IMPLEMENTATION PART:-

Launch VS Code.

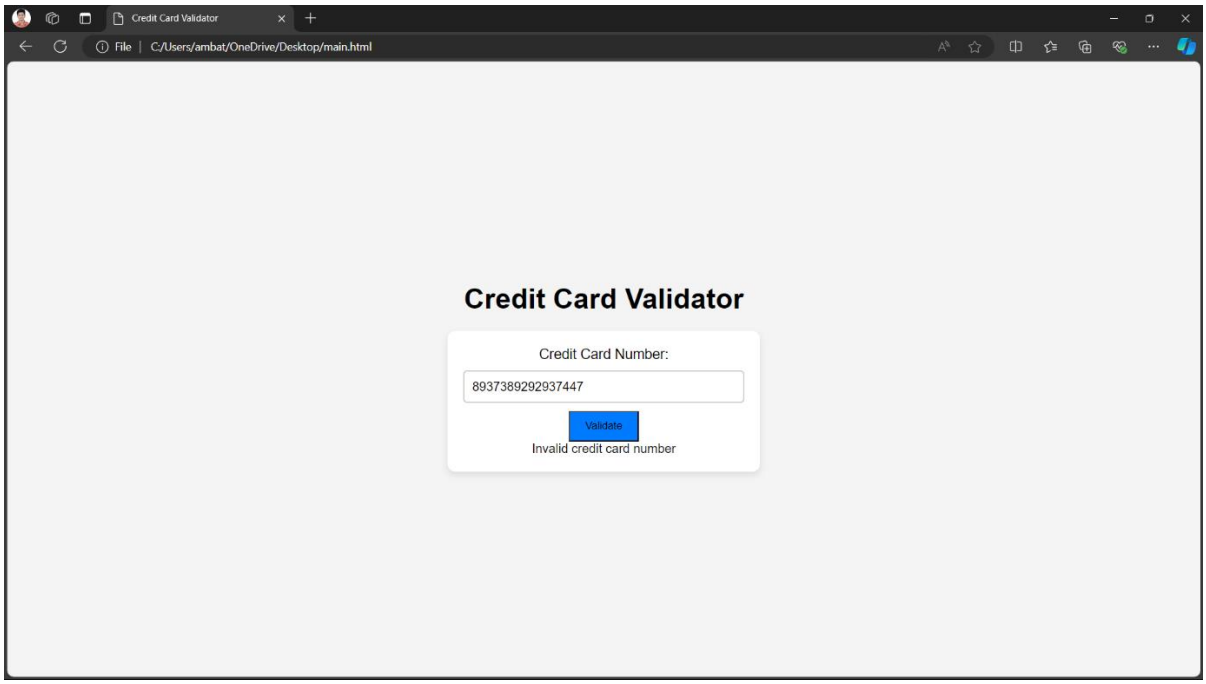
Open the project folder by selec?ng File > Open Folder and choosing the folder containing your downloaded files.

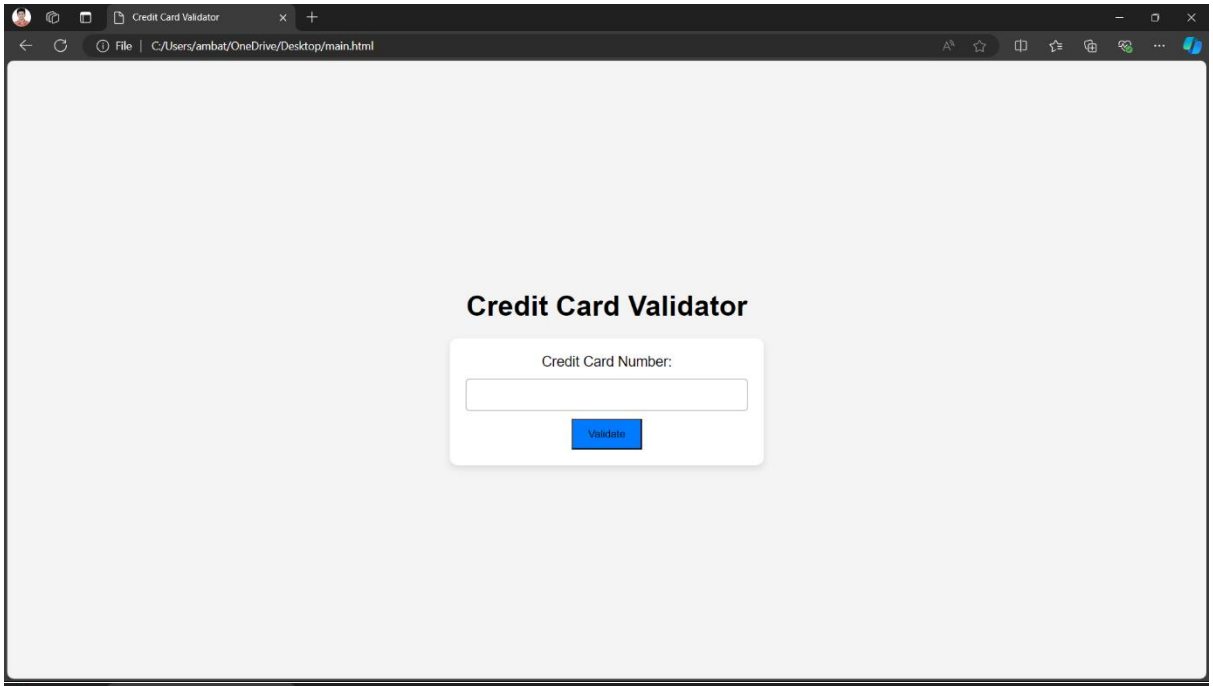
Open index.html in VS Code:

