and is the last student in the list. Max	Patience Wilkins is added to the Student Directory and is the last student in the list. The Student ID is shown as well.

		credits is set to 18.	
T12: Add Student - end	Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T3 has run.

Enter the following in the Student Information section:
● First Name: **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: ● 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 **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**		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** 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,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•{-	**Demetrius,Austin,daustin,Curabitur.egestas.nunc@placeratorcilacus.co.uk,MMIS+rEiw/l1nwKm2Vw3WLJGtP7iOZV7LU/uRuJhcMQ=,18 Lane,Berg,lberg,sociis@non.org,MMIS+rEiw/l1nwKm2Vw3WLJGtP7iOZV7LU/uRuJhcMQ=,14 Raymond,Brennan,rbrennan,litora.torquent@pellentesquemassalobortis.ca,MMIS+rEiw/l1nwKm2Vw3WLJGtP7iOZV7LU/uRuJhcMQ=,12 Emerald,Frost,efrost,adipiscing@acipsumPhasellus.edu,MMIS+rEiw/l1nwKm2Vw3WLJGtP7iOZV7LU/uRuJhcMQ=,3 Althea,Hicks,ahicks,Phasellus.dapibus@luctusfelis.com,MMIS+rEiw/l1nwKm2Vw3WL**

		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	**JGtP7iOZV7LU/uRuJhcMQ=,11 Zahir,King,zking,orci.Donec@ametmassaQuisque.com,MMIS+rEiw/l1nwKm2Vw3WLJGtP7iOZV7LU/uRuJhcMQ=,15 Dylan,Nolan,dnolan,placerat.Cras.dictum@dictum.net,MMIS+rEiw/l1nwKm2Vw3WLJGtP7iOZV7LU/uRuJhcMQ=,5 Rylee,Puckett,rpuckett,rpuckett@ncsu.edu,MMIS+rEiw/l1nwKm2Vw3WLJGtP7iOZV7LU/uRuJhcMQ=,15 Cassandra,Schwartz,cschwartz,semper@imperdietornare.co.uk,MMIS+rEiw/l1nwKm2Vw3WLJGtP7iOZV7LU/uRuJhcMQ=,4 Griffith,Stone,gstone,porta@magnamalesuadavel.net,MMIS+rEiw/l1nwKm2Vw3WLJGtP7iOZV7LU/uRuJhcMQ=,17**
T20: New Student Directory	Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T12-T18 have run.\n\nClick **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.\n\nEnter the following in the Student Information		Patience Wilkins is added to the Student Directory and is the only student in the list.

	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.	
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**	13 courses are listed starting with CSC116-001 and ending with CSC316-001	13 courses are listed starting with CSC116-001 and ending with CSC316-001
T24: Add Invalid Course - no name	Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T23 has run. Enter the following in the Course Information section: ● Course Name: ● Course Title: **Computer Organization and Assembly Language** ● Course Section: **001**		Error Message: Invalid course name

	● 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	
T25: Add Invalid Course - no title	Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T23 has run. Enter the following in the Course Information section: ● Course Name: **CSC236** ● Course Title: ● Course Section: **001** ● Credits: **3** ● Instructor Id: **lasher** ● Start Time: **10:15 AM** ● End Time: **11:30 AM** ● Meeting Days: **Tuesday & Thursday** Click **Add Course** Click **OK**	Error Message: Invalid course title	Error Message: Invalid title
T26: Add Invalid Course - no section	Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T23 has run. Enter the following in the Course Information section: ● Course Name: **CSC236** ● Course Title: **Computer Organization and Assembly Language** ● Course Section: ● Credits: **3**		

	● Instructor Id: **lasher** ● Start Time: **10:15 AM** ● End Time: **11:30 AM** ● Meeting Days: **Tuesday & Thursday** Click **Add Course** Click **OK**	Error Message: Invalid section number	Error Message: Invalid section
T27: Add Invalid Course - section too short	Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T23 has run. Enter the following in the Course Information section: ● Course Name: **CSC236** ● Course Title: **Computer Organization and Assembly Language** ● Course Section: **0011** ● Credits: **3** ● Instructor Id: **lasher** ● Start Time: **10:15 AM** ● End Time: **11:30 AM** ● Meeting Days: **Tuesday & Thursday** Click **Add Course** Click **OK**	Error Message: Invalid section number	Error Message: Invalid section
T28: Add Invalid Course - section too long	Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T23 has run. Enter the following in the Course Information section: ● Course Name: **CSC236** ● Course Title: **Computer Organization and Assembly Language** ● Course Section: **01** ● Credits: **3**		Error Message: Invalid section

	● 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	
T29: Add Invalid Course - no instructor id	Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T23 has run. Enter the following in the Course Information section: ● Course Name: **CSC236** ● Course Title: **Computer Organization and Assembly Language** ● Course Section: **001** ● Credits: **3** ● Instructor Id: ● Start Time: **10:15 AM** ● End Time: **11:30 AM** ● Meeting Days: **Tuesday & Thursday** Click **Add Course** Click **OK**	Error Message: Invalid instructor unity id	Error Message: Invalid instructor id
T30: Add Invalid Course - end time after start time	Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T23 has run. Enter the following in the Course Information section: ● Course Name: **CSC236** ● Course Title: **Computer Organization and Assembly Language** ● Course Section: **001** ● Credits: **3**		Error Message: Invalid meeting days and times

