



Civil Defense Command and Control Center



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Submitted to Dr. Ramzi Haraty in partial fulfillment of the requirements for the course "CSC 490: Software Engineering."

11/17/2023



Cypher Nova Cypher Nova Test Case ID: TC001 Test Priority (Low/Medium/High): Med Test Designed by: Nancy Akoum Test Priority (Low/Medium/High): Med Test Designed date: 11/1/2023 Module Name: Login form Test Executed by: Test Title: Verify login with a valid username and valid password Test Execution date: Description: Evaluate the functionality of the login page with the user attempt to log in with a valid email and a valid password Pre-conditions: The user possesses a valid username and password Dependencies: User credentials are securely stored in the database

Step	Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)	Notes
1	Open the web app and click on the login button to access the form	User: beirut.center@gmail.com	The user should successfully log in and access the dashboard.			
2	Provide valid username	Password: xyThk9?aepOOnhbeirut				
3	Provide valid password					
4	Click on the login button					

Post-conditions:

The user is validated with the database and successfully logs into the account.

The account session details are logged into the database.



Test Case ID: TC002	Test Designed by: Nancy Akoum
Test Priority (Low/Medium/High): Med	Test Designed date: 11/1/2023
Module Name: Login form	Test Executed by:
Test Title: Restrict login with a valid username and invalid password	Test Execution date:
Description: Assess the login functionality when a user attempts to log in with a valid username and invalid password.	

 $\boldsymbol{Pre\text{-conditions:}}$ The user possesses a valid username and password

Dependencies: The user credentials are securely stored in the database

Step	Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)	Notes
1	Open the web app and click on the login button to get the form	User: beirut.center@gmail.com	The user should NOT be able to log in and access the dashboard			
2	Provide valid username	Password: 1234	An error message guides the user to reset the password if needed			
3	Provide invalid password					
4	Click on login button					

Post-conditions:

The user is denied access and fails to login to account.

An error message signals to either attempt to log in again or reset the password via the "Forget my password" link.



Test Case ID: TC003	Test Designed by: Nancy Akoum
Test Priority (Low/Medium/High): Med	Test Designed date: 11/1/2023
Module Name: Login form	Test Executed by:
Test Title: Restrict login with invalid username and password	Test Execution date:
Description: Evaluate the login page functionality when the user attempts to log in with an invalid username and password.	

Pre-conditions: The user possesses a valid username and password

Dependencies: The user credentials are securely stored in the database

Step	Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)	Notes
1	Open the web app and click on the login button to get the form	User: bierut.center@gmail.com	The user should NOT be able to login and access the dashboard			
2	Provide invalid username	Password: xyThk9?aepOOnhbeirut	An error message guides the user to create a new account if needed.			
3	Provide valid/invalid password					
4	Click on login button					

Post-conditions:

The user is denied access and fails to log in to the account.

An error message signals to either attempt to log in again or create an account via the "Sign up" link.



Test Case ID: TC004	Test Designed by: Nancy Akoum
Test Priority (Low/Medium/High): Med	Test Designed date: 11/1/2023
Module Name: Login form	Test Executed by:
Test Title: Restrict login with empty username box and a password	Test Execution date:
Description: Evaluate the login page functionality when a user attempts to log in with an empty username and a password	
attempts to log in with an empty username and a password	
Dre conditions. The year necessary a valid yearness and necessary	

Pre-conditions: The user possesses a valid username and password

Dependencies: The user credentials are securely stored in the database

Step	Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)	Notes
1	Open the web app and click on the login button to get the form	Password: 1234	The user should NOT be able to login and access the dashboard			
2	Keep username box empty		An error message signals username field is required			
3	Provide password					
4	Click on login button					

Post-conditions:

The user is denied access and fails to log in to account.

An error message signals to enter the username.



