

# Lab 06: 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 test files should be located in the test-files/ folder.

The registrar's information is provided in 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: <b>lberg</b> Password: <b>pw</b> Click <b>Login</b>  Click <b>OK</b>  Click <b>Clear</b>	Pop up with message "User doesn't exist."  User ID and password text fields are cleared.	<b>Pop Up comes up stating that the user does not exist.</b>  <b>Everything else is cleared.</b>
T2: Registrar	Preconditions: PackSchedulerGUI has loaded		<b>The view of my GUI switched.</b>

Login	User ID: name as provided in registrar.properties Password: password as provided in registrar.properties Click <b>Login</b>	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 <b>Load Student Directory</b> Select <b>test-files/student_records.txt</b> Click <b>Select</b>	10 students are listed in alphabetical order by last name. The list starts with Demetrius Austin and ends with Griffith Stone.	<b>I have a list of students present in my GUI.</b>
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: <ul style="list-style-type: none"> <li>• First Name:</li> <li>• Last Name: <b>Wilkins</b></li> <li>• ID: <b>pwilkins</b></li> <li>• Email: <b>pwilkins@ncsu.edu</b></li> <li>• Password: <b>pw</b></li> <li>• Repeat Password: <b>pw</b></li> <li>• Max Credits: <b>15</b></li> </ul> Click <b>Add Student</b>  Click <b>OK</b>	Error Message: Invalid first name	<b>Error message comes up stating that there was an invalid first name.</b>

T5: Add Invalid Student - no last name	<p>Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T3 has run.</p> <p>Enter the following in the Student Information section:</p> <ul style="list-style-type: none"> <li>• First Name: <b>Patience</b></li> <li>• Last Name:</li> <li>• ID: <b>pwilkins</b></li> <li>• Email: <b>pwilkins@ncsu.edu</b></li> <li>• Password: <b>pw</b></li> <li>• Repeat Password: <b>pw</b></li> <li>• Max Credits: <b>15</b></li> </ul> <p>Click <b>Add Student</b></p> <p>Click <b>OK</b></p>	Error Message: Invalid last name	<b>Error - Invalid Last</b>
T6: Add Invalid Student - no id	<p>Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T3 has run.</p> <p>Enter the following in the Student Information section:</p> <ul style="list-style-type: none"> <li>• First Name: <b>Patience</b></li> <li>• Last Name: <b>Wilkins</b></li> <li>• ID:</li> <li>• Email: <b>pwilkins@ncsu.edu</b></li> <li>• Password: <b>pw</b></li> <li>• Repeat Password: <b>pw</b></li> <li>• Max Credits: <b>15</b></li> </ul> <p>Click <b>Add Student</b></p> <p>Click <b>OK</b></p>	Error Message: Invalid id	<b>Error - Invalid ID</b>
T7: Add Invalid	<p>Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T3 has run.</p>		<b>Error - Invalid Email</b>

Student - no email	<p>Enter the following in the Student Information section:</p> <ul style="list-style-type: none"> <li>• First Name: <b>Patience</b></li> <li>• Last Name: <b>Wilkins</b></li> <li>• ID: <b>pwilkins</b></li> <li>• Email:</li> <li>• Password: <b>pw</b></li> <li>• Repeat Password: <b>pw</b></li> <li>• Max Credits: <b>15</b></li> </ul> <p>Click <b>Add Student</b></p> <p>Click <b>OK</b></p>	Error Message: Invalid email	
T8: Add Invalid Student - invalid email	<p>PPreconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T3 has run.</p> <p>Enter the following in the Student Information section:</p> <ul style="list-style-type: none"> <li>• First Name: <b>Patience</b></li> <li>• Last Name: <b>Wilkins</b></li> <li>• ID: <b>pwilkins</b></li> <li>• Email: <b>pwilkinsncsu.edu</b></li> <li>• Password: <b>pw</b></li> <li>• Repeat Password: <b>pw</b></li> <li>• Max Credits: <b>15</b></li> </ul> <p>Click <b>Add Student</b></p> <p>Click <b>OK</b></p>	Error Message: Invalid email	<b>Error - Invalid Email</b>
T9: Add Invalid Student - password	<p>Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T3 has run.</p> <p>Enter the following in the Student Information</p>		<b>Error - Passwords do not match</b>

