

API – Project

Overview of UI to API Mapping for Contact List App:

This document outlines how each API endpoint in the [Contact List App](#) is triggered based on corresponding user actions in the UI.

firstly: when we follow the link <https://thinking-tester-contact-list.herokuapp.com> we got interface as fronted end as shown below:

Contact List App

Welcome! This application is for testing purposes only. The database will be purged as needed to keep costs down.

The API documentation can be found [here](#).

Log In:

Not yet a user? Click here to sign up!

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As we can see in this interface we got :

1-Login for already registered users by submit button with valid credential (Email and password)

2-Create new user by sign up button

1.API User:

1.1Log in API(By Submit)

Precondition for this API:

User has already registered before , So he has valid email and password like this:

Email: linashaqoura2002@gmail.com

Password:LinaShaq20\$

When user click on Submit after entering his email and password:

1. The frontend (browser) sends a **POST** request to the login API endpoint.
2. This request includes (Email and Password) as JSON format will send into backend
3. The backend (server) verifies the credentials by checking the email and password against a database:
 - If the credentials are correct, the server sends a success response (200 OK) with an authentication token
 - If the credentials are incorrect, the server sends an error response (401 Unauthorized) with an error message like 'Incorrect email or password.'
4. The frontend processes the response:
 - For success: It redirects the user to the next page (contact list). As shown below

Contact List

Click on any contact to view the Contact Details

[Add a New Contact](#)

Name	Birthdate	Email	Phone	Address	City, State/Province, Postal Code	Country
Ulric Dyer		qeraniqog@mailinator.com	0898776554	835 Hague Court Facilis voluptatem	Nihil repudiandae es Ad numquam ex eaque	Cum expedita quasi f
Madeline Koch		cegy@mailinator.com	0598877665	215 Cowley Freeway Ipsam provident dol	Molestias explicabo Autem sed neque exce	Culpa voluptas ut c
Lina Shaqoura		linashaqoura2002@gmail.com	0567215544	Gaza	11233 نابلس	Palestinian Authority

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- For failure: It displays the error message, as shown below.

Contact List App

Welcome! This application is for testing purposes only. The database will be purged as needed to keep costs down.

The API documentation can be found [here](#).

Log In:

Incorrect username or password

Merritt22@gmail.com

[Submit](#)

Not yet a user? Click here to sign up!

[Sign up](#)

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1.2.Sign-up API

When you click on Sign Up button to create a new account:

Add User

Sign up to begin adding your contacts!

First Name

Last Name

Email

Password

1. The front end(browser) sends a POST request to the sign-up API endpoint (e.g., POST /api/signup).
2. The request includes user details like first name, last name, email, and password (or any other required fields).
3. The backend processes the request against database:
 - It validates the provided details (e.g., checks for duplicate emails, ensures the password meets security requirements).
 - If validation passes, the server stores the new user's information in the database and sends a success response (e.g., 201 Created).
 - If there's an error (e.g., the email is already registered), it sends an error response (e.g., 400 Bad Request).

4. The frontend handles the response:

- For success: It redirects the user to contact list page and user can View and add new contact as shown.

Contact List

Click on any contact to view the Contact Details

[Add a New Contact](#)

Name	Birthdate	Email	Phone	Address	City, State/Province, Postal Code	Country
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- For failure: It displays an error message (e.g., 'Email is already registered', any validation error message).

-When user leave all required field empty , will appear this validation error message:

Add User

Sign up to begin adding your contacts!

User validation failed: firstName: Path 'firstName' is required., lastName: Path 'lastName' is required., email: Email is invalid, password: Path 'password' is required.

-When user sign up with already registered email , will appear this validation error message:

Add User

Sign up to begin adding your contacts!

Email address is already in use

API Test Cases: Login, & Sign-Up

1. Login API (POST /api/login)

Test Case 1: Successful Login

Description: Verify that a user can log in successfully with valid credentials.