	● Instructor Id: **lasher** ● Start Time: **11:30 AM** ● End Time: **10:15 AM** ● Meeting Days: **Tuesday & Thursday** Click **Add Course** Click **OK**	Error Message: Invalid meeting times	
T31: Add Invalid Course - no meeting days	Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T23 has run. Enter the following in the Course Information section: ● Course Name: **CSC236** ● Course Title: **Computer Organization and Assembly Language** ● Course Section: **001** ● Credits: **3** ● Instructor Id: **lasher** ● Start Time: **10:15 AM** ● End Time: **11:30 AM** ● Meeting Days: Click **Add Course** Click **OK**	Error Message: Invalid meeting days	Error Message: Invalid meeting days and times.
T32: Add Course - end	Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T23 has run. Enter the following in the Course Information section: ● Course Name: **CSC236** ● Course Title: **Computer Organization and Assembly Language** ● Course Section: **001** ● Credits: **3**		CSC236-001 is added to the list between CSC230-001 and CSC316-001

	● 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 between CSC230-001 and CSC316-001	
T33: Add Course - front	Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T23 has run. Enter the following in the Course Information section: ● Course Name: **CSC113** ● Course Title: **Introduction to 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.	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**		CSC116-006 is added to the list between CSC116-003 and CSC216-001.

	● Instructor Id: **jdyoung2** ● Start Time: **10:40 AM** ● End Time: **12:30 PM** ● Meeting Days: **Tuesday & Thursday** Click **Add Course** Click **OK**	CSC116-006 is added to the list between CSC116-003 and CSC216-001.	
T35: Remove Course - no selection	Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). Click **Remove Course**	 Error Message: No course selected	Error Message: No course selected
T36: Remove Course - middle	Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). Select **CSC216-001** Click **Remove Course**	 CSC216-001 is removed. CSC116-006 is followed by CSC216-002.	CSC216-001 is removed. CSC116-006 is followed by CSC216-002.
T37: Remove Course - front	Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T33 has run. Select **CSC113-001** Click **Remove Course**	 CSC113-001 is removed. CSC116-001 is the first course in the catalog	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. CSC316-001 is the last course in the catalog

	Click **Remove Course**	CSC236-001 is removed. CSC316-001 is the last course in the catalog	
T39: Save Course Catalog	Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T32-T38 have run. Click **Save Course Catalog** Select **test-files** directory and name the file **t39_course_catalog.txt**.	Contents should be: CSC116,Intro to Programming - Java,001,3,jdyoung2,MW,910,1100 CSC116,Intro to Programming - Java,002,3,spbalik,MW,1120,1310 CSC116,Intro to Programming - Java,003,3,tbdimitr,TH,1120,1310 CSC116,Introduction to Programming - Java,006,3,jdyoung2,TH,1040,1230 CSC216,Software Development Fundamentals,002,3,ixdoming,MW,1330,1445 CSC216,Software Development Fundamentals,601,3,jctetter,A CSC217,Software Development Fundamentals Lab,202,1,sesmith5,M,1040,1230 CSC217,Software Development Fundamentals	**CSC116,Intro to Programming - Java,001,3,jdyoung2,MW,910,1100** **CSC116,Intro to Programming - Java,002,3,spbalik,MW,1120,1310** **CSC116,Intro to Programming - Java,003,3,tbdimitr,TH,1120,1310** **CSC116,Introduction to Programming - Java,006,3,jdyoung2,TH,1040,1230** **CSC216,Software Development Fundamentals,002,3,ixdoming,MW,1330,1445** **CSC216,Software Development Fundamentals,601,3,jctetter,A** **CSC217,Software Development Fundamentals Lab,202,1,sesmith5,M,1040,1230** **CSC217,Software Development Fundamentals Lab,211,1,sesmith5,T,830,10**

		Lab,211,1,sesmith5,T,830,1020 CSC217,Software Development Fundamentals Lab,223,1,sesmith5,W,1500,1650 CSC217,Software Development Fundamentals Lab,601,1,sesmith5,A CSC226,Discrete Mathematics for Computer Scientists,001,3,tmbarnes,MWF,935,1025 CSC230,C and Software Tools,001,3,dbsturgi,MW,1145,1300 CSC316,Data Structures and Algorithms,001,3,jtking,MW,830,945	**20** **CSC217,Software Development Fundamentals Lab,223,1,sesmith5,W,1500,1650** **CSC217,Software Development Fundamentals Lab,601,1,sesmith5,A** **CSC226,Discrete Mathematics for Computer Scientists,001,3,<u>tmbarnes</u>,MWF,935,1025** **CSC230,C and Software Tools,001,3,<u>dbsturgi</u>,MW,1145,1300** **CSC316,Data Structures and Algorithms,001,3,<u>jtking</u>,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.	An empty course catalog is shown.
T41: Add Course - first	Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T20 has run. Enter the following in the Course Information section: ● Course Name: **CSC216** ● Course Title: **Programming Concepts - Java** ● Course Section: **601**		**Message box: Invalid meeting days and times.**

	● Credits: **4** ● Instructor Id: **jctetter** ● Start Time: ● End Time: ● Meeting Days: **Arranged** Click **Add Course** Click **OK**	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
T42: Login Student	Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T21 and T42 have run. User ID: **pwilkins** Password: **pw** Click: **Login**	pwilkins is logged in and is switched to the user view. They see the catalog and an empty schedule	pwilkins is logged in and is switched to the user view. They see the catalog and an empty schedule