Test Case ID: TC005	Test Designed by: Nancy Akoum
Test Priority (Low/Medium/High): Med	Test Designed date: 11/1/2023
Module Name: Login form	Test Executed by:
Test Title: Restrict login with username and empty password box	Test Execution date:
Description: Evaluate the login page functionality when the user attempts to log in with a username and an empty password box.	
Dra conditions. The user pessesses a valid username and pessessed	

Pre-conditions: The user possesses a valid username and password

Dependencies: The user credentials are securely stored in the database

Step	Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)	Notes
1	Open the web app and click on the login button to get the form	User: beirut.center@gmail.com	The user should NOT be able to login and access the dashboard			
2	Provide username		An error message signals that the password field is empty.			
3	Keep password box empty					
4	Click on login button					

Post-conditions:

The user is denied access and fails to login to account.

An error message signals to enter the password.



Test Case ID: TC006	Test Designed by: Joy Andraos
Test Priority (Low/Medium/High): Med	Test Designed date: 11/1/2023
Module Name: Signup form	Test Executed by:
Test Title: Verify signup with valid username and valid password	Test Execution date:
Description: Assess the signup page functionality when a user attempts to create an account with a valid username and a valid password.	
Due conditions Uses has a valid amail	

Dependencies: None

Step	Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)	Notes
1	Open the web app and click on the signup button to get the form	User: beirut.center@gmail.com	The user should be able to create an account			
2	Provide valid email	Password: xyThk9?aepOOnhbeirut				
3	Provide strong password	Confirm password: xyThk9?aepOOnhbeirut				
4	Confirm password					
5	Click on signup button					

Post-conditions:

The user is validated with database and successfully created an account.

The account details are securely stored in the database.



Test Case ID: TC007	Test Designed by: Joy Andraos
Test Priority (Low/Medium/High): Med	Test Designed date: 11/1/2023
Module Name: Signup form	Test Executed by:
Test Title: Restrict signup with invalid username and valid password	Test Execution date:
Description: Evaluate the sign-up page functionality when a user attempts to create an account with an invalid username and a valid password	

Dependencies: None

Step	Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)	Notes
1	Open the web app and click on the signup button to get the form	User: beirut.center	The user should NOT be able to create an account			
2	Provide invalid email	Password: xyThk9?aepOOnhbeirut	An error message signals to enter a valid email address			
3	Provide strong password	Confirm password: xyThk9?aepOOnhbeirut				
4	Confirm password					
5	Click on signup button					

Post-conditions:

User failed to create an account.

An error message signals that the entered username is not a valid email address.



Test Case ID: TC008	Test Designed by: Joy Andraos
Test Priority (Low/Medium/High): Med	Test Designed date: 11/1/2023
Module Name: Signup form	Test Executed by:
Test Title: Restrict signup with valid username but unmatched password and confirmed password	Test Execution date:
Description: Verify that the sign-up page restricts account creation when a valid email is provided but the password and confirmed password do not match	

Dependencies: None

Step	Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)	Notes
1	Open the web app and click on the signup button to get the form	User: beirut.center@gmail.com	The user should NOT be able to create an account			
2	Provide valid email	Password: xyThk9?aepOOnhbeirut	An error message indicates that the password and confirmed password should match			
3	Provide strong password	Confirm password: xyThk9?aepOOnh				
4	Incorrect confirmed password	_				
5	Click on signup button					

Post-conditions:

The user failed to create an account.

An error message signals that the confirmed password does not match the password.



Test Case ID: TC009	Test Designed by: Joy Andraos
Test Priority (Low/Medium/High): Med	Test Designed date: 11/1/2023
Module Name: Signup form	Test Executed by:
Test Title: Restrict signup with valid username and weak password	Test Execution date:
Description: Evaluate the sign-up page functionality when a user attempts to create an account with a username and a weak password.	

Pre-conditions: The user has a valid username

Dependencies: None

Step	Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)	Notes
1	Open the web app and click on the signup button to get the form	User: beirut.center@gmail.com	The user should NOT be able to create an account			
2	Provide valid email	Password: 1234	An error message indicates the requirements for a strong password			
3	Provide weak password	Confirm password: 1234				
4	Confirm password					
5	Click on signup button					

Post-conditions:

The user failed to create an account.

An error message signals that the password entered is weak and should contain at least a number, an uppercase letter, a lowercase letter, a symbol, and should be at least 8 characters long.



