
SCATS APPLICATION

UNIT TEST DOCUMENTATION

Version *1.0*

01/19/2020

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Purpose

This SCATS Application Test Report provides a summary of the results of tests performed as outlined within this document.

Unit Test Plan

Java-based modules to manage data inputs from users interacting with FXML interface designs (controllers) will be the primary focus of Unit Testing. Unit tests will address the core functionality of each interface controller, ensuring the modules perform as expected, generate accurate data points, and handle exceptions gracefully.

Interface Controllers to be tested:

- AddDocumentController.java
- EditSystemUserController.java
- EngagementOptionsController.java
- ManageConsultantsController.java
- ManageSystemUsersController.java
- NewCertificationController.java
- NewConsultantController.java
- UpdateCertificationController.java
- UpdateEngagementController.java
- ViewConsultantController.java
- NewConsultantController.java

Unit Test Summary

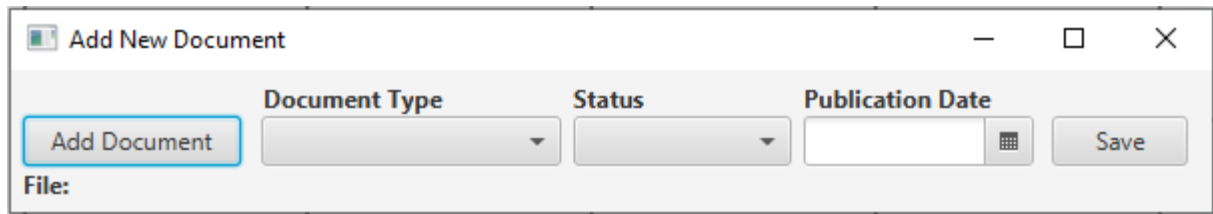
The SCATS application underwent unit testing on its functional controller modules to ensure the core functionality of the module performed accurately and as expected. The testing performed assessed 11 individual controller modules, each containing various features and functions that stood to execute one primary function of the application. Of the 11 cases assessed, 4 did not pass the unit tests performed.

Module	Test Case ID	Pass/Fail	Summary of Defect	Comments
AddDocumentController.java	Case001	Fail	The save date of the file is one day behind.	Fix: address the new document function in the Database Manager.
ManageConsultantsController.java	Case004	Fail	Functionality Not Implemented	The Delete Consultant functionality is not implemented/mapped to the menu event. Manage Consultants can also benefit from an item count label.
UpdateEngagementController.java	Case009	Fail	The end date of the Fieldwork Duration is inaccurate.	Fix: address the UpdateEngagement function in the Database Manager.
ViewConsultantController.java	Case011	Fail	The system cannot find the image file because the filepath used within the function contains bad characters.	Fix is to implement relative path functionality to retrieve the file from the file system.

Unit Test Details

Module (Case#001): AddDocumentController.java [Test Failed]

Interface:



Inputs to Module:

- File document – selected from the file system to be associated with an Engagement
- Document Type <String> -- selected from an existing set of values
- Document Status <String> -- selected from an existing set of values
- Publication Date <Date> -- selected from a DatePicker to represent the publication date of the document

Outputs from Module:

- Module will successfully display the filename of the File Documented selected for association
- Module will validate all inputs into the form, ensuring all elements are populated
- Module will successfully create a local directory within the SCATS workspace based on the name of the Company specified in the Engagement
- Document attributes will be successfully persisted in the backend database

Logic Flow Diagram:

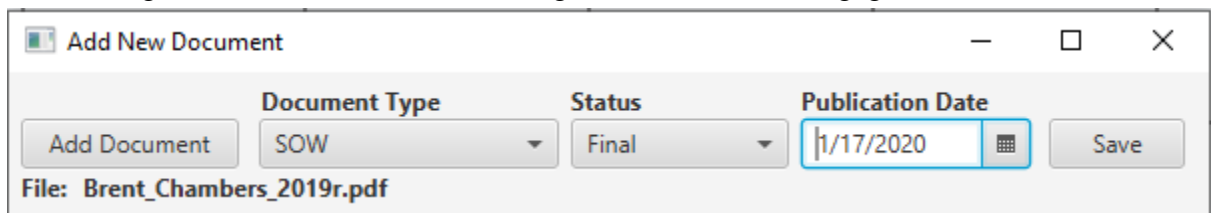
1. User clicks <Add Document> and selects a document from the local file system
2. User selects a document type from the drop-down menu
3. User selects a document status from the drop-down menu
4. User specifies a publication date
5. User clicks save

Test Data:

- Document: %DOCUMENTS%/Brent_Chambers_2019r.pdf as the Input Document

Positive Test Cases:

Associating the Document File with “Ellingson Mineral Inc.” Engagement



Upon Saving, the file is successfully loaded and associated with the engagement, but the date is misrepresented by one day.

The Ellingson Mineral Inc. folder is successfully created upon saving the file, and the file is successfully renamed and placed in the directory.

This PC > Documents > NetBeansProjects > SCATSApplication > Reports > Ellingson_Mineral_Inc				
Name	Date modified	Type	Size	
Ellingson_Mineral_Inc._Research_SOW_Final_20200117	1/19/2020 6:44 PM	PDF File	127 KB	

Finally, the File database record can be observed within the database:

SELECT * FROM scats.docum... X										
#	documentId	assignmentId	active	filename	type	status	checksum	publishDate	createdDate	createdBy
1	3	7		1 Evil Corp_Red_Team_Engagement_ROE_Final_20200111.pdf	ROE	Final	7656d9c92b73afbd7c41ebd9f6b2a07cef9...	2020-01-10	2020-01-16	admin
2	4	1		1 Erbnam_Digital_Web_Application_Test_SOW_Final_20200103.pdf	SOW	Final	e2be0babe8bd5e50e89bd59edb4fd01db960...	2020-01-02	2020-01-16	admin
3	5	1		1 Erbnam_Digital_Web_App_Test_SOW_Final_20200117.pdf	SOW	Final	7656d9c92b73afbd7c41ebd9f6b2a07cef9...	2020-01-16	2020-01-19	admin
4	6	5		1 Ellingson_Mineral_Inc._Research_SOW_Final_20200117.pdf	SOW	Final	7656d9c92b73afbd7c41ebd9f6b2a07cef9...	2020-01-16	2020-01-19	admin

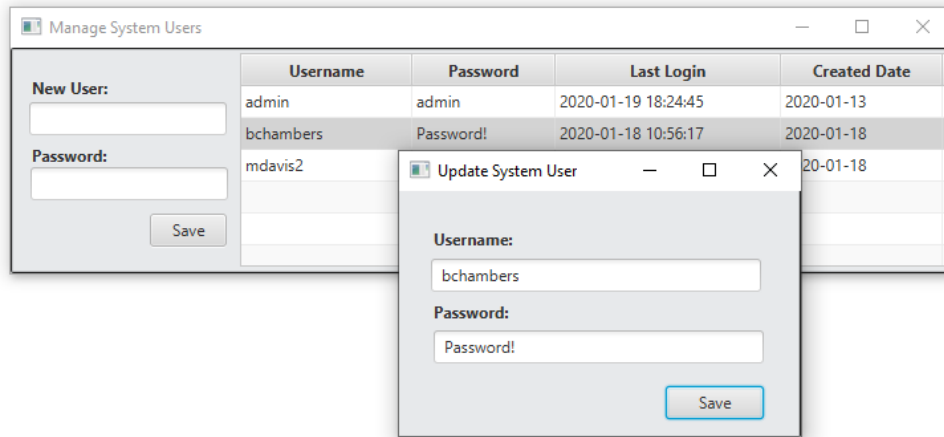
Test Results Table:

Test Case ID	Date Tested	Pass/Fail	Severity of Defect	Summary of Defect	Comments
Case002	1/19/2020	Failed	Minimal	The save date of the file is one day behind.	Fix: address the new document function in the Database Manager.

Module (Case#002): EditSystemUserController.java [Test Passed]

Description: Allows the user to update the username and/or password of a system user.

Interface:



Inputs to Module:

- SystemUser Username <String> -- provided as text
- SystemUser Password <String> -- provided as text

Outputs from Module:

- Module will ensure password are no less than 8 characters.
- Module will apply appropriate changes to the existing System User.
- SystemUser changes will be successfully persisted on the backend database.

Logic Flow Diagram:

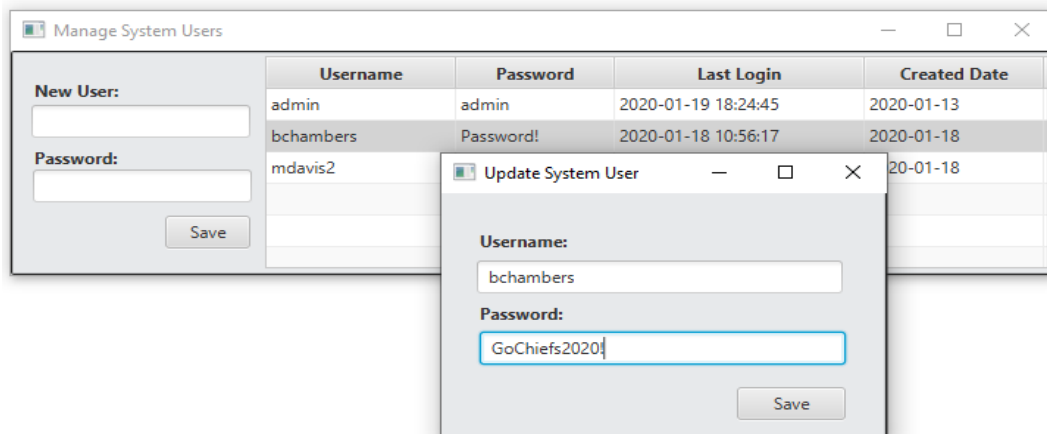
1. User right-clicks an existing SystemUser from Manage System Users tool.
2. Module will populate the form with the username and password of the existing SystemUser.
3. User will change the username and password of the existing SystemUser.
4. User clicks save

Test Data:

- Case#001
 - <String> Username
 - <String> Password: GoChiefs2020!