Steps:

1. Send a POST request to /api/login.
2. Include a valid email and password in the request body.

Expected Result:

- Status Code: 200 OK.
- Response body includes:
 - A success message: "Login successful."
 - A valid authentication token.
- Token can be used to access protected endpoints.

Test Case 2: Incorrect Password

Description: Verify that login is rejected if the password is incorrect.

Steps:

1. Send a POST request to /api/login.
2. Provide a valid email and an incorrect password.

Expected Result:

- Status Code: 401 Unauthorized.
- Response body: "Incorrect username or password."

Test Case 3: Non-Existent User

Description: Verify that login is rejected for an unregistered email.

Steps:

1. Send a POST request to /api/login.
2. Provide a non-existent email and a valid password.

Expected Result:

- Status Code: 401 Unauthorized.

- Response body: "Incorrect username or password."

Test Case 4: Missing Required Fields

Description: Verify that login fails when email or password is missing.

Steps:

1. Send a POST request to /api/login.
2. Leave the email and/or password field empty.

Expected Result:

- Status Code: 400 Bad Request.
- Response body: "Email and password are required."

2. Sign-Up API (POST /api/signup)

Test Case 1: Successful Sign-Up

Description: Verify that a new user can register successfully with valid details.

Steps:

1. Send a POST request to /api/signup.
2. Provide valid name, email, and password.

Expected Result:

- Status Code: 201 Created.
- Response body: "Account created successfully."

Test Case 2: Registered Email

Description: Verify that registration fails if the email is already registered.

Steps:

1. Send a POST request to /api/signup.
2. Provide an already registered email and a valid password.

Expected Result:

- Status Code: 400 Bad Request.
- Response body: "Email already exists."

Test Case 3: Weak Password

Description: Verify that sign-up fails when the password does not meet security requirements.

Steps:

1. Send a POST request to /api/signup.
2. Provide a valid name, email, and a weak password (e.g., "123").

Expected Result:

- Status Code: 400 Bad Request.
- Response body: "Password must be at least 8 characters long."

Test Case 4: Invalid Email Format

Description: Verify that sign-up fails when the email format is invalid.

Steps:

1. Send a POST request to /api/signup.
2. Provide an invalid email (e.g., user@com) with valid name and password.

Expected Result:

- Status Code: 400 Bad Request.
- Response body: "Invalid email format."

Test Case 5: Missing Required Fields

Description: Verify that sign-up fails when any required field is missing.

Steps:

1. Send a POST request to /api/signup.
2. Leave one or more fields (name, email, or password) empty.

Expected Result:

- Status Code: 400 Bad Request.

- Response body: "All fields are required."

For fronted interface after we login with valid credentials, it redirects to contact list page, if you have a creation list previously you will find it as shown, here we have a permission to add a contact in the contact list, so we have Add a new contact API.

Contact List

Click on any contact to view the Contact Details

[Add a New Contact](#)

Name	Birthdate	Email	Phone	Address	City, State/Province, Postal Code	Country
Utric Dyer		qeraniqog@mailinator.com	0898776554	835 Hague Court Facilis voluptatem	Nihil repudiandae es Ad numquam ex eaque	Cum expedita quasi f
Madeline Koch		cegy@mailinator.com	0598877665	215 Cowley Freeway Ipsam provident dol	Molestias explicabo Autem sed neque exce	Culpa voluptas ut c
Lina Shaqoura		linashaqoura2002@gmail.com	0567215544	Gaza	11233 الغزة	Palestinian Authority

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2. API Contact List

2.1. POST – Add Contact:

- **UI Action (Steps):**
 1. Navigate to the Contact List page.
 2. Click the "Add a New Contact" button.
 3. Fill in the required fields at less (First Name, Last Name) in the Add Contact form.
 4. Click "Submit".
- **Result:**
 1. A POST request is triggered to create a new contact.
 2. The contact is added to the backend and displayed in the Contact List table.
- **Example:** A new contact "Ahmed Elian" is added with the entered details.

1.