s don't match	<p>section:</p> <ul style="list-style-type: none"> <li>• First Name: <b>Patience</b></li> <li>• Last Name: <b>Wilkins</b></li> <li>• ID: <b>pwilkins</b></li> <li>• Email: <b>pwilkins@ncsu.edu</b></li> <li>• Password: <b>pw1</b></li> <li>• Repeat Password: <b>pw</b></li> <li>• Max Credits: <b>15</b></li> </ul> <p>Click <b>Add Student</b></p> <p>Click <b>OK</b></p>	Error Message: Passwords do not match	
T10: Add Invalid Student - zero max credits	<p>Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T3 has run.</p> <p>Enter the following in the Student Information section:</p> <ul style="list-style-type: none"> <li>• First Name: <b>Patience</b></li> <li>• Last Name: <b>Wilkins</b></li> <li>• ID: <b>pwilkins</b></li> <li>• Email: <b>pwilkins@ncsu.edu</b></li> <li>• Password: <b>pw</b></li> <li>• Repeat Password: <b>pw</b></li> <li>• Max Credits: <b>0</b></li> </ul> <p>Click <b>Add Student</b></p> <p>Click <b>OK</b></p>	Patience Wilkins is added to the Student Directory and is the last student in the list. Max credits is set to 18.	<b>New student is added to the list</b>
T11: Add Invalid Student - 19 max	<p>Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T3 has run.</p> <p>Enter the following in the Student Information</p>		<b>New student is added and the credits are set</b>

credits	<p>section:</p> <ul style="list-style-type: none"> <li>• First Name: <b>Alice</b></li> <li>• Last Name: <b>Adams</b></li> <li>• ID: <b>aadams</b></li> <li>• Email: <b>aadams@ncsu.edu</b></li> <li>• Password: <b>pw</b></li> <li>• Repeat Password: <b>pw</b></li> <li>• Max Credits: <b>19</b></li> </ul> <p>Click <b>Add Student</b></p> <p>Click <b>OK</b></p>	<p>Alice Adams is added to the Student Directory and is the first student in the list. Max credits is set to 18.</p>	
T12: Add Student - end	<p>Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T3 has run.</p> <p>Enter the following in the Student Information section:</p> <ul style="list-style-type: none"> <li>• First Name: <b>Mikayla</b></li> <li>• Last Name: <b>William</b></li> <li>• ID: <b>mwilliam</b></li> <li>• Email: <b>mwilliam@ncsu.edu</b></li> <li>• Password: <b>pw</b></li> <li>• Repeat Password: <b>pw</b></li> <li>• Max Credits: <b>15</b></li> </ul> <p>Click <b>Add Student</b></p> <p>Click <b>OK</b></p>	<p>Mikayla William is added to the Student Directory and is the last student in the list.</p>	<b>New student is added</b>
T13: Add Student - middle	<p>Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T3 has run.</p> <p>Enter the following in the Student Information</p>		<b>New student is added</b>

	<p>section:</p> <ul style="list-style-type: none"> <li>• First Name: <b>Rylee</b></li> <li>• Last Name: <b>Puckett</b></li> <li>• ID: <b>rpuckett</b></li> <li>• Email: <b>rpuckett@ncsu.edu</b></li> <li>• Password: <b>pw</b></li> <li>• Repeat Password: <b>pw</b></li> <li>• Max Credits: <b>15</b></li> </ul> <p>Click <b>Add Student</b></p> <p>Click <b>OK</b></p>	<p>Rylee Puckett is added to the Student Directory between Dylan Nolan and Cassandra Schwartz</p>	
T14: Add Student - front	<p>Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T3 has run.</p> <p>Enter the following in the Student Information section:</p> <ul style="list-style-type: none"> <li>• First Name: <b>Melvin</b></li> <li>• Last Name: <b>Acevedo</b></li> <li>• ID: <b>macevedo</b></li> <li>• Email: <b>macevedo@ncsu.edu</b></li> <li>• Password: <b>pw</b></li> <li>• Repeat Password: <b>pw</b></li> <li>• Max Credits: <b>15</b></li> </ul> <p>Click <b>Add Student</b></p> <p>Click <b>OK</b></p>	<p>Melvin Acevedo is added to the Student Directory and is the first student in the list.</p>	<b>New student is added</b>
T15: Remove Student - no selection	<p>Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2).</p> <p>Click <b>Remove Student</b></p>	<p>Error Message: No student selected</p>	<b>Error - No student selected</b>

