

# 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=  
last=  
id=  
email=  
pw=

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: <b>Iberg</b> Password: <b>pw</b> Click <b>Login</b>	Pop up with message "User	<b>The use I attempted to log in with is not valid and said to be non-existent.</b>

	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: <b>registrar.properties.id</b> Password: <b>registrar.properties.pw</b> Click <b>Login</b>	View switches to Registrar panel with Student Directory functionality displayed	<b>The panel switches and now I can see a different directory.</b>
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>Students are listed. They are listed in a specific manner.</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> </ul>		<b>An error message pops up stating that there was an invalid first name.</b>

	<ul style="list-style-type: none"> <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 first name	
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	Another error message pops up, stating that this time there was an invalid last name.
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> </ul>		Another error message pops up, stating there was an invalid id.

	<ul style="list-style-type: none"> <li>Max Credits: <b>15</b></li> </ul> Click <b>Add Student</b>  Click <b>OK</b>	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: <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> Click <b>Add Student</b>  Click <b>OK</b>	Error Message: Invalid email	Another error message pops up, stating that there was an invalid email.
T8: Add Invalid Student - invalid email	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: <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> Click <b>Add Student</b>	Error Message: Invalid email	Another error message pops up, stating that once again, there was an invalid email.

	Click <b>OK</b>		
T9: Add Invalid Student - password s don't match	<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>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	<b>There was another error message, stating that the two passwords put in do not match.</b>
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>	Student added with max credits of 18.	<b>Student gets added - Credits set.</b>

<p>T11: Add Invalid Student - 11 max credits</p>	<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>19</b></li> </ul> <p>Click <b>Add Student</b></p> <p>Click <b>OK</b></p>	<p>Student added with max credits of 18</p>	<p><b>Student gets added - Credits set.</b></p>
<p>T12: Add Student - end</p>	<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>15</b></li> </ul> <p>Click <b>Add Student</b></p> <p>Click <b>OK</b></p>	<p>Patience Wilkins is added to the Student Directory and is the last student in the list.</p>	<p><b>Mr. Wilkins is added to the directory and is shown towards the end of the list.</b></p>
<p>T13: Add Student -</p>	<p>Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T3 has run.</p>		<p><b>Rylee Puckett is added to the directory and is shown</b></p>

middle	<p>Enter the following in the Student Information 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>	Rylee Puckett is added to the Student Directory between Dylan Nolan and Cassandra Schwartz	in between other characters.
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>	Melvin Acevedo is added to the Student Directory and is the first student in the list.	<b>Melvin Acevedo is added to the directory and comes out to be the very first person in the list of characters.</b>
T15: Remove Student -	<p>Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2).</p>		<b>Cannot remove a student without them being selected.</b>

no selection	Click <b>Remove Student</b>	Error Message: No student selected	
T16: Remove Student - middle	Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2).  Select <b>Shannon Hansen</b>  Click <b>Remove student</b>	Shannon Hansen is removed. Athea Hicks follows Emerald Frost in the list	<b>Shannon is removed. The list is updated after removal.</b>
T17: Remove Student - front	Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T14 has run.  Select <b>Melvin Acevedo</b>  Click <b>Remove student</b>	Melvin Acevedo is removed. Demetrius Austin is front of the directory	<b>Melvin is removed. The list is updated after removal.</b>
T18: Remove Student - back	Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T12 has run.  Select <b>Patience Wilkins</b>  Click <b>Remove student</b>	Patience Wilkins is removed. Griffith Stone is last in the directory	<b>Wilkins is removed. The list is updated after the removal.</b>
T19: Save Student	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):	<b>Contents of file are updated and saved.</b>



Directory	<p>Click <b>Save Student Directory</b></p> <p>Select <b>test-files</b> directory and name the file <b>t19_student_directory.txt</b>.</p>	<p>Demetrius,Austin,daustin,Cura bitur.egestas.nunc@placator cilacus.co.uk,0ÉRú±"ÃùuŸ!Ù\7 X²F'pâ9•{-OîFâapÄ,18 Lane,Berg,lberg,sociis@non.or g,0ÉRú±"ÃùuŸ!Ù\7X²F'pâ9•{- OîFâapÄ,14 Raymond,Brennan,rbrennan,lit ora.torquent@pellentesquema ssalobortis.ca,0ÉRú±"ÃùuŸ!Ù\7 X²F'pâ9•{-OîFâapÄ,12 Emerald,Frost,efrost,adipiscing @acipsumPhasellus.edu,0ÉRú ±"ÃùuŸ!Ù\7X²F'pâ9•{-OîFâapÄ ,3 Althea,Hicks,ahicks,Phasellus. dapibus@luctusfelis.com,0ÉR ú±"ÃùuŸ!Ù\7X²F'pâ9•{-OîFâap Ä,11 Zahir,King,zking,orci.Donec@a metmassaQuisque.com,0ÉRú± "ÃùuŸ!Ù\7X²F'pâ9•{-OîFâapÄ, 15 Dylan,Nolan,dnolan,placerat.C ras.dictum@dictum.net,0ÉRú± "ÃùuŸ!Ù\7X²F'pâ9•{-OîFâapÄ, 5 Rylee,Puckett,rpuckett,rpuckett @ncsu.edu,0ÉRú±"ÃùuŸ!Ù\7X ²F'pâ9•{-OîFâapÄ,15 Cassandra,Schwartz,cschwartz, semper@imperdietornare.co.</p>	
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T20: New Student Directory	<p>Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T12-T18 have run.</p> <p>Click <b>New Student Directory</b></p>	<p>An empty student directory is shown.</p>	<b>New student directory is created and shown in GUI.</b>
T21: Add Student - first	<p>Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T20 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>15</b></li> </ul> <p>Click <b>Add Student</b></p> <p>Click <b>OK</b></p>	<p>Patience Wilkins is added to the Student Directory and is the only student in the list.</p>	<b>Wilkins is added and is currently the only person in the directory/list.</b>
T22: Course Catalog view	<p>Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2).</p> <p>Click <b>Course Catalog</b></p>	<p>Course Catalog functionality displayed</p>	<b>13 Courses begin being displayed.</b>