Contact List

Logout

Click on any contact to view the Contact Details

Add a New Contact

Name	Birthdate	Email	Phone	Address	City, State/Province, Postal Code	Country
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2.

Add Contact

Logout

* First Name: * Last Name:

Date of Birth:

Email: Phone:

Street Address 1:


Street Address 2:

City: State or Province:

Postal Code: Country:

Submit Cancel

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3.

Contact List


Logout

Click on any contact to view the Contact Details

Add a New Contact

Name	Birthdate	Email	Phone	Address	City, State/Province, Postal Code	Country
Ahmed Elian	1940-06-27	ahmed.3lian.me@gmail.com	8005551234	Al-Mokhabarat St.	Gaza Gaza Strip 34000	Palestine
Ahmed Elian						

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2.2. GET – Retrieve Contact List:

- **UI Action (Steps):**
 1. Open the Contact List page (default view after login or navigation).
 2. Or click "Return to Contact List" from the Contact Details page.
- **Result:**
 1. A GET request fetches the list of all contacts from the backend.
 2. The Contact List table is populated with the retrieved data.
- **Example:** Contacts like "Ahmed Elian" appear in the list.

1.

Contact List


Logout

Click on any contact to view the Contact Details

Add a New Contact

Name	Birthdate	Email	Phone	Address	City, State/Province, Postal Code	Country
Ahmed Elian	1940-06-27	ahmed.3liam.me@gmail.com	8005551234	Al-Mokhabarat St.	Gaza Gaza Strip 34000	Palestine
Ahmed Elian						

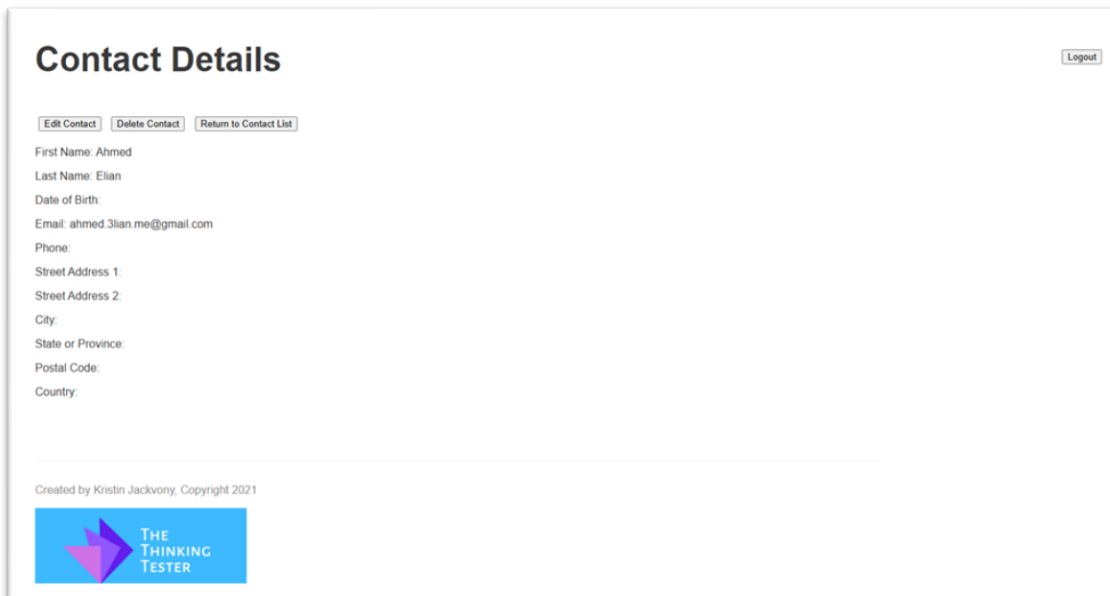
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2.3. GET – Retrieve a Specific Contact:

- **UI Action (Steps):**
 1. From the Contact List page, click on a contact's name (Ahmed Elian).
- **Result:**
 1. A GET request retrieves detailed information for the selected contact.
 2. The UI navigates to the Contact Details page displaying.
- **Example:** Contacts Details "Ahmed Elian" appear in Contact Details page.