T16: Remove Student - middle	<p>Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2).</p> <p>Select <b>Shannon Hansen</b></p> <p>Click <b>Remove student</b></p>	<p>Shannon Hansen is removed. Athea Hicks follows Emerald Frost in the list</p>	<b>Student is removed</b>
T17: Remove Student - front	<p>Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T14 has run.</p> <p>Select <b>Melvin Acevedo</b></p> <p>Click <b>Remove student</b></p>	<p>Melvin Acevedo is removed. Demetrius Austin is front of the directory</p>	<b>Student is removed</b>
T18: Remove Student - back	<p>Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T12 has run.</p> <p>Select <b>Mikayla William</b></p> <p>Click <b>Remove student</b></p>	<p>Mikayla William is removed. Griffith Stone is last in the directory</p>	<b>Student is removed</b>
T19: Save Student Directory	<p>Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T12-T18 have run.</p> <p>Click <b>Save Student Directory</b></p> <p>Select <b>test-files</b> directory and name the file</p>	<p>Contents should be (note that the password hash may be different due to encoding):</p> <p>Alice,Adams,aadams,aadams@ncsu.edu,0ÉRú±"ÃùuŸ!Ù\7X</p>	<b>File is saved with updated student directory</b>



	t19_student_directory.txt.	<p>²F´pâ9•{-OîFâapÄ, 18  Demetrius,Austin,daustin,Cura  bitur.egestas.nunc@placerator  cilacus.co.uk,0ÉRú±"ÄùuYÿ!Ü\7  X²F´pâ9•{-OîFâapÄ, 18  Lane,Berg,lberg,sociis@non.or  g,0ÉRú±"ÄùuYÿ!Ü\7X²F´pâ9•{-  OîFâapÄ, 14  Raymond,Brennan,rbrennan,lit  ora.torquent@pellentesquema  ssalobortis.ca,0ÉRú±"ÄùuYÿ!Ü\  7X²F´pâ9•{-OîFâapÄ, 12  Emerald,Frost,efrost,adipiscing  @acipsumPhasellus.edu,0ÉRú  ±"ÄùuYÿ!Ü\7X²F´pâ9•{-OîFâapÄ  ,3  Althea,Hicks,ahicks,Phasellus.  dapibus@luctusfelis.com,0ÉR  ú±"ÄùuYÿ!Ü\7X²F´pâ9•{-OîFâap  Ä, 11  Zahir,King,zking,orci.Donec@a  metmassaQuisque.com,0ÉRú±  "ÄùuYÿ!Ü\7X²F´pâ9•{-OîFâapÄ,  15  Dylan,Nolan,dnolan,placerat.C  ras.dictum@dictum.net,0ÉRú±  "ÄùuYÿ!Ü\7X²F´pâ9•{-OîFâapÄ,  5  Rylee,Puckett,rpuckett,rpuckett  @ncsu.edu,0ÉRú±"ÄùuYÿ!Ü\7X  ²F´pâ9•{-OîFâapÄ, 15  Cassandra,Schwartz,cschwartz,  semper@imperdietornare.co.</p>	
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		uk,0ÉRú±"ÃùuŸ!Û\7X²F'pâ9•{-OîFâapÃ,4 Griffith,Stone,gstone,porta@m agnamalesuadavel.net,0ÉRú±" ÃùuŸ!Û\7X²F'pâ9•{-OîFâapÃ,1 7 Patience,Wilkins,pwilkins,pwilki ns@ncsu.edu,0ÉRú±"ÃùuŸ!Û\ 7X²F'pâ9•{-OîFâapÃ,18	
T20: New Student Directory	Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T12-T18 have run.  Click <b>New Student Directory</b>	An empty student directory is shown.	<b>New student directory - empty</b>
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: <ul style="list-style-type: none"> <li>• First Name: <b>Patience</b></li> <li>• Last Name: <b>Wilkins</b></li> <li>• ID: <b>pwilkins</b></li> <li>• Email: <b>pwilkins@ncsu.edu</b></li> <li>• Password: <b>pw</b></li> <li>• Repeat Password: <b>pw</b></li> <li>• Max Credits: <b>15</b></li> </ul> Click <b>Add Student</b>  Click <b>OK</b>	Patience Wilkins is added to the Student Directory and is the only student in the list.	<b>Student is added</b>
T22: Course	Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2).		<b>The different functionality is displayed</b>

