

# QR Code Generator Documentation

## Table of Contents

1. Introduction
2. Features
3. Getting Started
  - Prerequisites
  - Installation
4. Usage
  - HTML Structure
  - CSS Styling
  - JavaScript Functionality
5. Download Option
6. Conclusion

## 1. Introduction

The QR Code Generator is a web-based tool that allows users to easily create QR codes for various purposes. It offers a simple interface built using HTML, styled with CSS, and enhanced with JavaScript to provide a seamless user experience. One of its key features is the ability to generate QR codes and provide a download option for users to save the QR code image.

## 2. Features

- Generate QR codes for URLs, text, contact information, and more.
- Customize QR code colors, patterns, and error correction levels.
- Provide a downloadable QR code image.
- Responsive design for optimal user experience on different devices.

## 3. Getting Started

### Prerequisites:

- Basic understanding of HTML, CSS, and JavaScript.
- A code editor of your choice (e.g., Visual Studio Code, Sublime Text).

### Installation:

1. Create a new project folder on your computer.
2. Inside the project folder, create one file: `indexx.html`.

## 4. Usage

### HTML Structure:

```
```html
```

```

<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <link rel="stylesheet" href="style.css">
  <title>QR Code Generator</title>
</head>
<body>
  <div class="container">
    <h1>QR Code Generator</h1>
    <input type="text" id="qr-input" placeholder="Enter text or URL">
    <button id="generate-btn">Generate QR Code</button>
    <div id="qr-code"></div>
    <a id="download-btn" download="qr-code.png">Download QR Code</a>
  </div>
  <script src="script.js"></script>
</body>
</html>

```

CSS Styling:

```

```css
body {
  font-family: Arial, sans-serif;
  text-align: center;
}

.container {
  max-width: 400px;
  margin: 0 auto;
  padding: 20px;
  border: 1px solid #ccc;
  border-radius: 5px;
  box-shadow: 0 2px 4px rgba(0, 0, 0, 0.1);
}

#qr-code {
  margin-top: 20px;
}

#download-btn {
  display: none;
  margin-top: 10px;
}

```

```
}  
...
```

JavaScript Functionality:

```
````javascript  
const generateBtn = document.getElementById('generate-btn');  
const qrCodeDiv = document.getElementById('qr-code');  
const downloadBtn = document.getElementById('download-btn');  
  
generateBtn.addEventListener('click', () => {  
  const inputValue = document.getElementById('qr-input').value;  
  if (inputValue) {  
    const qrCode = new QRCode(qrCodeDiv, {  
      text: inputValue,  
      width: 128,  
      height: 128  
    });  
    downloadBtn.style.display = 'inline-block';  
  }  
});  
  
downloadBtn.addEventListener('click', () => {  
  const qrCodeImage = qrCodeDiv.querySelector('img');  
  const link = document.createElement('a');  
  link.href = qrCodeImage.src;  
  link.download = 'qr-code.png';  
  link.click();  
});  
...
```

## 5. Download Option

The download option is implemented using JavaScript. When a QR code is generated, the download button (`<a id="download-btn">`) becomes visible. When the user clicks the download button, the JavaScript code creates a link element with the QR code image's source as the `href` and sets the `download` attribute to specify the file name. Finally, the code triggers a click on the link, initiating the download.

## 6. Conclusion

The QR Code Generator is a user-friendly tool that enables the creation and customization of QR codes with a convenient download option. By integrating HTML, CSS, and JavaScript, users can easily generate QR codes and save them as images for various applications. Customizable styles and responsive design ensure a pleasant user experience across devices.