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uted by:
ution date:

Dependencies: None

Step	Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)	Notes
1	Open the web app and click on the login button to get the form	User: beirut.center@gmail.com	The user should receive an email on the email address entered to change the password			
2	Provide valid email	Password: 1234				
3	Provide incorrect password					
4	Click on the login button and receive an error message					
5	Click on the forgot my password button					

Post-conditions:

The user failed to login to the account.

The email containing the password reset link is sent to the user's registered email address for verification.



Test Case ID: TC011	Test Designed by: Nancy Akoum
Test Priority (Low/Medium/High): Med	Test Designed date: 11/1/2023
Module Name: Login form	Test Executed by:
Test Title: Forgot my password form with a valid password and confirmed password	Test Execution date:
Description: Evaluate the "Forgot my password" page when the user attempts to change the password with a valid password and confirmed password.	
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Dependencies: None

Step	Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)	Notes
1	Open the link received in the mail	New password: zxyThk9?aepOnhbeirut	The user should be able to log in with the new password			
2	Provide strong password	Confirmed password: zxyThk9?aepOnhbeirut				
3	Confirm password					
4	Click on the "change password" button and receive a success message					
5	Click on the "login" button to get redirected to the main page and log in					

Post-conditions:

The user managed to change their password and log in to their account.

The user credentials and the account session details are logged in the database.



Test Case ID: TC012	Test Designed by: Nancy Akoum
Test Priority (Low/Medium/High): Med	Test Designed date: 11/1/2023
Module Name: Login form	Test Executed by:
Test Title: Forgot my password form with password and confirmed password does not match	Test Execution date:
Description: Evaluate the "Forgot my password" page when a user attempts to change the password with a password and confirmed password that does not match	
Due con didional The man has a realid areail	

Dependencies: None

Step	Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)	Notes
1	Open the link received in the mail	New password: zxyThk9?aepOnhbeirut	The user should NOT be able to change the password			
2	Provide strong password	Confirmed password: zxyThk9?aepOnh				
3	Incorrect confirmed password					
4	Click on the "change password" button and receive an error message					

Post-conditions:

The user failed to change their password and received an error message indicating that the password and confirmed password do not match.



Test Case ID: TC013	Test Designed by: Nancy Akoum
Test Priority (Low/Medium/High): Med	Test Designed date: 11/1/2023
Module Name: Login form	Test Executed by:
Test Title: Forgot my password form with weak password	Test Execution date:
Description: Evaluate the "Forgot my password" page when the user attempts to change the password with a weak password	

Dependencies: None

Step	Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)	Notes
1	Open the link received in the mail	New password: 1234	The user should NOT be able to change the password			
2	Provide weak password	Confirmed password: 1234	An error message indicates the requirements for a strong password			
3	Confirm password					
4	Click on the "change password" button and receive an error message					

Post-conditions:

The user failed to change their password and received an error message indicating that the password entered is weak and should contain at least a number, an uppercase letter, a lowercase letter, and a symbol, and should be at least 8 characters long.



Test Case ID: TC014	Test Designed by: Joy Andraos
Test Priority (Low/Medium/High): High	Test Designed date: 11/1/2023
Module Name: Dashboard	Test Executed by:
Test Title: Generate a new incident form with complete details	Test Execution date:
Description: Evaluate the "Create incident" page functionality	
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Pre-conditions: The user possesses valid credentials and logged in

Dependencies: None

Step	Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)	Notes
1	Click on the create new incidents button "+"	Type of emergency: forest fire	The user should be able to save the new incident form			
2	Fill all the details in	Priority level:				
3	Save incident					
4						

Post-conditions:

The user successfully saved the new incident.



Test Case ID: TC015	Test Designed by: Joy Andraos
Test Priority (Low/Medium/High): High	Test Designed date: 11/1/2023
Module Name: Dashboard	Test Executed by:
Test Title: Generate a new incident form with missing details	Test Execution date:
Description: Evaluate the functionality of the create incident page to ensure that it appropriately handles the scenarios where necessary details are missing during the incident creation process.	