Catalog view	Click <b>Course Catalog</b>	Course Catalog functionality displayed	
T23: Load Course Catalog	<p>Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2)</p> <p>Click <b>Load Course Catalog</b>  Select <b>test-files/course_records.txt</b>  Click <b>Select</b></p>	13 courses are listed starting with CSC116-001 and ending with CSC316-001	<b>Courses are being presented</b>
T24: Add Invalid Course - no name	<p>Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T23 has run.</p> <p>Enter the following in the Course Information section:</p> <ul style="list-style-type: none"> <li>• Course Name:</li> <li>• Course Title: <b>Computer Organization and Assembly Language</b></li> <li>• Course Section: <b>001</b></li> <li>• Credits: <b>3</b></li> <li>• Instructor Id: <b>lasher</b></li> <li>• Start Time: <b>10:15 AM</b></li> <li>• End Time: <b>11:30 AM</b></li> <li>• Meeting Days: <b>Tuesday &amp; Thursday</b></li> </ul> <p>Click <b>Add Course</b></p> <p>Click <b>OK</b></p>	Error Message: Invalid course name	<b>Error message - invalid course name</b>
T25: Add Invalid Course -	<p>Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T23 has run.</p>		<b>Error - invalid course title</b>

no title	<p>Enter the following in the Course Information section:</p> <ul style="list-style-type: none"> <li>• Course Name: <b>CSC236</b></li> <li>• Course Title:</li> <li>• Course Section: <b>001</b></li> <li>• Credits: <b>3</b></li> <li>• Instructor Id: <b>lasher</b></li> <li>• Start Time: <b>10:15 AM</b></li> <li>• End Time: <b>11:30 AM</b></li> <li>• Meeting Days: <b>Tuesday &amp; Thursday</b></li> </ul> <p>Click <b>Add Course</b></p> <p>Click <b>OK</b></p>	Error Message: Invalid title.	
T26: Add Invalid Course - no section	<p>Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T23 has run.</p> <p>Enter the following in the Course Information section:</p> <ul style="list-style-type: none"> <li>• Course Name: <b>CSC236</b></li> <li>• Course Title: <b>Computer Organization and Assembly Language</b></li> <li>• Course Section:</li> <li>• Credits: <b>3</b></li> <li>• Instructor Id: <b>lasher</b></li> <li>• Start Time: <b>10:15 AM</b></li> <li>• End Time: <b>11:30 AM</b></li> <li>• Meeting Days: <b>Tuesday &amp; Thursday</b></li> </ul> <p>Click <b>Add Course</b></p> <p>Click <b>OK</b></p>	Error Message: Invalid section	<b>Error - invalid course section</b>
T27: Add Invalid	<p>Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T23 has run.</p>		<b>Error - invalid course section</b>