Positive Test Cases:

Changing the password of the bchambers SystemUser account.



Upon Saving, the password of bchambers is successfully changed.

Username	Password	Last Login	Created Date
admin	admin	2020-01-19 18:24:45	2020-01-13
bchambers	GoChiefs2020!	2020-01-18 10:56:17	2020-01-18
mdavis2	Password1!		2020-01-18

The SystemUser database record can be observed within the database:

SELECT * FROM scats.`user` ... X

Max. rows: 100 | Fetched Rows: 3 | Matching Rows: 3

#	userId	username	password	active	lastLogin	createdDate	createdBy	lastUpdate
1	1	admin	admin	1	2020-01-19 11:24:45.000	2020-01-12	admin	2020-01-19 18:24:46.000
2	2	bchambers	GoChiefs2020!	1	2020-01-18 03:56:17.000	2020-01-17	admin	2020-01-19 12:16:30.000
3	3	mdavis2	Password1!	1	<NULL>	2020-01-17	admin	2020-01-18 12:30:19.000

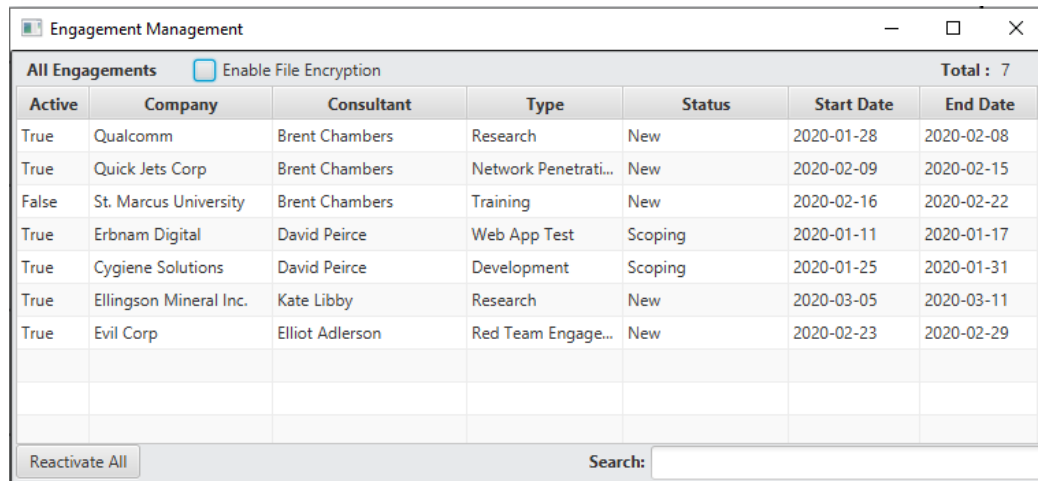
Summary

Test Case ID	Date Tested	Pass/Fail	Severity of Defect	Summary of Defect	Comments
Case001	1/19/2020	Passed	None	NA	NA

Module (Case#003): EngagementOptionsController.java [Test Passed]

Description: Provides an interface to activate/deactivate, search, and view all active and inactive engagements

Interface:



The screenshot shows a window titled "Engagement Management". It contains a table with 7 columns: Active, Company, Consultant, Type, Status, Start Date, and End Date. The table lists 7 engagements. At the bottom, there is a "Reactivate All" button and a "Search:" text box.

Active	Company	Consultant	Type	Status	Start Date	End Date
True	Qualcomm	Brent Chambers	Research	New	2020-01-28	2020-02-08
True	Quick Jets Corp	Brent Chambers	Network Penetrati...	New	2020-02-09	2020-02-15
False	St. Marcus University	Brent Chambers	Training	New	2020-02-16	2020-02-22
True	Erbnam Digital	David Peirce	Web App Test	Scoping	2020-01-11	2020-01-17
True	Cygiene Solutions	David Peirce	Development	Scoping	2020-01-25	2020-01-31
True	Ellingson Mineral Inc.	Kate Libby	Research	New	2020-03-05	2020-03-11
True	Evil Corp	Elliot Adlerson	Red Team Engage...	New	2020-02-23	2020-02-29

Inputs to Module:

- Search Query <String> -- provided as text

Outputs from Module:

- Module will load all active and inactive engagements.
- Module will provide the ability to toggle the active and inactive modes of engagements.
- Module filter engagement results based on specified search query.
- Module will accurately display the number of active and inactive engagement.
- Module will set active to all engagements upon "Reactivate All" button press.

Logic Flow Diagram:

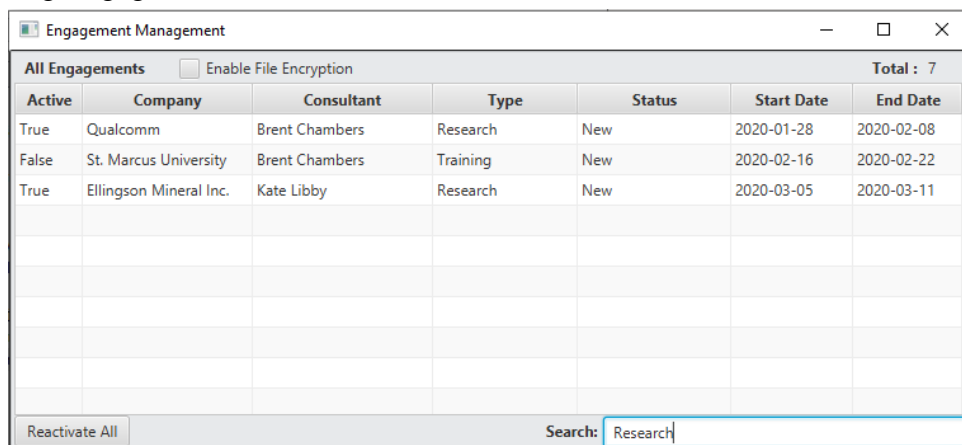
1. User select Manage Engagements from main SCATS UI window.
2. User will search Engagement Management for engagements classified as "Research".
3. User will deactivate engagements classified as "Research".
4. User will reactivate all engagements using the "Reactivate All" button.

Test Data:

- Case#001
 - <String> Search Query: "Research"

Test Case:

Searching Engagements for Research:



The screenshot shows the same "Engagement Management" window, but the search box now contains the text "Research". The table below shows only the engagements where the Type is "Research".

Active	Company	Consultant	Type	Status	Start Date	End Date
True	Qualcomm	Brent Chambers	Research	New	2020-01-28	2020-02-08
False	St. Marcus University	Brent Chambers	Training	New	2020-02-16	2020-02-22
True	Ellingson Mineral Inc.	Kate Libby	Research	New	2020-03-05	2020-03-11

System effectively returns three results, including an inactive engagement at St. Marcus University where the word “research” is in the description.

The screenshot shows two windows from the 'Engagement Management' application. The background window displays a table of engagements, and the foreground window shows the details for a specific engagement.

Engagement Management Table:

Active	Company	Consultant
True	Qualcomm	Brent Chambers
False	St. Marcus University	Brent Chambers
True	Ellingson Mineral Inc.	Kate Libby

View Engagement Details:

- Status: New
- Consultant Assigned: Brent Chambers
- Location: Bristol, CT
- Company/Firm: St. Marcus University
- Engagement Type: Training
- Fieldwork Duration: 2/16/2020 to 2/22/2020
- Description: Advanced Research Training Assignment.
- Documents: No content in table
- Reports: No content in table

The Deactivate Engagement selection item was applied to both the St. Marcus University engagement, as well as the Ellingson Mineral Inc. engagement.

The screenshot shows the 'Engagement Management' application with a table of engagements. A context menu is open over the row for 'Ellingson Mineral Inc.', showing options to 'Deactivate Engagement', 'Reactivate Engagement', and 'Delete Engagement'.

Engagement Management Table:

Active	Company	Consultant	Type	Status	Start Date	End Date
False	Qualcomm	Brent Chambers	Research	New	2020-01-28	2020-02-08
True	Quick Jets Corp	Brent Chambers	Network Penetrati...	New	2020-02-09	2020-02-15
False	St. Marcus University	Brent Chambers	Training	New	2020-02-16	2020-02-22
True	Erbnam Digital	David Peirce	Web App Test	Scoping	2020-01-11	2020-01-17
True	Cygiene Solutions	David Peirce	Development	Scoping	2020-01-25	2020-01-31
False	Ellingson Mineral Inc.	Kate Libby	Research	New	2020-03-05	2020-03-11
True	Evil Corp	Elliot Adlerson	Red Team Engage	New	2020-02-23	2020-02-29

Context Menu Options:

- View Details
- Browse Reports Folder
- Deactivate Engagement**
- Reactivate Engagement
- Delete Engagement

The Reactivate All button was pressed to successfully reactivate all existing engagements.