Pre-conditions: The user possesses valid credentials and logged in

Dependencies: None

Step	Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/ Fail)	Notes
1	Click on the create new incidents button "+"	Type of emergency: forest fire	The user should NOT be able to save the new incident form			The time taken for each step should be within acceptable limits
2	Fill in the details to some questions but keep some empty	Priority level: unselected	An error message indicates that all the information should be filled.			
3	Save incident					

Post-conditions:

The user failed to save the new incident.

An error message indicates that all the information should be filled.



Test Case ID: TC016	Test Designed by: Joy Andraos
Test Priority (Low/Medium/High): High	Test Designed date: 11/1/2023
Module Name: Dashboard	Test Executed by:
Test Title: Status of a new incident	Test Execution date:
Description: Evaluate the system's ability to display and manage the status of newly created incidents.	
Pre-conditions: The user possesses valid credentials, logs in, and creates	a new incident

Dependencies: None

Step	Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)	Notes
1	Click on the table of active incidents		The user should be able to view the incident created in the "active" table with a status = active			

Post-conditions:

The user can view and follow in real-time the ongoing emergency and its potential evolutions.



Test Designed by: Joy Andraos
Test Designed date: 11/1/2023
Test Executed by:
Test Execution date:

Pre-conditions: The user possesses valid credentials, logged in, and resolved an incident without filling the post-mission report.

Dependencies: None

Step	Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)	Notes
1	Once the mission is over, click on the "done" button on the incident form		The user should be able to view the incident resolved in the "active" table with a status = resolved which indicates it is over with an incomplete postmission report			
2	Click on the table of active incidents					

Post-conditions:

The user marked the mission as resolved and can now move to the post-mission report.



Test Case ID: TC018	Test Designed by: Joy Andraos
Test Priority (Low/Medium/High): High	Test Designed date: 11/1/2023
Module Name: Dashboard	Test Executed by:
Test Title: Status of a completed incident (mission resolved and post-mission report complete)	Test Execution date:
Description: Evaluate the system's handling of incidents marked as closed with completed post-mission reports.	

Pre-conditions: The user possesses valid credentials, logs in, resolves an incident, and fills in the post-mission report.

Dependencies: None

Step	Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)	Notes
1	After resolving an incident, the user fills in the postmission report	Degree of damage: severe (with a text describing the details)	The user should be able to view the incident resolved in the "history" table with a status = closed which indicates it is over with its postmission report			
2	Click on the "close" button when done					

Post-conditions:

The user marked the mission as closed and can still view it and update it in the history table.



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Test Ca	ase ID: TC019			Test Designed by: Joy Andraos			
Test Pr	riority (Low/Medium/High): Hi	gh		Test Designed date: 11/1/2023			
Module	e Name: Dashboard			Test Executed	d by:		
Test Title: Update details of an incident				Test Execution	n date:		
Description: Evaluate the system's capability to update information on an incident							
Pre-cor	nditions: The user possesses vali	d credentials and logged in.					
Depend	lencies: None						
Step	Test Steps	Test Data	Exp	ected Results	Actual Results	Status (Pass/Fail)	Notes
1	Click on the table of active incidents table	Type of emergency: Forest fire is modified to house fire	be a	user should ble to modify neident's ils			
2	Click on the "update" button						
3	Access the incident form and modify the needed details						
4	Click on the "save" button						
	onditions: or updated information on an inci	dent.					



Test Case ID: TC020	Test Designed by: Joy Andraos
Test Priority (Low/Medium/High): High	Test Designed date: 11/1/2023
Module Name: Dashboard	Test Executed by:
Test Title: Automatic resource allocation	Test Execution date:
Description: Evaluate the automatic allocation of resources based on the details filled in when creating the incident	
Due conditions. The year messesses well a medentials loss in and area	

Pre-conditions: The user possesses valid credentials, logs in, and creates a new incident

Dependencies: None

Step	Test Steps	Test Data	Expected Results	Actual Results	Status	Notes
1	Save the incident and initiate automatic resource allocation, measuring the time taken		An automatic form of the resources needed and available is generated.			
2	Generate the automatic form of needed resources and record the time taken		Availability should be updated in real-time, meaning it should not show available when it is not and vice versa.			
3	Validate that the availability updates in real-time within an acceptable time limit					
4	Verify data integrity by checking that the allocated resources match the incident details					

Post-conditions:

The user generated an automatic form of the needed resources in real-time and proceeded with it.



