REPORT

I aimed to create a comprehensive and user-friendly platform by integrating Angular for the frontend and Node.js with a MySQL database for the backend. This report provides an overview of the technologies used, the design choices made, and the various functionalities incorporated to enhance the overall user experience.

Note - All the required/ Mandatory fields and functionalities have been incorporated in the webpage. I've used Angular, Node.js and MySQL to build the webpage as per the guideline.

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Front End:

I followed the guidelines and used Angular for the front end to build a webpage. It includes a header, a form, and a table, along with a pop-up module. These components improve the user interface and functionality of the site.

Back End:

I incorporated a MySQL database to store data, utilizing Node.js for the server side. Four tables were designed: countries, states, cities, and users. The countries, states, and cities tables contribute to the implementation of a dependent dropdown functionality on the front end, enhancing the user experience. On the other hand, the users table is dedicated to storing user information, providing a structured approach to data organization

Table Schema:

Countries Table:

country_id	country_name
1	United States
2	Canada
3	United Kingdom
NULL	NULL

States Table:

state_id	state_name	country_id
1	New York	1
2	California	1
3	Ontario	2
4	England	3
5	Scotland	3
NULL	NULL	NULL

Cities table:

state_id	state_name	country_id
1	New York	1
2	California	1
3	Ontario	2
4	England	3
5	Scotland	3
NULL	NULL	NULL

Users Table:

id	first_name	last_name	gender	phone_number	email	designation	dob_date	age	photo	country	state	city	pincode
1	Sumit	Patil	male	+919325537554	spatil9217@gmail.com	employee	861926400000	26	1705923370044.jpg	United States	California	Edinburgh	416211
2	Shree	Patil	male	9834392387	shree@gmail.com	employee	1609113600000	3	1705890407929.png	Canada	Ontario	Toronto	987234
3	Piyush	Patil	male	+919325537554	spatil9217@gmail.com	employee	1213142400000	15	1705912916685.png	United States	New York	New York City	4162118
4	pratik	Patil	male	+919325537554	spatil9217@gmail.com	employee	1455062400000	7	1705917417575.png	United States	New York	New York City	4162114
NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

Validations:

- Implemented required validation for all form fields. The button should remain disabled until all validations are fulfilled.

- Added email validation for the email field, ensuring it adheres to the required email format.

- Introduced validation for the Pin code field, specifying that it must consist of 8 numeric characters.

Functionality:

Dependent Dropdowns:

- Upon page load, an API call fetches a list of countries, populating the initial dropdown.
- Upon selecting a country, a subsequent API call retrieves and populates the states dropdown.
- Similarly, upon selecting a state, another API call fetches and populates the cities dropdown.
- This cascading dependent dropdown functionality enhances the user's ability to select specific locations.

Dates in Milliseconds:

- All date values are converted into epoch numbers before being stored in the database.
- During the editing process, these epoch numbers are converted back into a human-readable date format, ensuring consistency and accuracy in date handling.

Dynamic Age Calculation:

- After selecting a date, the webpage dynamically calculates and populates the age input field based on the selected birthdate. This feature enhances user convenience by automating age information.

Image Handling:
- Upon image upload, an API call is triggered, storing the image on the server.
- The server responds with an epoch-based filename, linking this filename with user details in the database.
- This approach ensures efficient image management and retrieval.

Prepopulate Popup Form and Update Functionality:

- Clicking the eye icon in the table triggers the display of a popup form.
- The form is pre populated with the existing details of the selected user.
- Users can conveniently update information directly within the popup, streamlining the data modification process.

These functionalities collectively contribute to an enhanced and user-friendly experience on your webpage.