Engagement Management						
All Engagements		<input type="checkbox"/> Enable File Encryption		Total : 7		
Active	Company	Consultant	Type	Status	Start Date	End Date
True	Qualcomm	Brent Chambers	Research	New	2020-01-28	2020-02-08
True	Quick Jets Corp	Brent Chambers	Network Penetrati...	New	2020-02-09	2020-02-15
True	St. Marcus University	Brent Chambers	Training	New	2020-02-16	2020-02-22
True	Erbnam Digital	David Peirce	Web App Test	Scoping	2020-01-11	2020-01-17
True	Cygiene Solutions	David Peirce	Development	Scoping	2020-01-25	2020-01-31
True	Ellingson Mineral Inc.	Kate Libby	Research	New	2020-03-05	2020-03-11
True	Evil Corp	Elliot Adlerson	Red Team Engage...	New	2020-02-23	2020-02-29
<div> <div>Reactivate All</div> <div>Search: <input type="text" value="Research"/></div> </div>						

The Main SCATS UI screen, which only displays active engagements, does not immediately reflect the changes made to all stored engagements.

Active Engagements						
Company/Firm	Consultant	Type	Status	Location	Start Date	End Date
Erbnam Digital	David Peirce	Web App Test	Scoping	Baltimore, MD	2020-01-11	2020-01-17
Cygiene Solutions	David Peirce	Development	Scoping	Phoenix, AZ	2020-01-25	2020-01-31
Qualcomm	Brent Chambers	Research	New	San Diego, CA	2020-01-28	2020-02-08
Ellingson Mineral Inc.	Kate Libby	Research	New	New York, NY	2020-03-05	2020-03-11
Quick Jets Corp	Brent Chambers	Network Penetration Test	New	Miami, FL	2020-02-09	2020-02-15
Evil Corp	Elliot Adlerson	Red Team Engagement	New	Buffalo, NY	2020-02-23	2020-02-29
<div> <div>New Engagement</div> <div>Manage Consultants</div> </div>						

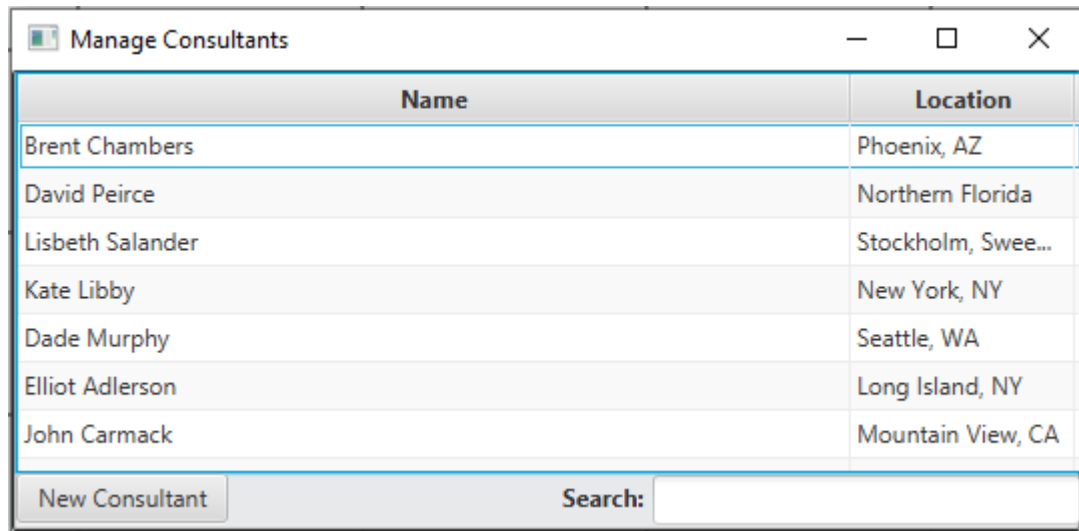
Summary:

Test Case ID	Date Tested	Pass/Fail	Severity of Defect	Summary of Defect	Comments
Case003	1/19/2020	Passed	None	NA	<p>Main UI interface needs to be updated after Reactivate All is executed in Manage Engagements.</p> <p>The Main UI could also benefit from a Search function and an engagement counter.</p>

Module (Case#004): ManageConsultantsController.java [Test Failed]

Description: Provides an interface to add, delete, and search for consultants housed in the SCATS system.

Interface:



Name	Location
Brent Chambers	Phoenix, AZ
David Peirce	Northern Florida
Lisbeth Salander	Stockholm, Swee...
Kate Libby	New York, NY
Dade Murphy	Seattle, WA
Elliot Adlerson	Long Island, NY
John Carmack	Mountain View, CA

New Consultant Search:

Inputs to Module:

- Search Query <String> -- provided as text

Outputs from Module:

- Module will load all consultants
- Module filter engagement results based on specified search query.
- Module will provide functionality to add a new consultant to the SCATS system.
- Module will provide functionality to delete a consultant from the SCATS system.

Logic Flow Diagram:

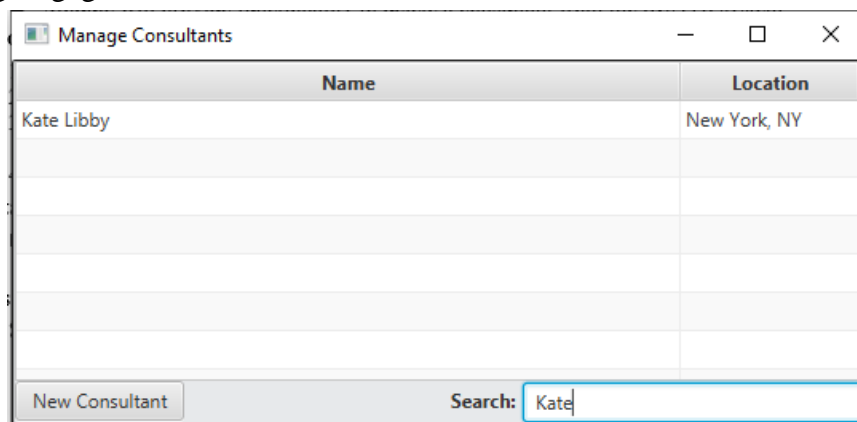
1. User select Consultants -> Manage from main SCATS UI window
2. User will search Consultants Management tool for consultants named “Kate”
3. User will create a new consultant “Jesse Bradford”, providing all necessary data points for the new consultant.
4. User will delete newly created consultant “Jesse Bradford”.

Test Data:

- Case#001
 - <String> Search Query: “Kate”

Test Case:

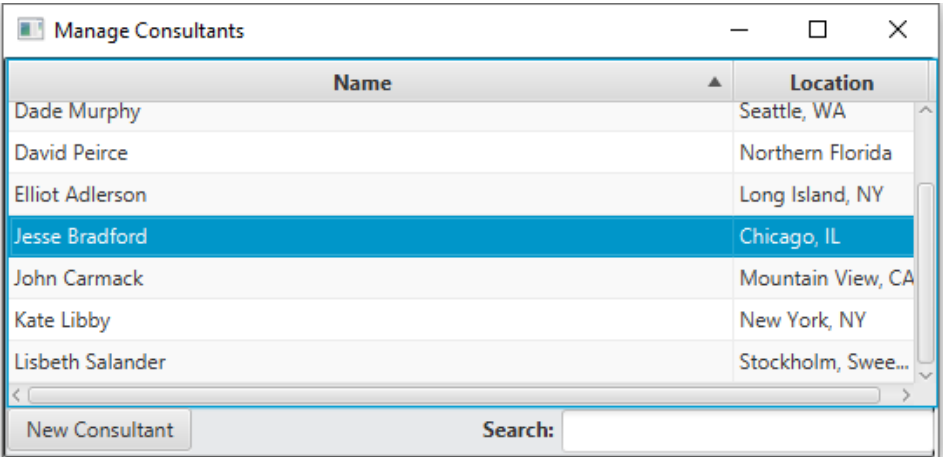
Searching Engagements for “Kate” was successful.



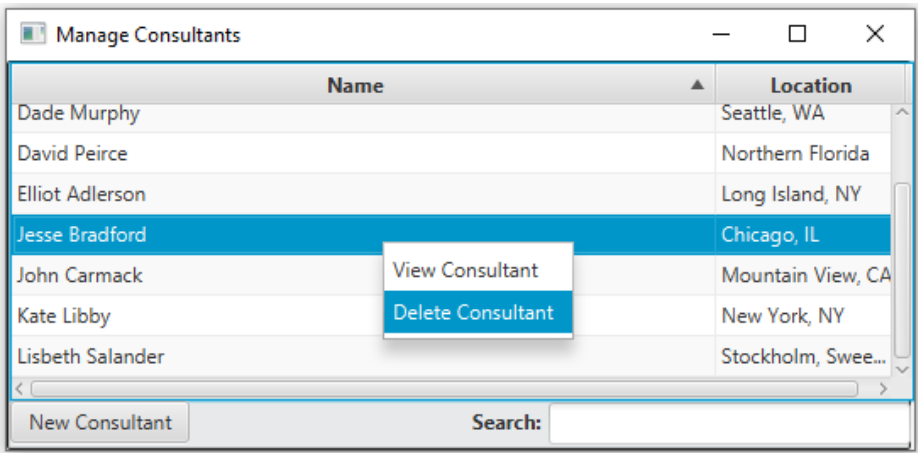
Name	Location
Kate Libby	New York, NY

New Consultant Search:

The successful creation of new consultant “Jesse Bradford” was successful using the “New Consultant” button.