Test Case ID: TC021	Test Designed by: Joy Andraos
Test Priority (Low/Medium/High): High	Test Designed date: 11/1/2023
Module Name: Dashboard	Test Executed by:
Test Title: Automatic resource allocation error	Test Execution date:
Description: Evaluate the automatic allocation of resources based on	
the available ones, with attention to handling errors	

Pre-conditions: The user possesses valid credentials, logs in, and creates a new incident

Dependencies: None

Step	Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)	Notes
1	After saving the incident, the user is taken to the resource allocation form which is generated automatically based on the availability		An automatic form of the resources needed is generated with a green flag next to available ones and a red flag next to unavailable ones.			
2	Some needed resources are unavailable. The user clicked on "proceed".		The user receives an attention message indicating that some resources are unavailable but can proceed anyway in case of high priority.			

Post-conditions:

The user-generated an automatic form of the needed resources and proceeded with it.



Test Ca				Test Designed by: Joy Andraos					
Test Pr	iority (Low/Medium/High): Hi	igh		Test Designed date: 11/1/2023					
Module Name: Dashboard			Test Executed	l by:					
Test Tit	Test Title: Manual Resource Allocation			Test Executio	n date:				
Descrip	execution: Evaluate the manual allocations	ation of resources							
Pre-con	nditions: The user possesses vali	id credentials, logs in	, and creates	a new incident					
Depend	lencies:								
Step	Test Steps	Test Data	Exp	ected Results	Actual Results	Status (Pass/Fail)	Notes		
1	After saving the incident, the			form of the					
	user is taken to the resource allocation form and chooses			urces needed enerated with a					
	the "manual" button		_	n flag next to					
			_	available ones					
2	The user manually selects the needed resources which are all available								
3	Click on "Proceed"								
	nditions:								
The use	r-generated a manual form of the	e needed resources an	d proceeded	l with it.					



Test Case ID: TC023	Test Designed by: Joy Andraos
Test Priority (Low/Medium/High): High	Test Designed date: 11/1/2023
Module Name: Dashboard	Test Executed by:
Test Title: Manual resource allocation error	Test Execution date:
Description: Evaluate the manual allocation of resources with attention	
to handling errors.	

Pre-conditions: The user possesses valid credentials, logged in, and created a new incident

Dependencies: None

Step	Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)	Notes
1	After saving the incident, the user is taken to the resource allocation form and chooses the "manual" button		The form of the resources needed is generated with a green flag next to the available ones and a red flag next to the unavailable ones.			
2	The user manually selects the needed resources but some of them are unavailable		The user receives an attention message indicating that some resources are unavailable but can proceed anyway in case of high priority.			
3	Click on "Proceed"					

Post-conditions:

The user-generated a manual form of the needed resources and failed to proceed with it.



Test Case ID: TC024	Test Designed by: Ahmad El Kurdi
Test Priority (Low/Medium/High): Med	Test Designed date: 11/1/2023
Module Name: Messaging	Test Executed by:
Test Title: Messaging feature from/to the center to/from responders	Test Execution date:
Description: Evaluate the functionality of the messaging feature for communication between the center and responders during a mission	
Pre-conditions: The user possesses valid credentials and logged in.	

Dependencies: None

Step	Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)	Notes
1	The user clicks on the "message" button		Messages are sent and received successfully			
2	The user accesses chats with responders and selects the needed one					
3	The user sends a message and receives a message when the responder answers					

Post-conditions:

The user managed to send messages from the center and receive messages from the responders' side.



Test Case ID: TC025	Test Designed by: Ahmad El Kurdi
Test Priority (Low/Medium/High): Med	Test Designed date: 11/1/2023
Module Name: Maps	Test Executed by:
Test Title: Real-time tracking on maps	Test Execution date:
Description: Evaluate the performance and accuracy of real-time tracking on maps.	

