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.

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.	 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 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** ● 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** • 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** • 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** ● 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** 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** 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 - 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** 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,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 | Contents are:

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 |

		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	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

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** ● 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 name	Error Message: Invalid 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** ● 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 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** ● 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	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** ● Enrollment Cap: **10** ● Start Time: **10:15 AM** ● End Time: **11:30 AM** ● Meeting Days: **Tuesday & Thursday** Click **Add Course**	Error Message: Invalid section	Error Message: Invalid section

	Click **OK**		
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: **lasher** ● 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	Error Message: Invalid section

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 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** ● Instructor Id: **lasher** ● Enrollment Cap: **10** ● Start Time: **11:30 AM** ● End Time: **10:15 AM** ● Meeting Days: **Tuesday & Thursday** Click **Add Course**	Error Message: Invalid meeting times	Error Message: Invalid meeting times

	Click **OK**		
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** ● 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	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** ● 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	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** ● Enrollment Cap: **10** ● Start Time: **3:00 PM** ● End Time: **3:50 PM** ● Meeting Days: **Monday & Wednesday** Click **Add Course**	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.

	Click **OK**		
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: **10** ● 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.	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** 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 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,spba-lik,10,MW,1120,1310
CSC116,Intro to Programming - Java,003,3,tbdi-mitr,10,TH,1120,1310
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,1145,1300 | Contents are:

CSC116,Intro to Programming - Java,001,3,jdyoung2,10,MW,910,1100
CSC116,Intro to Programming - Java,002,3,spba-lik,10,MW,1120,1310
CSC116,Intro to Programming - Java,003,3,tbdi-mitr,10,TH,1120,1310
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,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 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** ● Credits: **4** ● Instructor Id: **jep** ● **Enrollment Cap: 10** ● Start Time: ● End Time: ● Meeting Days: **Arranged** Click **Add Course** Click **OK**	CSC216-601 is added to the list	CSC216-601 is added to the list
T42: Log-out	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 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. 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: Login Student with Course Catalog	Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T21 has run. Click **Load Course Catalog** Select **test-files/t43_course_catalog.txt** Click **Select** Click **Logout.** User ID: **pwilkins** Password: **pw** Click: **Login**	The course catalog now has 9 classes, starting with ART215 and ending with MUS120. pwilkins is logged in and is switched to the user view. The course catalog is shown with 9 classes.	The course catalog now has 9 classes, starting with ART215 and ending with MUS120. pwilkins is logged in and is switched to the user view. The course catalog is shown with 9 classes.
T45: Add course to sched- ule	Preconditions: PackSchedulerGUI has loaded and T44 has run. Select **CSC116 001** Click **Add Course**	CSC116 001's course infor- mation is seen in the course details CSC116 is added to the schedule	CSC116 001's course infor- mation is seen in the course de- tails CSC116 is added to the sched- ule
T46: Add dupli- cate course to schedule	Preconditions: PackSchedulerGUI has loaded and T45 has run. Select **CSC116 002** Click **Add Course** Click **OK**	Error Message: Course can- not be added to schedule.	Error Message: Course cannot be added to schedule.

T47: Add con- flicting course to schedule	Preconditions: PackSchedulerGUI has loaded and T46 has run. Select **BIO101 001** Click **Add Course** Click **OK**	Error Message: Course can- not be added to schedule.	Error Message: Course cannot be added to schedule.
T48: Re- move course from schedule	Preconditions: PackSchedulerGUI has loaded and T47 has run. Select **CSC116 001** in Student's Schedule Click **Remove Course**	Schedule is now empty	Schedule is now empty
T49: Add multiple courses and set ti- tle	Preconditions: PackSchedulerGUI has loaded and T44 has run. Select **ART215 001** Click **Add Course** Select **CSC114 006** Click **Add Course** Select **BIO101 001** Click **Add Course** Select **CSC116 002** Click **Add Course** Select **MUS120** Click **Add Course** In the text field next to Schedule Title, type **"Fall 2017"** Click **Set Title**	Schedule now has 5 classes, starting with ART215 and ending with MUS120 The schedule's title is now: Fall 2017 Each class in the schedule shows 9 open seats.	Schedule now has 5 classes, starting with ART215 and ending with MUS120 The schedule's title is now: Fall 2017 Each class in the schedule shows 9 open seats.