The attempted deletion of consultant “Jesse Bradford” was unsuccessful. The functionality is not mapped to the “Delete Consultant” menu item.



Summary:

Test Case ID	Date Tested	Pass/Fail	Severity of Defect	Summary of Defect	Comments
Case004	1/19/2020	Fail	Medium	Functionality Not Implemented	The Delete Consultant functionality is not implemented/mapped to the menu event. Manage Consultants can also benefit from an item count label.

Module (Case#005): ManageSystemUsersController.java [Test Passed]

Description: Provides an interface to add, delete, and modify System User Accounts.

Interface:

The screenshot shows a window titled "Manage System Users". On the left, there are two input fields: "New User:" and "Password:", each with a text box below it. A "Save" button is located below the password field. To the right is a table with the following data:

Username	Password	Last Login	Created Date
admin	admin	2020-01-19 19:43:33	2020-01-13
bchambers	GoChiefs2020!	2020-01-18 10:56:17	2020-01-18
mdavis2	Password1!		2020-01-18

Inputs to Module:

- SystemUser Username <String> -- msmith
- SystemUser Password <String> -- Password1!

Outputs from Module:

- Module will load all existing System Users
- Module will provide functionality to add and delete a System User.

Logic Flow Diagram:

1. User selects File -> Manage Users from main SCATS UI window
2. User will add new system user: Mike Smith (username: msmith::Password1!)
3. User will delete new system user Mike Smith
4. Module will reflect all changes made.

Test Case:

System User information is populated in the New User and Password fields.

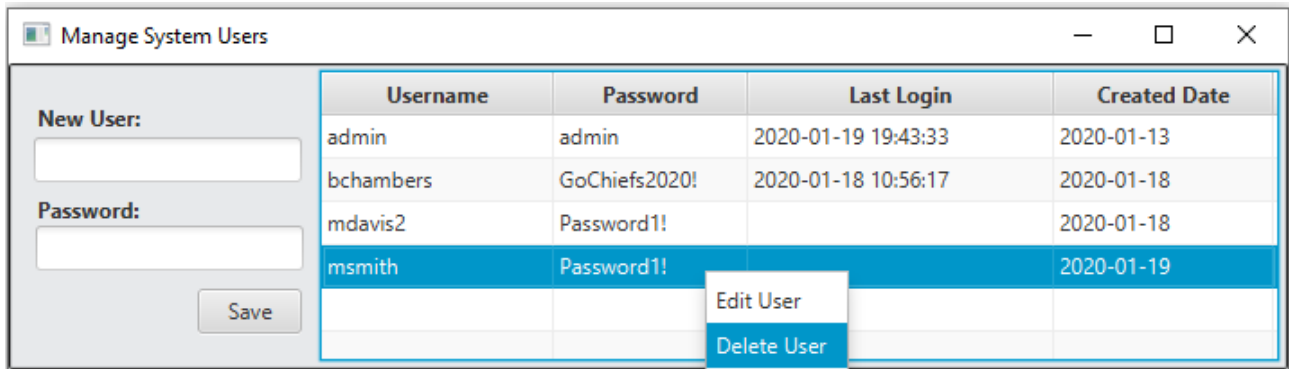
The screenshot shows the "Manage System Users" window. The "New User:" field now contains the text "msmith". The "Password:" field contains masked characters (dots). The "Save" button is still visible. The table of existing users remains the same as in the previous screenshot.

Upon clicking SAVE, the user is added to the Manage System User's primary table.

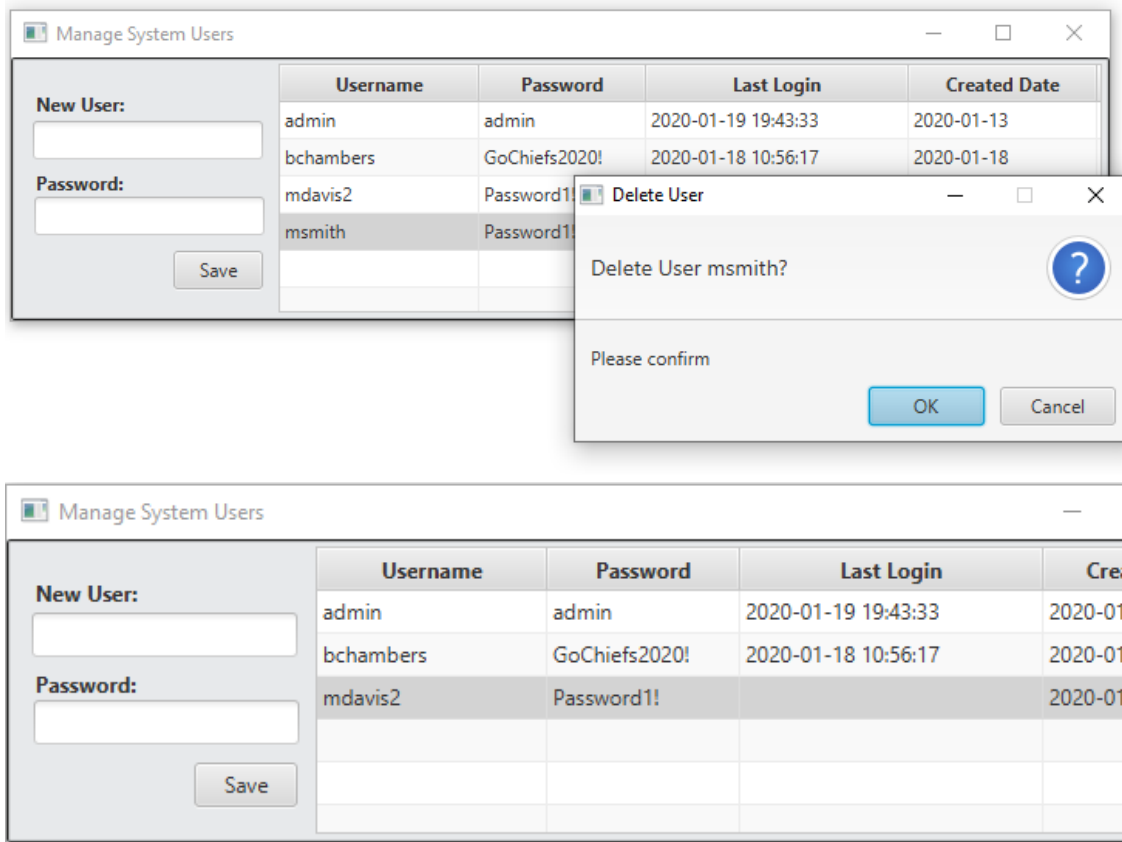
The screenshot shows the "Manage System Users" window after the user has been added. The "New User:" and "Password:" fields are now empty. The table now includes the new user "msmith" with the password "Password1!".

Username	Password	Last Login	Created Date
admin	admin	2020-01-19 19:43:33	2020-01-13
bchambers	GoChiefs2020!	2020-01-18 10:56:17	2020-01-18
mdavis2	Password1!		2020-01-18
msmith	Password1!		2020-01-19

The Delete User menu item is selected after right clicking the new user.



The System User was successfully removed from the SCATS system after being prompted for confirmation.



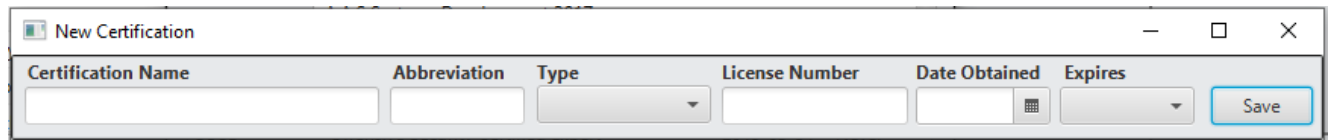
Summary:

Test Case ID	Date Tested	Pass/Fail	Severity of Defect	Summary of Defect	Comments
Case005	1/19/2020	Pass	None	None	None

Module (Case#006): NewCertificationController.java [Test Passed]

Description: Provides an interface to add a new Certification to be associated with a Consultant.

Interface:



The screenshot shows a window titled "New Certification" with a standard Windows title bar (minimize, maximize, close buttons). The form contains several input fields: "Certification Name" (a text box), "Abbreviation" (a text box), "Type" (a dropdown menu), "License Number" (a text box), "Date Obtained" (a date picker with a calendar icon), and "Expires" (a dropdown menu). A "Save" button is located on the right side of the form.

Inputs to Module:

- Certification Name <String> -- provided as text
- Abbreviation <String> -- provided as text
- Certification Type <String> -- selected from existing items
- Certification License Number <String> -- provided as text
- Date Obtained <Date> -- selected from a DatePicker to represent the date the certification was obtained
- Certification Expiry <String> selected from existing items

Outputs from Module:

- Module will validate all inputs into the form, ensuring all elements are populated
- Module will successfully associate the new certification with the consultant from which the New Certification window was spawned
- Certificate attributes will be successfully persisted in the backend database

Logic Flow Diagram:

1. User clicks <Add Certification> after viewing the details of an existing Consultant
2. User supplies a certification name "Continuous Security Monitoring"
3. User supplies a certification abbreviation "GMON"
4. User selects a certification type "Cyber Defense"
5. User supplies a license number "#9483983"
6. User specifies the date obtained
7. User selects an expiration time frame
8. User clicks SAVE

Test Data:

- Name: "Continuous Security Monitoring"
- Abbreviation: "GMON"
- Type: Cyber Defense
- License Number "#9483983"
- Date Obtained: 3/1/2018
- Expiration: 3 Years

Test Case:

The “Add Certification” dialog was launched from the View Consultant details of “Brent Chambers” and successfully populated with test data.