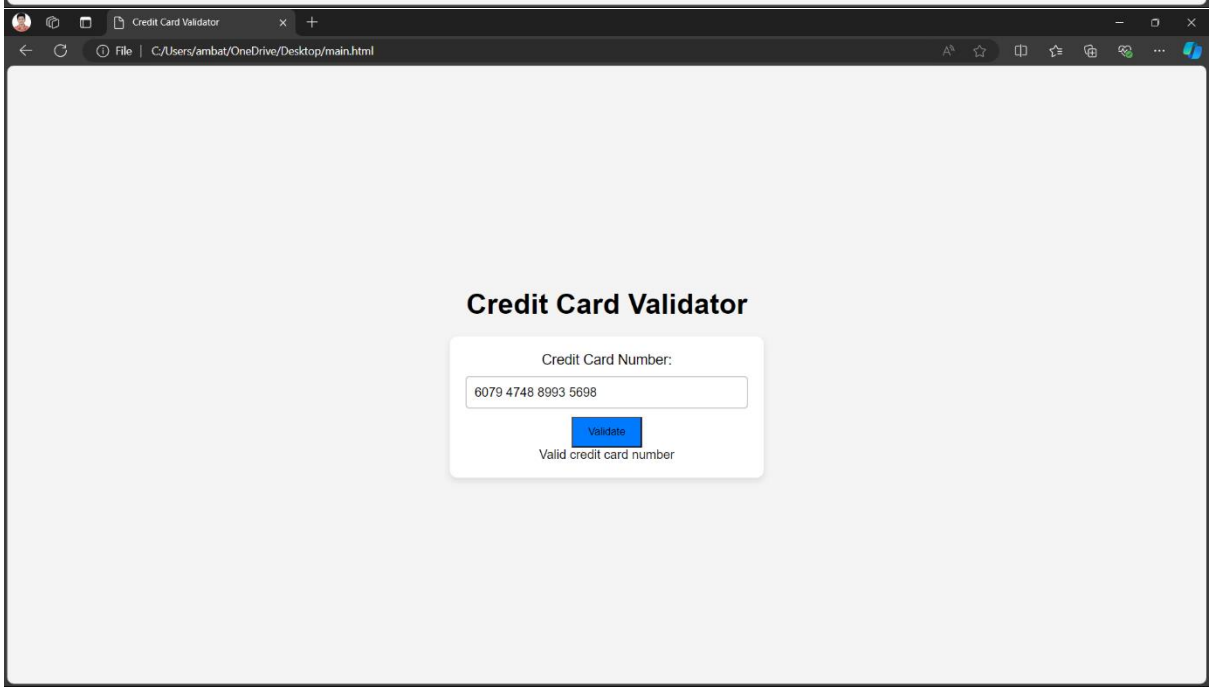
Locate the index.html file in the VS Code file explorer.

Right-click on index.html and Run it by clicking start debugging it will open in a web browser you can take any card number and check the validation.

