

A. A step-by-step explanation of how I developed the QR Code generator.

1. HTML Structure:
 - The webpage structure includes a heading (`<h2>`), an input field (`<input>`) for entering text or a URL, a button (`<button>`) to trigger QR code generation, and an image element (``) to display the generated QR code. The heading is styled with custom text color and alignment, while the background color is set using the `<body>` tag. The button activates a JavaScript function to generate the QR code based on user input.
2. Inclusion of the QRious Library:
 - The QRious library, linked via a CDN, simplifies QR code generation by converting text or URLs into graphical representations. It uses a QRious constructor with configurable properties such as `value` (the data to encode), `size` (QR code dimensions), and `level` (error correction level for resilience against damage).
3. JavaScript Function for QR Code Generation:
 - The `generateQRCode()` JavaScript function is triggered when the user clicks the "Generate QR Code" button. It retrieves the input value, creates a new QRious object with specified options (`value`, `size`, and error correction level), and generates the QR code as a data URL. This URL is then set as the source of the image element to display the QR code on the page.
4. CSS Styling:
 - The page features a light purple background (`rgb(186, 130, 238)`), with the heading text centered and colored white. Both the QR code image and input field are also centered on the page, creating a clean and simple user interface.

B. Instructions on how to use the QR Code generator.

1. Opening the Webpage:
 - Open the HTML file in a web browser. Alternatively, you can host the HTML code on a web server and access it through a URL.
2. Input:
 - Type the text or URL you want to encode into a QR code in the input field located at the center of the page. This could be anything from a website URL to simple text.
3. Generate QR Code:
 - After entering the desired text or URL, click the "Generate QR Code" button. The page will generate the corresponding QR code and display it below the input field in the `` element.
4. Scan the QR Code:

- Once the QR code is generated, you can scan it with a QR code scanner to retrieve the encoded data. Additionally, you can copy or save the QR code image by right-clicking on it and selecting "Save image as...".
5. Reset:
- To generate a new QR code with different input, clear the text field, enter the new data, and click the "Generate QR Code" button again.

This QR Code Generator is designed to be simple and user-friendly, allowing quick generation of QR codes from any text or URL.