View Consultant

Consultant: Brent Chambers

Location: Phoenix, AZ

Hire Date: 1/10/2020

Description: aka: becrevex, q0m
B.S. Software Development, 2020
A.A.S Systems Development 2017
A.S. Network Technology 2006.

New Certification

Certification Name	Abbreviation	Type	License Number	Date Obtained	Expires
Continuous Security Monitoring	GMON	Cyber Defense	#9483983	3/1/2018	3 Years

Add Certification Save

The new certification is visible within the View Consultant details of consultant “Brent Chambers”.

View Consultant

Consultant: Brent Chambers

Location: Phoenix, AZ

Hire Date: 1/10/2020

Description: aka: becrevex, q0m
B.S. Software Development, 2020
A.A.S Systems Development 2017
A.S. Network Technology 2006.

Certification	Description	Obtained	Expires
OSCE	Offensive Security Certified Expert	2019-03-31	Never
OSCP	Offensive Security Certified Professional	2017-12-02	Never
SPSE	Python Scripting Expert	2017-07-31	Never
GMON	Continuous Security Monitoring	2018-03-01	3 Years

Add Certification Save

SELECT * FROM scats.docum... X

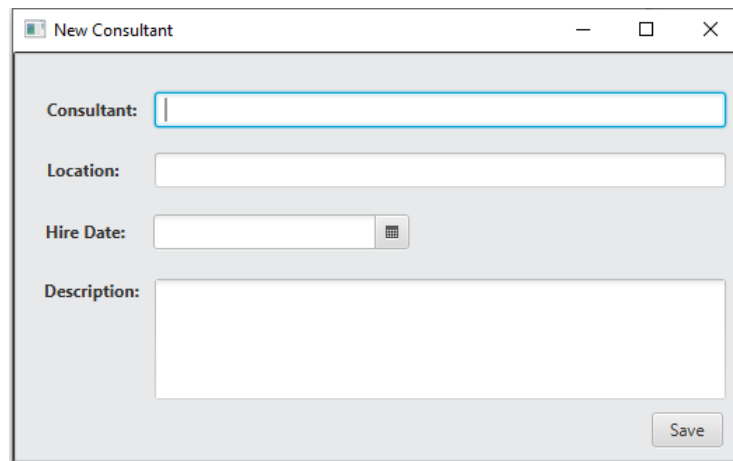
Test Results Table:

Test Case ID	Date Tested	Pass/Fail	Severity of Defect	Summary of Defect	Comments
Case006	1/19/2020	Pass	None	None	None

Module (Case#007): NewConsultantController.java [Test Passed]

Description: Provides an interface to add a new Consultant to the SCATS System.

Interface:

A screenshot of a web application window titled "New Consultant". The window has a light gray background and a standard title bar with minimize, maximize, and close buttons. Inside the window, there are four input fields: "Consultant:" (a single-line text box), "Location:" (a single-line text box), "Hire Date:" (a date picker with a calendar icon), and "Description:" (a multi-line text area). A "Save" button is located at the bottom right of the form.

Inputs to Module:

- Consultant Name <String> -- provided as text
- Location <String> -- provided as text
- Hire Date <Date> -- selected from a DatePicker to represent the hire date of the consultant
- Description <String> selected from existing items

Outputs from Module:

- Module will validate all inputs into the form, ensuring all necessary elements are populated
- Module will successfully store a new consultant to the SCATS System
- Certificate attributes will be successfully persisted in the backend database

Logic Flow Diagram:

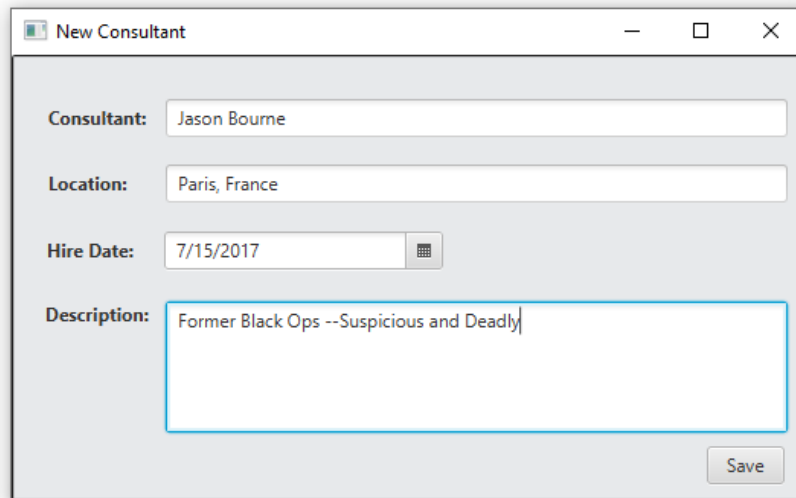
1. User supplies a Consultant name
2. User supplies a Consultant location
3. User selects a hire date
4. User supplies a Consultant description
5. User clicks SAVE

Test Data:

- Name: "Jason Bourne"
- Location: Paris, France
- Hire Date: 7/15/2017
- Description: "Former Black Ops --Suspicious and Deadly"

Test Case:

The “New Consultant” dialog was launched from the New Consultant menu item on the main SCATS UI interface and successfully populated with test data.



New Consultant

Consultant: Jason Bourne

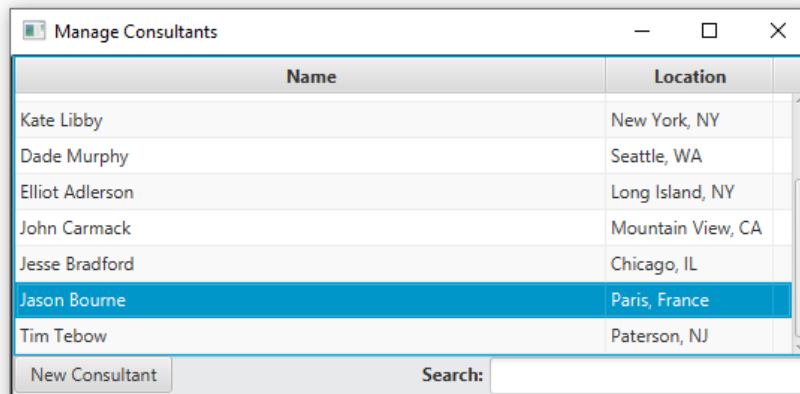
Location: Paris, France

Hire Date: 7/15/2017

Description: Former Black Ops --Suspicious and Deadly

Save

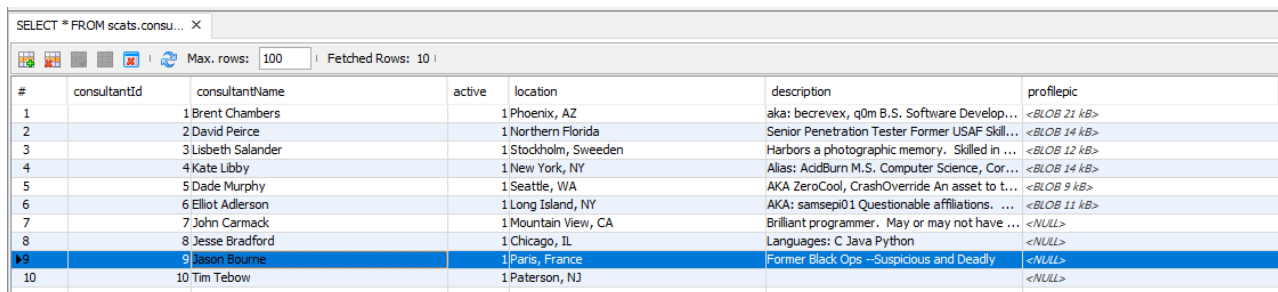
Upon population, the SAVE button was clicked and the consultant was successfully added to the SCATS system.



Manage Consultants

Name	Location
Kate Libby	New York, NY
Dade Murphy	Seattle, WA
Elliot Adlerson	Long Island, NY
John Carmack	Mountain View, CA
Jesse Bradford	Chicago, IL
Jason Bourne	Paris, France
Tim Tebow	Paterson, NJ

New Consultant Search:



SELECT * FROM scats.consultants

Max. rows: 100 | Fetched Rows: 10

#	consultantId	consultantName	active	location	description	profilepic
1	1	Brent Chambers	1	Phoenix, AZ	aka: becrevex, q0m B.S. Software Develop...	<BLOB 21 kB>
2	2	David Peirce	1	Northern Florida	Senior Penetration Tester Former USAF Skill...	<BLOB 14 kB>
3	3	Lisbeth Salander	1	Stockholm, Sweden	Harbors a photographic memory. Skilled in ...	<BLOB 12 kB>
4	4	Kate Libby	1	New York, NY	Alias: AddBurn M.S. Computer Science, Cor...	<BLOB 14 kB>
5	5	Dade Murphy	1	Seattle, WA	AKA ZeroCool, CrashOverride An asset to t...	<BLOB 9 kB>
6	6	Elliot Adlerson	1	Long Island, NY	AKA: samsepi01 Questionable affiliations. ...	<BLOB 11 kB>
7	7	John Carmack	1	Mountain View, CA	Brilliant programmer. May or may not have ...	<NULL>
8	8	Jesse Bradford	1	Chicago, IL	Languages: C Java Python	<NULL>
9	9	Jason Bourne	1	Paris, France	Former Black Ops --Suspicious and Deadly	<NULL>
10	10	Tim Tebow	1	Paterson, NJ		<NULL>

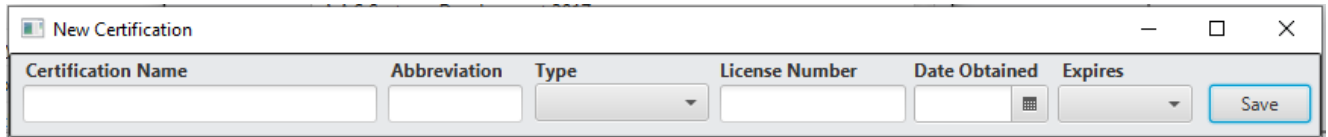
Test Results Table:

Test Case ID	Date Tested	Pass/Fail	Severity of Defect	Summary of Defect	Comments
Case007	1/19/2020	Pass	None	None	None

Module (Case#008): UpdateCertificationController.java [Test Passed]

Description: Provides an interface to modify a Certification associated with a Consultant.