T50: Attempt to overload student's schedule	Preconditions: PackSchedulerGUI has loaded and T49 has run. Select **ECN101** Click **Add Course** Click **OK**	Error Message: Course cannot be added to schedule.	Error Message: Course cannot be added to schedule.
T50: reset schedule	Preconditions: PackSchedulerGUI has loaded and T49 has run. Click **Reset Schedule**	The schedule is empty and the title is now "My Schedule"	The schedule is empty and the title is now "My Schedule"
T51: Test Load Faculty Record	Preconditions: PackSchedulerGUI has loaded and registrar is logged in (T2) Click **Faculty Directory** Click **Load Faculty Directory** Choose test-files/faculty_records.txt	The UI switches to an empty Faculty Directory panel. The Faculty Directory contains 8 faculty members, starting with Ashely Witt and ending in Lacey Walls	The UI switches to an empty Faculty Directory panel. The Faculty Directory contains 8 faculty members, starting with Ashely Witt and ending in Lacey Walls

Test 52: Test First Name	Preconditions: PackSchedulerGUI has loaded and T51 has run. In the Faculty Controls, enter: First Name: Last Name: **Adams** ID: tadams Email: tadams@ncsu.edu Password: pw Repeat Password: pw Max Courses: 2 Click **Add Faculty** Click **OK**	Error message: Invalid first name	Error message: Invalid first name
T53: Test Last Name	Preconditions: PackSchedulerGUI has loaded and T51 has run. In the Faculty Controls, enter: First Name: **Timberly** Last Name: ID: tadams Email: tadams@ncsu.edu Password: pw Repeat Password: pw Max Courses: 2 Click **Add Faculty** Click **OK**	Error message: Invalid last name	Error message: Invalid last name

T54: Test Faculty ID	Preconditions: PackSchedulerGUI has loaded and T51 has run. In the Faculty Controls, enter: First Name: **Timberly** Last Name: **Adams** ID: Email: tadams@ncsu.edu Password: pw Repeat Password: pw Max Courses: 2 Click **Add Faculty** Click **OK**	Error message: Invalid id	Error message: Invalid id
T55: Test faculty email	Preconditions: PackSchedulerGUI has loaded and T51 has run. In the Faculty Controls, enter: First Name: **Timberly** Last Name: ID: tadams Email: Password: pw Repeat Password: pw Max Courses: 2 Click **Add Faculty** Click **OK**	Error message: Invalid email	Error message: Invalid email

T56: Test Faculty Password	Preconditions: PackSchedulerGUI has loaded and T51 has run. In the Faculty Controls, enter: First Name: **Timberly** Last Name: ID: tadams Email: tadams@ncsu.edu Password: pw Repeat Password: pw Max Courses: 2 Click **Add Faculty** Click **OK**	Error message: Invalid pass-word	Error message: Invalid password
T57: Test Faculty Password Mismatch	Preconditions: PackSchedulerGUI has loaded and T51 has run. In the Faculty Controls, enter: First Name: **Timberly** Last Name: ID: tadams Email: tadams@ncsu.edu Password: pw Repeat Password: pw Max Courses: 2 Click **Add Faculty** Click **OK**	Error message: Passwords do not match	Error message: Passwords do not match

T58: Test Add Faculty	Preconditions: PackSchedulerGUI has loaded and T51 has run. In the Faculty Controls, enter: First Name: **Timberly** Last Name: **Adams** ID: tadams Email: tadams@ncsu.edu Password: pw Repeat Password: pw Max Courses: 2 Click **Add Faculty** Click **OK**	Timberly Adams is added to the list of faculty members at the end of the list	Timberly Adams is added to the list of faculty members at the end of the list
T59: Remove Faculty	Preconditions: PackSchedulerGUI has loaded and T58 has run. Select Halla Aguirre Click **Remove Faculty** Select Ashley Witt Click **Remove Faculty** Select Timberly Adams Click **Remove Faculty**	Halla Aguirre is removed from the list Ashley Witt is removed from the list Timberley Adams is removed from the list.	Halla Aguirre is removed from the list Ashley Witt is removed from the list Timberley Adams is removed from the list.

| T60: Save Faculty | Precondition: PackSchedulerGUI has loaded and T59 has run.