 $\mbox{\bf Pre-conditions:}$ The user possesses valid credentials and logged in.

Dependencies: None

Step	Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)	Notes
1	The user clicks on the "maps" button and measures the time taken		The user should access the Lebanese map and be able to view the trucks on mission and the available ones in real-time			The time taken for each step should be within acceptable limits for a seamless real-time experience
2	Observe the real-time tracking of trucks on a mission recording the time taken					
3	Introduce a simulated high-traffic scenario by increasing the number of tracked vehicles on the map.					



4	Confirm that the system continues to update the real-time location of vehicles within the acceptable time limit			
5	Verify that the map interface provides a clear and intuitive visualization of the tracked vehicles including status indicators and route information			
6	Test the zoom functionality to ensure a smooth user experience			

Post-conditions:

Real-time tracking should reflect the location of vehicles, even under high-traffic conditions.



Test Case ID: TC026	Test Designed by: Ahmad El Kurdi
Test Priority (Low/Medium/High): Med	Test Designed date: 11/1/2023
Module Name: Weather and Disaster Predictions	Test Executed by:
Test Title: Real-time weather data and accurate predictive analysis	Test Execution date:
Description: Evaluate the accuracy of real-time weather data and predictive analysis	
Pre-conditions: The user possesses valid credentials and logged in.	

Dependencies:

Step	Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)	Notes
1	The user clicks on the		The user should			The time
	"weather" button		be able to view			taken for
			the weather			each step
			weekly with			should be
			predictions of			within
			possible disasters			acceptable
			•			limits.

Post-conditions:

The user managed to send messages from the center and receive messages from the responders' side.



Test Case ID: TC027	Test Designed by: Ahmad Abou El Kheir
Test Priority (Low/Medium/High): High	Test Designed date: 11/1/2023
Module Name: Role-based access	Test Executed by:
Test Title: Call center account access to the history table	Test Execution date:
Description: Evaluate that only the call center can update an incident in	
the history table while other users can only view them from the history	
table	
Due conditions. The call center year necessary valid credentials and logge	od in

Pre-conditions: The call center user possesses valid credentials and logged in.

Dependencies:

Step	Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)	Notes
1	The call center user clicks on the "history" table		Incident information has been successfully updated in the history table by the call center user			
2	An "update" button appears to the call center user next to each incident					
3	The call center user can modify the incident information					
4	Click on the "save" button					

Post-conditions:

The call center user successfully modified the incident's information in the history table.



Test Case ID: TC028	Test Designed by: Ahmad Abou El Kheir
Test Priority (Low/Medium/High): High	Test Designed date: 11/1/2023
Module Name: Role-based access	Test Executed by:
Test Title: Call center account access to maps	Test Execution date:
Description: Evaluate that only the call center can view the trucks of	
all the centers in Lebanon in real-time	
Pre-conditions: The call center user possesses valid credentials and logg	ved in.

Dependencies:

Step	Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)	Notes
1	The call center user clicks on the "map" button		The call center user should access the Lebanese map and be able to view the trucks on mission and the available ones of all the centers in real-time			

Post-conditions:

The call center user successfully viewed the Lebanese maps along with the trucks of all the centers interacting in real time.



Test Case ID: TC029	Test Designed by: Ahmad Abou El Kheir
Test Priority (Low/Medium/High): High	Test Designed date: 11/1/2023
Module Name: Multi-factor authentication for role-based access accounts	Test Executed by:
Test Title: Verify login with a valid username, valid first password, and valid second password	Test Execution date:
Description: Evaluate the functionality of the login page when the user attempts to log in with a valid email, a valid first password, and a valid second password.	

Pre-conditions: The call center user possesses valid credentials and passed the first login step

Dependencies: The user should have successfully entered the username and the first password

Step	Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)	Notes
1	Provide a valid second password	Second password: fTkiiI;@LEBgHk125	The call center user should be able to successfully log in			The time taken for each step should be within acceptable limits for a secure yet efficient login process.

Post-conditions:

The call center user successfully logged in to the dashboard where it has allowed access to specific features.