Interface:



Certification Name	Abbreviation	Type	License Number	Date Obtained	Expires
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Inputs to Module:

- Certification Name <String> -- provided as text
- Abbreviation <String> -- provided as text
- Certification Type <String> -- selected from existing items
- Certification License Number <String> -- provided as text
- Date Obtained <Date> -- selected from a DatePicker to represent the date the certification was obtained
- Certification Expiry <String> selected from existing items

Outputs from Module:

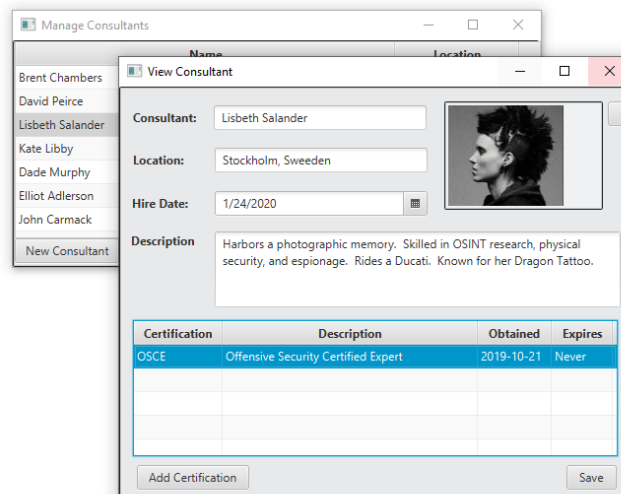
- Module will validate all inputs into the form, ensuring all elements are populated
- Module will save new changes and update the existing certification record associated with the consultant
- Certificate attributes will be successfully persisted in the backend database

Logic Flow Diagram:

1. From View Engagement details of a Consultant, User right-clicks an existing certification, and selects "Update Certification".
2. Update Certification dialog is spawned with the form fields populated with Certification attributes.
3. User changes three Certification attributes.
4. User clicks SAVE
5. Changes to the Certification should be observed within the Consultant form and Database.

Test Case:

Consultant, Lisbeth Salander is chosen from the Manage Consultants tool. Upon viewing the consultant details, it is observed Consultant Salander has one certification: OSCE.



Certification	Description	Obtained	Expires
OSCE	Offensive Security Certified Expert	2019-10-21	Never

The OSCE certification is right-clicked, and “Update Certification” is chosen. The Update Certification tool is displayed with the attributes of Salander’s OSCE certification populated within the form:

The image shows two overlapping windows from a software application. The top window, titled 'View Consultant', displays information for a consultant named Lisbeth Salander. It includes fields for Location (Stockholm, Sweeden), Hire Date (1/24/2020), and a Description (Harbors a photographic memory. Skilled in OSINT research, physical security, and espionage. Rides a Ducati. Known for her Dragon Tattoo.). Below this is a table with one row showing a certification: OSCE, Offensive Security Certified Expert, 2019-10-21, and Never. The bottom window, titled 'Update Certification', is a form for updating a certification. It contains fields for Certification Name (Offensive Security Certified Expert), Abbreviation (OSCE), Type (Pentesting), License Number (#4298298), Date Obtained (10/21/2019), and Expires (Never). There are 'Add Certification' and 'Save' buttons at the bottom.

Certification	Description	Obtained	Expires
OSCE	Offensive Security Certified Expert	2019-10-21	Never

Certification Name	Abbreviation	Type	License Number	Date Obtained	Expires
Offensive Security Certified Expert	OSCE	Pentesting	#4298298	10/21/2019	Never

Attributes Abbreviation, Type, and License number are all changed to different values:

Abbreviation: OSCE → OSCEE

Type: Pentesting → Development

License Number: #4298298 → #4298249

This screenshot shows the 'Update Certification' window with the values updated as described in the text. The Abbreviation is now OSCEE, the Type is Development, and the License Number is #4298249. The other fields remain the same. The 'Add Certification' and 'Save' buttons are still present at the bottom.

Certification Name	Abbreviation	Type	License Number	Date Obtained	Expires
Offensive Security Certified Expert	OSCEE	Development	#4298249	10/21/2019	Never

Upon saving, changes made to the Lisbeth OSCE certification are visible in the View Consultant details, the Update Certification dialog tool, as well as the backend database.

The screenshot displays two overlapping windows from a web application. The 'View Consultant' window shows details for 'Lisbeth Salander', including her location (Stockholm, Sweden), hire date (1/24/2020), and a description of her skills. Below this, a table lists her certifications. The 'Update Certification' window is open on top, showing the 'Offensive Security Certified Expert' certification with its abbreviation (OSCE), type (Development), license number (#4298249), and date obtained (10/21/2019).

Certification	Description	Obtained	Expires
OSCE	Offensive Security Certified Expert	2019-10-21	Never

SELECT * FROM scats.cert...

Max. rows: 100 | Fetched Rows: 7 | Matching Rows:

#	certificationId	consultantId	active	certificationName	abbreviation	type	license
1	1	1	1	1 Offensive Security Certified Expert	OSCE	Pentesting	#99193094
2	2	2	5	1 SecurityTube Linux Assembly Expert	SLAE	Pentesting	#1010
3	3	2	1	1 EC-Council Certified Ethical Hacker	C EH	Pentesting	#8348735
4	4	1	1	1 Offensive Security Certified Professional	OSCP	Pentesting	#29498539
5	5	1	1	1 Python Scripting Expert	SPSE	Development	#04599
6	6	3	1	1 Offensive Security Certified Expert	OSCE	Development	#4298249
7	7	1	1	1 Continuous Security Monitoring	GMON	Cyber Defense	#9483983

Test Results Table:

Test Case ID	Date Tested	Pass/Fail	Severity of Defect	Summary of Defect	Comments
Case008	1/19/2020	Pass	None	None	None

Module (Case#009): UpdateEngagementController.java [Test Failed]

Description: Provides an interface to modify an Engagement.

Interface:

The screenshot shows a 'View Engagement' window with the following fields and sections:

- Status:** New (dropdown)
- Consultant Assigned:** Elliot Adlerson (dropdown)
- Location:** Buffalo, NY (text input)
- Company/Firm:** Evil Corp (text input)
- Engagement Type:** (dropdown)
- Fieldwork Duration:** 2/23/2020 to 2/29/2020 (date range input)
- Description:** Classic red team engagement. (text area)
- Documents:** Table with columns 'Filename' and 'Date'.

Filename	Date
Evil Corp_Red_Team_Engagement_ROE_Final_20200111.pdf	2020-01-10
- Reports:** Table with columns 'Filename' and 'Date'.

Filename	Date
No content in table	
- Buttons:** Add Documentation, Save

Inputs to Module:

- Engagement Status Name <String> -- selected from existing items
- Engagement Consultant Assigned <String> -- selected from existing items
- Engagement Location <String> -- provided as text
- Engagement Company/Firm <String> provided as text
- Engagement Type <String> selected from existing items
- Engagement Fieldwork Duration <Dates>

Outputs from Module:

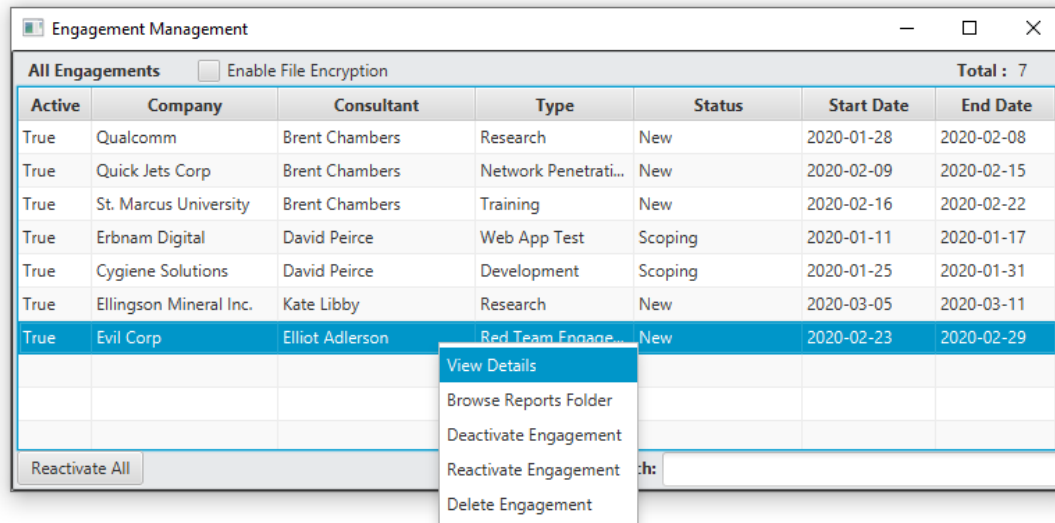
- Module will validate all inputs into the form, ensuring all elements are populated
- Module will save new changes and update the existing engagement record
- Engagement data fields will be successfully persisted in the backend database

Logic Flow Diagram:

1. The Engagement Management tool is launched from the main SCATS menu bar (Engagements → Manage Engagements). From the Engagement Management tool, an existing engagement is right-clicked and “View Details” is selected to make changes to the Engagement.
2. User changes three Engagement attributes.
3. User clicks SAVE
4. Changes to the Engagement should be observed within the Engagement Management tool and the backend database.