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 CSC 116-001 and ending with CSC 316-001 as provided in the course_records.txt file (minus the one duplicate course)	
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 comes up stating that an invalid course name was applied.</b>
T25: Add Invalid Course - no title	<p>Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T23 has run.</p> <p>Enter the following in the Course Information</p>		<b>Another error message pops up stating that an invalid course title was trying to be applied.</b>

	<p>section:</p> <ul style="list-style-type: none"> <li>• Course Name: <b>CSC 236</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 course 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>CSC 236</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 number	<b>Another error message pops up stating that an invalid section number was trying to be applied.</b>
T27: Add Invalid Course -	<p>Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T23 has run.</p>		<b>Another error message about an invalid section number pops up.</b>

section too short	<p>Enter the following in the Course Information section:</p> <ul style="list-style-type: none"> <li>• Course Name: <b>CSC 236</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 number	
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>CSC 236</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 number	<b>Another error message about an invalid section number pops up.</b>
T29: Add	Preconditions: PackSchedulerGUI has loaded and		

Invalid Course - no instructor id	<p>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>CSC 236</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>	Error Message: Invalid instructor unity id	Another error message pops up stating that an invalid instructor unity id was trying to be applied.
T30: Add Invalid Course - end time after start time	<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>CSC 236</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>	Error Message: Invalid course times	Another error message comes up stating that we tried to apply invalid course times.

	Click <b>OK</b>		
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>CSC 236</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>	Error Message: Invalid meeting days	<b>Another error message comes up stating that we tried to apply invalid meeting days.</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>CSC 236</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: <b>Tuesday &amp; Thursday</b></li> </ul>		<b>Valid course is added and list of courses is updated.</b>

	Click <b>Add Course</b>  Click <b>OK</b>	CSC 236-001 is added to the list between CSC 230-001 and CSC 316-001	
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>CSC 113</b></li> <li>• Course Title: <b>Introduction to Computer - 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>	CSC 113-001 is added to the list at the front and is followed by CSC 116-001.	<b>Another course is added and the list is updated.</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>CSC 116</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>Another course is added and the list is updated.</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>	CSC 116-006 is added to the list between CSC 116-003 and CSC 216-001.	
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>Will not allow the removal of a course without the selection of a course.</b>
T36: Remove Course - middle	Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2).  Select <b>CSC 216-001</b>  Click <b>Remove Course</b>	CSC 216-001 is removed. CSC 116-006 is followed by CSC 216-002.	<b>Course is removed and list is updated.</b>
T37: Remove Course - front	Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T33 has run.  Select <b>CSC 113-001</b>  Click <b>Remove Course</b>	CSC 113-001 is removed. CSC 116-001 is the first course in the catalog	<b>Course is removed and the list is now updated.</b>
T38: Remove Course - back	Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T32 has run.  Select <b>CSC 236-001</b>		<b>Course is removed and the list is newly updated.</b>

	Click <b>Remove Course</b>	CSC 236-001 is removed. CSC 316-001 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 contain the courses in the following order with all information as in the original file or entered via earlier tests:</p> <p>CSC 116-001 CSC 116-002 CSC 116-003 CSC 116-006 CSC 216-002 CSC 216-601 CSC 217-202 CSC 217-211 CSC 217-223 CSC 217-601 CSC 226-001 CSC 230-001 CSC 316-001</p>	<b>Contents of course is saved to a test file.</b>
T40: New Course Catalog	<p>Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T12-T18 have run.</p> <p>Click <b>New Course Catalog</b></p>	An empty course catalog is shown.	<b>New course is pulled in and an empty course catalog is being displayed.</b>
T41: Add Course - first	Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T20 has run.		<b>Course CSC 216 is added to the empty list.</b>

	<p>Enter the following in the Course Information section:</p> <ul style="list-style-type: none"> <li>• Course Name: <b>CSC 216</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>jep</b></li> <li>• Start Time: <b>0</b></li> <li>• End Time: <b>0</b></li> <li>• Meeting Days: <b>Arranged</b></li> </ul> <p>Click <b>Add Course</b></p> <p>Click <b>OK</b></p>	<p>CSC 216-601 is added to the list</p>	
<p>T42: Login Student</p>	<p>Preconditions: PackSchedulerGUI has loaded and registrar user is logged in (T2). T21 has run</p> <p>Click <b>Logout</b></p> <p>User ID: <b>pwilkins</b> Password: <b>pw</b></p> <p>Click: <b>Login</b></p>	<p>User is returned to the Login view</p> <p>pwilkins is logged in and is switched to the user view. All that is shown is a Logout button.</p>	<p><b>Logged out and now returned to the log in view.</b></p>