Click **Save Faculty Directory** and choose test-files/T60_faculty_directory.txt

Click **Save** | T60_faculty_directory should contain:

Ashely,Witt,awitt,mol-lis@Fuscealiquetma-gna.net,0?R??"??u???\7X?F???9?{-O?F?ap?,2
Fiona,Mead-ows,fmeadow,pharetra.sed@et.org,0?R??"??u???\7X?F???9?{-O?F?ap?,3
Brent,Brewer,bbrewer,sem.semper@or-cisem.co.uk,0?R??"??u???\7X?F???9?{-O?F?ap?,1
Halla,Aguirre,ha-guirr,Fusce.do-lor.quam@amalesua-daid.net,0?R??"??u???\7X?F???9?{-O?F?ap?,3
Kevyn,Patel,kpatel,ri-sus@pellentes-que.ca,0?R??"??u???\7X?F???9?{-O?F?ap?,1
El-ton,Briggs,ebriggs,arcu.ac@ipsumsodalespu-rus.edu,0?R??"??u???\7X?F???9?{-O?F?ap?,3
Nor-man,Brady,nbrady,pede.nonummy@elitfermen-tum.co.uk,0?R??"??u???\7X?F???9?{-O?F?ap?,1 | T60_faculty_directory contains:

Ashely,Witt,awitt,mol-lis@Fuscealiquetma-gna.net,0?R??"??u???\7X?F???9?{-O?F?ap?,2
Fiona,Mead-ows,fmeadow,pharetra.sed@et.org,0?R??"??u???\7X?F???9?{-O?F?ap?,3
Brent,Brewer,bbrewer,sem.semper@or-cisem.co.uk,0?R??"??u???\7X?F???9?{-O?F?ap?,1
Halla,Aguirre,haguirr,Fusce.do-lor.quam@amalesua-daid.net,0?R??"??u???\7X?F???9?{-O?F?ap?,3
Kevyn,Patel,kpatel,risus@pe-llentes-que.ca,0?R??"??u???\7X?F???9?{-O?F?ap?,1
El-ton,Briggs,ebriggs,arcu.ac@ipsumsodalespu-rus.edu,0?R??"??u???\7X?F???9?{-O?F?ap?,3
Norman,Brady,nbrady,pede.nonummy@elitfermen-tum.co.uk,0?R??"??u???\7X?F???9?{-O?F?ap?,1
Lacey,Walls,lwalls,nas-cetur.ridiculus.mus@fermen-tum.net,0?R??"??u???\7X?F???9?{-O?F?ap?,2 |

		Lacey,Walls,lwalls,nascetur.ridiculus.mus@fermentum.net,0?R??"??u???\7X?F???9?{-O?F?ap?,2	

T61: New Faculty Directory	Precondition: PackSchedulerGUI has loaded and T60 has run. Click **New Faculty Directory**	All faculty members are cleared and an empty faculty directory is shown	All faculty members are cleared and an empty faculty directory is shown
T61: Faculty Assignment Panel	Precondition: PackSchedulerGUI has loaded and Registrar is logged in. Click Faculty Assignment.	The Faculty Assignment panel loads and there are no elements in either the Course Catalog or Faculty Directory.	The Faculty Assignment panel loads and there are no elements in either the Course Catalog or Faculty Directory.
T62: Load Directories into Faculty Assignment	Precondition: T61 has run. Click Faculty Directory Panel. Click Load Faculty Directory. Choose **test-files/faculty_records.txt** Click Course Catalog. Click Load Course Catalog. Choose **test-files/course_records.txt** Click Faculty Assignment.	The Faculty Assignment panel now has 10 courses in the course catalog and 8 instructors in the faculty directory	The Faculty Assignment panel now has 10 courses in the course catalog and 8 instructors in the faculty directory
T63: Assign Course to Faculty	Precondition: T62 has run. Choose CSC116-001 from the Course Catalog. Choose Ashley Witt from the Faculty Directory. Click **Assign Faculty to Course.**	CSC116-001 now has "awitt" listed as the Instructor.	Error message: Course already has an instructor.

T64: Assign Faculty to Course with an Instructor	Precondition: T63 has run. Choose CSC116-001 from the Course Catalog. Choose Fiona Meadows from the Faculty Directory. Click **Assign Faculty to Course.** Click **OK.**	Error message: Course already has an instructor.	Error message: Course already has an instructor.
T65: Remove Course From Faculty	Precondition: T64 has run. Choose CSC116-001. Choose Fiona Meadows. Click **Remove Faculty from Course.** Click **OK.** Choose CSC116-001. Choose Ashley Witt. Click **Remove Faculty from Course.**	Error message: Cannot remove faculty member from course. "awitt" is removed from the course.	Error message: Cannot remove faculty member from course. "awitt" is removed from the course.
T66: Reset Faculty Schedule	Precondition: T64 has run. Click **Reset Faculty Schedule** Choose another course in the catalog and then return to CSC116-001	"awitt" is no longer listed as the instructor for any course.	"awitt" is no longer listed as the instructor for any course.