Test Case:

The Evil Corp engagement performed by Elliot Alderson was selected from the Engagement Management tool and viewed using the “View Details” drop-down menu selection item.



Engagement Management

☐ Enable File Encryption

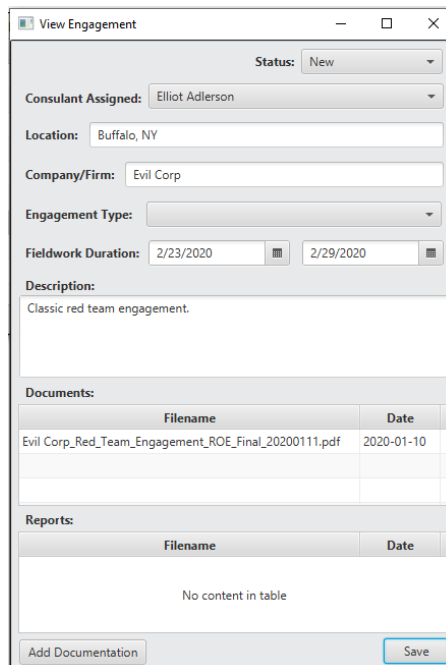
Total : 7

Active	Company	Consultant	Type	Status	Start Date	End Date
True	Qualcomm	Brent Chambers	Research	New	2020-01-28	2020-02-08
True	Quick Jets Corp	Brent Chambers	Network Penetrati...	New	2020-02-09	2020-02-15
True	St. Marcus University	Brent Chambers	Training	New	2020-02-16	2020-02-22
True	Erbnam Digital	David Peirce	Web App Test	Scoping	2020-01-11	2020-01-17
True	Cygiene Solutions	David Peirce	Development	Scoping	2020-01-25	2020-01-31
True	Ellingson Mineral Inc.	Kate Libby	Research	New	2020-03-05	2020-03-11
True	Evil Corp	Elliot Adlerson	Red Team Engage...	New	2020-02-23	2020-02-29

Reactivate All

- View Details
- Browse Reports Folder
- Deactivate Engagement
- Reactivate Engagement
- Delete Engagement

The engagement details are effectively populated within the form.



View Engagement

Status: New

Consultant Assigned: Elliot Adlerson

Location: Buffalo, NY

Company/Firm: Evil Corp

Engagement Type:

Fieldwork Duration: 2/23/2020 - 2/29/2020

Description:
Classic red team engagement.

Documents:

Filename	Date
Evil Corp_Red_Team_Engagement_ROE_Final_20200111.pdf	2020-01-10

Reports:

Filename	Date
No content in table	

Add Documentation Save

Attributes: Location, Type, and Duration End Date are all changed to different values:

Location: Buffalo, NY → Brooklyn, NY

Type: Red Team Engagement → Adversarial

Duration End Date: 2/29/2020 → 3/5/2020

The screenshot shows the 'View Engagement' form with the following details:

- Status: New
- Consulant Assigned: Elliot Adlerson
- Location: Brooklyn, NY
- Company/Firm: Evil Corp
- Engagement Type: Adversarial
- Fieldwork Duration: 2/23/2020 to 3/5/2020
- Description: Classic red team engagement.
- Documents table:

Filename	Date
Evil Corp_Red_Team_Engagement_ROE_Final_20200111.pdf	2020-01-10
- Reports table:

Filename	Date
No content in table	
- Buttons: Add Documentation, Save


2/3 changes made to the engagement are successful. The Fieldwork duration time is stored one day ahead of the specified value.

The screenshot shows the 'View Engagement' form with the following details:

- Status: New
- Consulant Assigned: Elliot Adlerson
- Location: Buffalo, NY
- Company/Firm: Evil Corp
- Engagement Type: Adversarial
- Fieldwork Duration: 2/23/2020 to 3/6/2020
- Description: Classic red team engagement.
- Documents table:

Filename	Date
Evil Corp_Red_Team_Engagement_ROE_Final_20200111.pdf	2020-01-10
- Reports table:

Filename	Date
No content in table	
- Buttons: Add Documentation, Save

SELECT * FROM scats. 'assi... X										
 Max. rows: 100 Fetched Rows: 7 Matching R										
#	assignmentId	consultantId	active	company	location	type	status	description	startDate	endDate
1	1	2	1	Erbrnam Digital	Baltimore, MD	Web App Test	Scoping	Internal PCI Web Application assessment. ...	2020-01-11	2020-01-17
2	2	2	1	Cygiene Solutions	Phoenix, AZ	Development	Scoping	See documentation.	2020-01-25	2020-01-31
3	3	1	1	Qualcomm	San Diego, CA	Research	New	Research assignment with clearance neede...	2020-01-28	2020-02-08
4	5	4	1	Ellingson Mineral Inc.	New York, NY	Research	New	Hack the Planet	2020-03-05	2020-03-11
5	6	1	1	Quick Jets Corp	Miami, FL	Network Penetration Test	New	TBD	2020-02-09	2020-02-15
6	7	6	1	Evil Corp	Buffalo, NY	Adversarial	New	Classic red team engagement.	2020-02-23	2020-03-06
7	8	1	1	St. Marcus University	Bristol, CT	Training	New	Advanced Research Training Assignment.	2020-02-16	2020-02-22

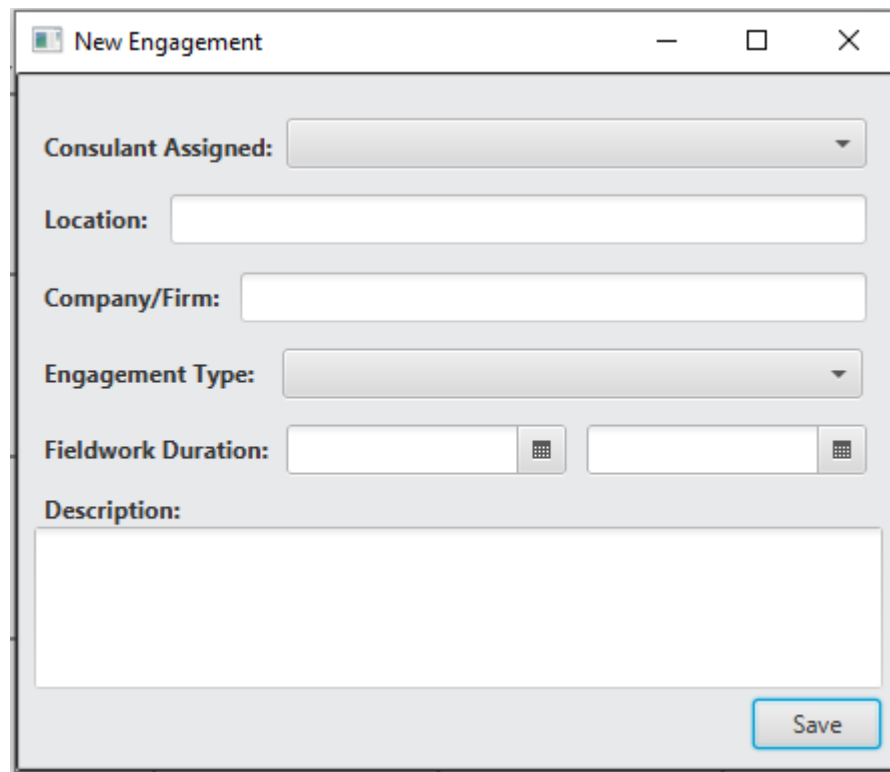
Test Results Table:

Test Case ID	Date Tested	Pass/Fail	Severity of Defect	Summary of Defect	Comments
Case009	1/19/2020	FAIL	Minimal	The end date of the Fieldwork Duration is inaccurate.	Fix: address the UpdateEngagement function in the Database Manager.

Module (Case#010): NewEngagementController.java [Test Passed]

Description: Provides an interface to add a new Consultant to the SCATS System.

Interface:



The screenshot shows a window titled "New Engagement" with a standard Windows-style title bar (minimize, maximize, close buttons). The form contains the following fields:

- Consultant Assigned:** A dropdown menu.
- Location:** A text input field.
- Company/Firm:** A text input field.
- Engagement Type:** A dropdown menu.
- Fieldwork Duration:** Two date input fields, each with a calendar icon to its right.
- Description:** A large text area.
- Save:** A button located at the bottom right of the form.