Course - section too short	<p>Enter the following in the Course Information section:</p> <ul style="list-style-type: none"> <li>• Course Name: <b>CSC236</b></li> <li>• Course Title: <b>Computer Organization and Assembly Language</b></li> <li>• Course Section: <b>0011</b></li> <li>• Credits: <b>3</b></li> <li>• Instructor Id: <b>lasher</b></li> <li>• Start Time: <b>10:15 AM</b></li> <li>• End Time: <b>11:30 AM</b></li> <li>• Meeting Days: <b>Tuesday &amp; Thursday</b></li> </ul> <p>Click <b>Add Course</b></p> <p>Click <b>OK</b></p>	Error Message: Invalid section	
T28: Add Invalid Course - section too long	<p>Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T23 has run.</p> <p>Enter the following in the Course Information section:</p> <ul style="list-style-type: none"> <li>• Course Name: <b>CSC236</b></li> <li>• Course Title: <b>Computer Organization and Assembly Language</b></li> <li>• Course Section: <b>01</b></li> <li>• Credits: <b>3</b></li> <li>• Instructor Id: <b>lasher</b></li> <li>• Start Time: <b>10:15 AM</b></li> <li>• End Time: <b>11:30 AM</b></li> <li>• Meeting Days: <b>Tuesday &amp; Thursday</b></li> </ul> <p>Click <b>Add Course</b></p> <p>Click <b>OK</b></p>	Error Message: Invalid section	<b>Error - invalid course section</b>

<p>T29: Add Invalid Course - no instructor id</p>	<p>Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T23 has run.</p> <p>Enter the following in the Course Information section:</p> <ul style="list-style-type: none"> <li>• Course Name: <b>CSC236</b></li> <li>• Course Title: <b>Computer Organization and Assembly Language</b></li> <li>• Course Section: <b>001</b></li> <li>• Credits: <b>3</b></li> <li>• Instructor Id:</li> <li>• Start Time: <b>10:15 AM</b></li> <li>• End Time: <b>11:30 AM</b></li> <li>• Meeting Days: <b>Tuesday &amp; Thursday</b></li> </ul> <p>Click <b>Add Course</b></p> <p>Click <b>OK</b></p>	<p>Error Message: Invalid instructor id.</p>	<p><b>Error - invalid instructor id</b></p>
<p>T30: Add Invalid Course - end time after start time</p>	<p>Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T23 has run.</p> <p>Enter the following in the Course Information section:</p> <ul style="list-style-type: none"> <li>• Course Name: <b>CSC236</b></li> <li>• Course Title: <b>Computer Organization and Assembly Language</b></li> <li>• Course Section: <b>001</b></li> <li>• Credits: <b>3</b></li> <li>• Instructor Id: <b>lasher</b></li> <li>• Start Time: <b>11:30 AM</b></li> <li>• End Time: <b>10:15 AM</b></li> <li>• Meeting Days: <b>Tuesday &amp; Thursday</b></li> </ul> <p>Click <b>Add Course</b></p>	<p>Error Message: Invalid meeting</p>	<p><b>Error - invalid meeting</b></p>

	Click <b>OK</b>	days and times.	
T31: Add Invalid Course - no meeting days	<p>Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T23 has run.</p> <p>Enter the following in the Course Information section:</p> <ul style="list-style-type: none"> <li>• Course Name: <b>CSC236</b></li> <li>• Course Title: <b>Computer Organization and Assembly Language</b></li> <li>• Course Section: <b>001</b></li> <li>• Credits: <b>3</b></li> <li>• Instructor Id: <b>lasher</b></li> <li>• Start Time: <b>10:15 AM</b></li> <li>• End Time: <b>11:30 AM</b></li> <li>• Meeting Days:</li> </ul> <p>Click <b>Add Course</b></p> <p>Click <b>OK</b></p>	<p>Error Message:Invalid meeting days and times.</p>	<b>Error - invalid meeting days and times</b>
T32: Add Course - end	<p>Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T23 has run.</p> <p>Enter the following in the Course Information section:</p> <ul style="list-style-type: none"> <li>• Course Name: <b>CSC492</b></li> <li>• Course Title: <b>Senior Design</b></li> <li>• Course Section: <b>001</b></li> <li>• Credits: <b>3</b></li> <li>• Instructor Id: <b>heil</b></li> <li>• Start Time: <b>9:30AM</b></li> <li>• End Time: <b>11:20AM</b></li> <li>• Meeting Days: <b>Monday &amp; Wednesday</b></li> </ul>		<b>Course is added to list</b>