1.




Contact Details Logout

Edit Contact Delete Contact Return to Contact List

First Name: Ahmed
Last Name: Elian
Date of Birth:
Email: ahmed.3lian.me@gmail.com
Phone:
Street Address 1:
Street Address 2:
City:
State or Province:
Postal Code:
Country:

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2.4. PUT/PATCH – Update Contact:

- **UI Action (Steps):**
 1. From the Contact List page, click on a contact's name (Ahmed Elian).
 2. From the Contact Details page, click "Edit Contact".
 3. Modify fields as needed.
 4. Click "Submit".
- **Result:**
 1. A GET request retrieves Contact Details page for the selected contact.
 2. A PUT or PATCH request is triggered to update the contact in the backend.
 3. PUT: Full object update (all fields).
 4. PATCH: Partial update.
 5. The changes are reflected in the Contact List table.
- **Example:** Email "" becomes "ahmed.3lian.me@gmail.com".

1.

Contact List


Logout

Click on any contact to view the Contact Details

Add a New Contact

Name	Birthdate	Email	Phone	Address	City, State/Province, Postal Code	Country
Ahmed Elian	1940-06-27	ahmed.3liam.me@gmail.com	8005551234	Al-Mokhabarat St.	Gaza Gaza Strip 34000	Palestine
Ahmed Elian						

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2.


Contact Details

Logout

Edit Contact Delete Contact Return to Contact List

First Name: Ahmed
Last Name: Elian
Date of Birth:
Email:
Phone:
Street Address 1:
Street Address 2:
City:
State or Province:
Postal Code:
Country:

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3.

Edit Contact

[Logout](#)

First Name:

Last Name:

Date of Birth:

Email:

Phone:

Street Address 1:

Street Address 2:


City:

State or Province:

Postal Code:

Country:

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4.

Contact List


[Logout](#)

Click on any contact to view the Contact Details

[Add a New Contact](#)

Name	Birthdate	Email	Phone	Address	City, State/Province, Postal Code	Country
Ahmed Elian	1940-06-27	ahmed.3lian.me@gmail.com	8005551234	Al-Mokhabarat St.	Gaza Gaza Strip 34000	Palestine
Ahmed Elian		ahmed.3lian.me@gmail.com				

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2.5. DELETE – Remove Contact:

- **UI Action (Steps):**

1. From the Contact List page, click on a contact's name (Ahmed Elian).
2. On the Contact Details page, click "Delete Contact".
3. Click "OK".

- **Result:**

1. A GET request retrieves Contact Details page for the selected contact.
2. A DELETE request is sent to remove the contact from the backend.
3. The contact is deleted from the Contact List table.

- **Example:** Duplicate entry "Ahmed Elian" is removed.

1.

Contact List


Logout

Click on any contact to view the Contact Details

Add a New Contact

Name	Birthdate	Email	Phone	Address	City, State/Province, Postal Code	Country
Ahmed Elian	1940-06-27	ahmed.3lian.me@gmail.com	8005551234	Al-Mokhabarat St.	Gaza Gaza Strip 34000	Palestine
Ahmed Elian		ahmed.3lian.me@gmail.com				

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2.


Contact Details

Logout

Edit ContactDelete ContactReturn to Contact List

First Name: Ahmed
Last Name: Elian
Date of Birth:
Email: ahmed.3lian.me@gmail.com
Phone:
Street Address 1:
Street Address 2:
City:
State or Province:
Postal Code:
Country:

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3.

Contact List


Logout

Click on any contact to view the Contact Details

Add a New Contact

Name	Birthdate	Email	Phone	Address	City, State/Province, Postal Code	Country
Ahmed Elian	1940-06-27	ahmed.3lian.me@gmail.com	8005551234	Al-Mokhabarat St.	Gaza Gaza Strip 34000	Palestine

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