Inputs to Module:

- Consultant Name <String> -- selected from existing items
- Location <String> -- provided as text
- Company/Firm <String> -- provided as text
- Type <String> -- selected from existing items
- Fieldwork duration dates <Date> -- selected from a DatePicker
- Description <String> provided as text

Outputs from Module:

- Module will validate all inputs into the form, ensuring all necessary elements are populated
- Module will successfully store a new engagement to the SCATS System
- Engagement attributes will be successfully persisted in the backend database
- New Engagement will be visible within the SCATS Interactive Calendar View

Logic Flow Diagram:

1. User selects an Engagement name
2. User supplies an Engagement location
3. User supplies a Company or Firm name
4. User selects an Engagement type
5. User specifies a start and end date to estimate the fieldwork duration
6. User clicks SAVE

Test Data:

- Engagement Assignment: "David Webb"
- Location: Paris, France
- Type: Adversarial
- Company: Treadstone
- Duration: 7/15/2020 – 7/19/2020

- Description: “Get in, Get out”

Test Case:

The “New Engagement” dialog was launched from the main SCATS UI interface and successfully populated with test data.

New Engagement

Consultant Assigned: David Webb

Location: Paris, France

Company/Firm: Treadstone

Engagement Type: Adversarial

Fieldwork Duration: 7/15/2020 7/20/2020

Description: Get in and get out.

Save

Upon population, the SAVE button was clicked and the consultant was successfully added to the SCATS system.

Active Engagements						
Company/Firm	Consultant	Type	Status	Location	Start Date	End Date
Qualcomm	Brent Chambers	Research	New	San Diego, CA	2020-01-28	2020-02-08
Ellingson Mineral Inc.	Kate Libby	Research	New	New York, NY	2020-03-05	2020-03-11
Quick Jets Corp	Brent Chambers	Network Penetration Test	New	Miami, FL	2020-02-09	2020-02-15
Evil Corp	Elliot Adlerson	Adversarial	New	Buffalo, NY	2020-02-23	2020-03-06
St. Marcus University	Brent Chambers	Training	New	Bristol, CT	2020-02-16	2020-02-22
Treadstone	David Webb	Adversarial	New	Paris, France	2020-07-15	2020-07-20

New Engagement Manage Consultants

The Engagement is also successfully added to the Interactive Calendar, as the Engagement fieldwork start date is scheduled for 7/15/2020, with an estimated date of conclusion on 7/20.

July 2020

Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2	3	4
	8	9	10	11
	15	16	17	18
	22	23	24	25
	29	30	31	

Engagements starting: Wednesday, July 15, 2020

Consultant	Company	Type	Est. End Date
David Webb	Treadstone	Adversarial	2020-07-20

<-- Today -->

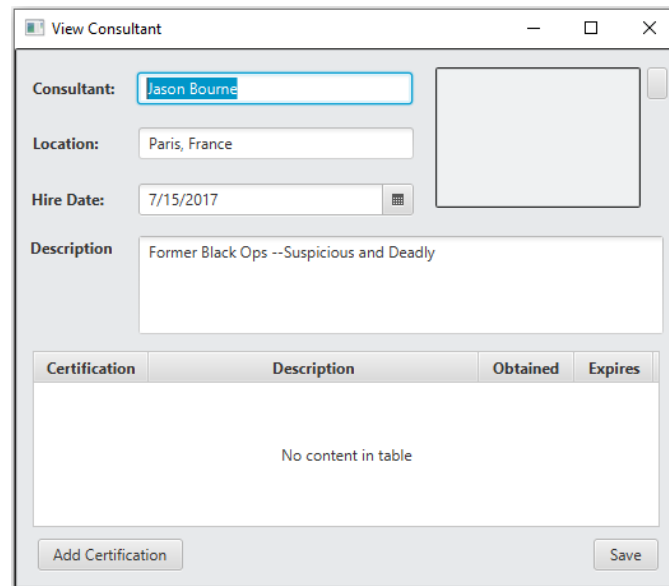
Test Results Table:

Test Case ID	Date Tested	Pass/Fail	Severity of Defect	Summary of Defect	Comments
Case010	1/19/2020	Pass	None	None	None

Module (Case#011): ViewConsultantController.java [Test Failed]

Description: Provides an interface to view and update the details of an existing consultant.

Interface:



Inputs to Module:

- Consultant Name <String> -- provided as text
- Location <String> -- provided as text
- Hire Date <Date> -- selected from a DatePicker to represent the hire date of the consultant
- Description <String> selected from existing items
- ProfilePic <Image/Blob> selected from Browse Dialog

Outputs from Module:

- Module will validate all inputs into the form, ensuring all necessary elements are populated
- Module will successfully update a new consultant to the SCATS System
- Module will successfully associate an uploaded profile picture with the Consultant, saving the image to the database as a blob
- Consultant attributes will be successfully persisted in the backend database

Logic Flow Diagram:

1. From the Manage Consultants tool, User right-clicks an existing consultant, and selects "View Consultant".
2. View Consultant dialog is spawned with the form fields populated with consultant attributes.
3. User changes two Certification attributes and uploads a profile pic to be associated with the consultant.
4. User clicks SAVE
5. Changes to the Consultant should be observed within the Consultant View Consultant details form as well as the Database.

Test Data:

- Profile Pic: "jb.jpg"

Test Case:

The “View Consultant” dialog was launched from the Manage Consultants tool with consultant Jason Bourne as the item selected for modification. The View Consultant dialog successfully populated its forms with the necessary data elements that describe consultant Jason Bourne.

The screenshot shows two overlapping windows. The 'Manage Consultants' window in the background has a table with the following data:

Name	Location
Kate Libby	New York, NY
Dade Murphy	Seattle, WA
Elliot Adlerson	
John Carmack	
Jesse Bradford	
Jason Bourne	
Tim Tebow	

The 'View Consultant' dialog box is in the foreground, displaying the details for Jason Bourne:

- Consultant:** Jason Bourne
- Location:** Paris, France
- Hire Date:** 7/15/2017
- Description:** Former Black Ops --Suspicious and Deadly

Below the description is a table for certifications:

Certification	Description	Obtained	Expires
No content in table			

Buttons at the bottom include 'Add Certification' and 'Save'.

Attributes: Consultant (Name) and Location are changed to different values:

Consultant : Jason Bourne → David Webb

Location: Paris, France → Berlin, Germany

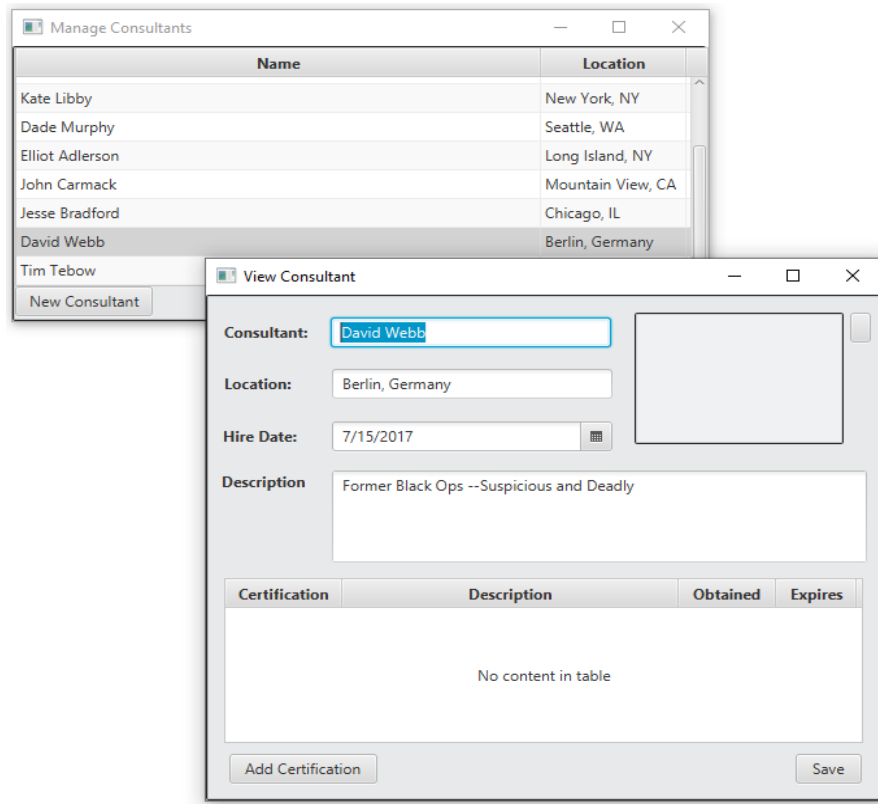
The file jb.jpg is also selected using the ProfilePicture button and rendered within the form successfully.

This screenshot shows the same windows as before, but with updated information. In the 'Manage Consultants' table, 'Jason Bourne' is now highlighted. The 'View Consultant' dialog box shows the following updates:

- Consultant:** David Webb
- Location:** Berlin, Germany
- Hire Date:** 7/15/2017
- Description:** Former Black Ops --Suspicious and Deadly

The certification table remains empty. A profile picture of a man (David Webb) is now displayed in the top right corner of the dialog box, next to the 'Consultant' field. The 'Add Certification' and 'Save' buttons are still present at the bottom.

SAVE button was clicked and the consultant data was successfully updated to the SCATS system evident by viewing the consultant after modification, but the image file was not effectively stored.



Test Results Table:

Test Case ID	Date Tested	Pass/Fail	Severity of Defect	Summary of Defect	Comments
Case011	1/19/2020	FAIL	Medium	The system cannot find the image file because the filepath used within the function contains bad characters.	Fix is to implement relative path functionality to retrieve the file from the file system.