	Click <b>Add Course</b>  Click <b>OK</b>	CSC492-001 is added to the list after 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: <ul style="list-style-type: none"> <li>• Course Name: <b>CSC113</b></li> <li>• Course Title: <b>Introduction to Computing - MATLAB</b></li> <li>• Course Section: <b>001</b></li> <li>• Credits: <b>3</b></li> <li>• Instructor Id: <b>tbdimitr</b></li> <li>• Start Time: <b>3:00 PM</b></li> <li>• End Time: <b>3:50 PM</b></li> <li>• Meeting Days: <b>Monday &amp; Wednesday</b></li> </ul> 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.	<b>Course is added to list</b>
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: <ul style="list-style-type: none"> <li>• Course Name: <b>CSC116</b></li> <li>• Course Title: <b>Introduction to Programming - Java</b></li> <li>• Course Section: <b>006</b></li> <li>• Credits: <b>3</b></li> <li>• Instructor Id: <b>jdyoung2</b></li> <li>• Start Time: <b>10:40 AM</b></li> </ul>		<b>Course is added to list</b>



	<ul style="list-style-type: none"> <li>• End Time: <b>12:30 PM</b></li> <li>• Meeting Days: <b>Tuesday &amp; Thursday</b></li> </ul> Click <b>Add Course</b>  Click <b>OK</b>	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 <b>Remove Course</b>	Error Message: No course selected	<b>Error - no course selected</b>
T36: Remove Course - middle	Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2).  Select <b>CSC216-001</b>  Click <b>Remove Course</b>	CSC216-001 is removed. CSC116-006 is followed by CSC216-002.	<b>Course is removed</b>
T37: Remove Course - front	Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T33 has run.  Select <b>CSC113-001</b>  Click <b>Remove Course</b>	CSC113-001 is removed. CSC116-001 is the first course in the catalog	<b>Course is removed</b>
T38: Remove Course - back	Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T32 has run.  Select <b>CSC492-001</b>		<b>Course is removed</b>

	Click <b>Remove Course</b>	CSC492-001 is removed. CSC316-001 is the last course in the catalog	
T39: Save Course Catalog	<p>Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T32-T38 have run.</p> <p>Click <b>Save Course Catalog</b></p> <p>Select <b>test-files</b> directory and name the file <b>t39_course_catalog.txt</b>.</p>	<p>Contents should be:</p> <p>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,1040,12</p>	<b>Course catalog is saved with updated contents</b>

		30 CSC217,Software Development Fundamentals Lab,211,1,sesmith5,T,830,102 0 CSC217,Software Development Fundamentals Lab,223,1,sesmith5,W,1500,16 50 CSC217,Software Development Fundamentals Lab,601,1,sesmith5,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 CSC316,Data Structures and Algorithms,001,3,jtking,MW,83 0,945	
T40: New Course Catalog	Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T12-T18 have run.  Click <b>New Course Catalog</b>	An empty course catalog is shown.	<b>New course catalog is shown</b>
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		<b>Course is added</b>

	<p>section:</p> <ul style="list-style-type: none"> <li>• Course Name: <b>CSC216</b></li> <li>• Course Title: <b>Programming Concepts - Java</b></li> <li>• Course Section: <b>601</b></li> <li>• Credits: <b>4</b></li> <li>• Instructor Id: <b>jctetter</b></li> <li>• Start Time:</li> <li>• End Time:</li> <li>• Meeting Days: <b>Arranged</b></li> </ul> <p>Click <b>Add Course</b></p> <p>Click <b>OK</b></p>	<p>CSC216-601 is added to the list</p>	
T42: Logout	<p>Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2).</p> <p>Click <b>Logout</b></p>	<p>User is returned to the Login view</p>	<b>Logged out</b>
T42: Login Student	<p>Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T21 and T42 have run.</p> <p>User ID: <b>pwilkins</b> Password: <b>pw</b></p> <p>Click: <b>Login</b></p>	<p>pwilkins is logged in and is switched to the user view. All that is shown is a Logout button.</p>	<b>Logged in</b>