Now we have implemented this code using **Luhns algorithm** . This algorithm is considered



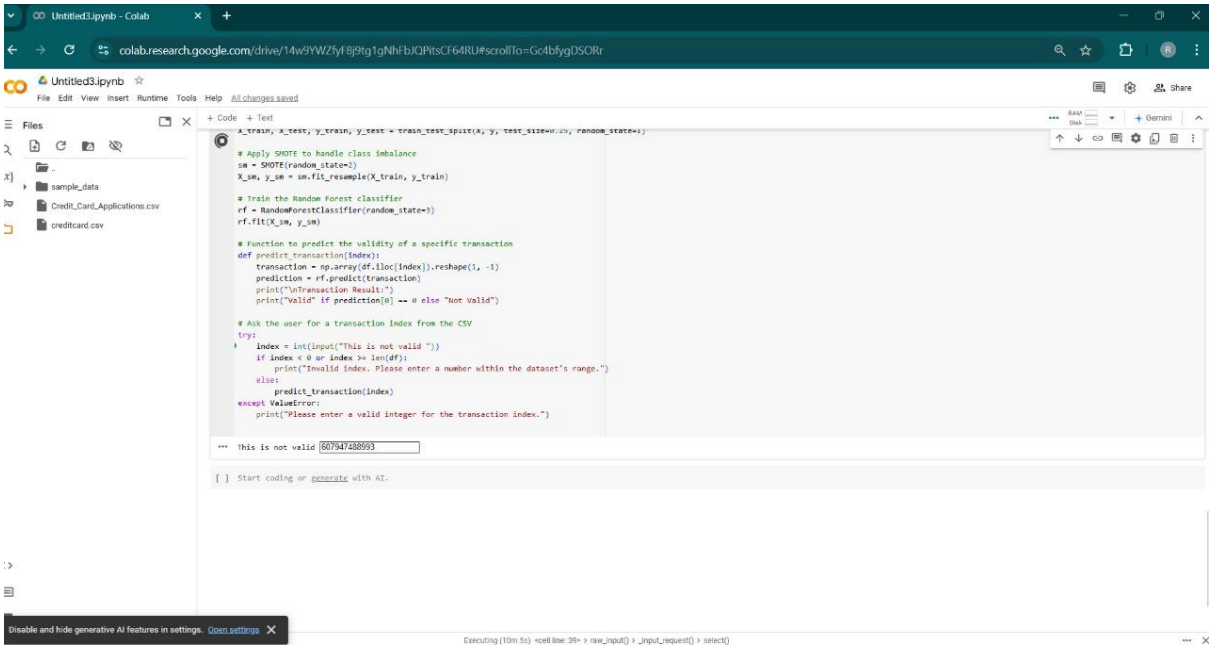

Credit Card Validator
File | C:/Users/ambat/OneDrive/Desktop/main.html
Credit Card Validator
Credit Card Number:
Validate


Credit Card Validator
File | C:/Users/ambat/OneDrive/Desktop/main.html
Credit Card Validator
Credit Card Number:
6079 4748 8993 5698
Validate
Valid credit card number

Now we will solve this using **Random forest algorithm:-**

In Google colab upload the csv file and and run the code.

You will get following outputs.



Implementation

HTML (Structure)

The HTML file sets up the structure for the Credit Card Validator. Here's a breakdown:

- The <!DOCTYPE html> and <html lang="en"> tags define the document type and language.
- In the <head> section, the page title is set as "Credit Card Validator," and a link to the style.css file is included to apply styling.
- The main content is wrapped in a with the class container, containing a form with:
    - A label and input field (<input type="text">) where users can enter a credit card number.
    - A submit button to trigger the validation.
- A with the ID result is included to display the validation outcome (either "Valid credit card number" or "Invalid credit card number").
- The <script src="script.js"> tag at the bottom includes the JavaScript file to enable validation functionality.

CSS (Styling)

The CSS styles make the interface visually appealing and responsive:

- A reset style is applied to remove default margins and padding, ensuring uniform appearance.
- body is styled with a background color and centered layout, using flex properties to vertically and horizontally center the content.
- The .container div is styled to appear as a card with rounded corners, a shadow, and padding, enhancing visual appeal.
- The form elements (label, input, and button) are styled for readability and usability:
    - Labels and input fields are sized and spaced for ease of use.
    - The button has a distinct blue background color, giving it a clickable appearance.

JavaScript (Functionality)

The JavaScript file (script.js) handles the core functionality of credit card validation:

- **Function validateCreditCardNumber(ccNum):** This function takes a credit card number as input, removes any non-numeric characters, and uses the Luhn algorithm to determine its validity:
    - The number is reversed and iterated over.
    - Every second digit (starting from the right) is doubled, and if this results in a two-digit number, 9 is subtracted.
    - All resulting digits are summed, and if the total is divisible by 10, the card number is valid.

- **Event Listener on Form Submit:** When the form is submitted:
    - e.preventDefault() prevents page reload.
    - The validateCreditCardNumber function is called with the entered number.
    - The resultDiv displays either "Valid credit card number" or "Invalid credit card number" based on the validation result.