

A  
MICROPROJECTREPORT  
ON  
“ Network And Information Security ”

SUBMITTED TO THE MSBTE , MUMBAI IN PARTIAL FULFILLMENT OF  
THERE QUIREMENTS FOR THE AWARD OF THE DIPLOMA

**Student name:Jadhav Sakshi**

**Enrollment No:-2115200044**

**Student name:Sutar Rupali**

**Enrollment No:-2115200073**

**Student name:Rane Isha**

**Enrollment No:-2215200253**

**Student name:Kharade Shravani**

**Enrollment No:-2115200047**

**UNDER THE GUIDANCE OF  
Mr.Kadam R.C.**



**DEPARTMENT OF COMPUTER  
ENGINEERINGSHARADCHANDRAPAWARINSTITUTE OF  
ECHNOLOGY,  
SOMESHWARNAGARTAL:-BARAMATIDIST:-PUNE**



**DEPARTMENT OF COMPUTER  
ENGINEERING SHARADCHANDRA PAWAR INSTITUTE OF  
TECHNOLOGY SOMESHWARNAGAR  
TAL:-BARAMATI DIST:-  
PUNE PinNo:-412306**

## **CERTIFICATE**

This is to certify that the Project report entitled

**“ QR Code Generator”**

Submitted by

**Student name: Jadhav Sakshi**

**Enrollment No:-2115200044**

**Student name: Sutar Rupali**

**Enrollment No:-2115200073**

**Student name: Rane Isha**

**Enrollment No:-2215200253**

**Student name: Kharade Shravani**

**Enrollment No:-2115200047**

Is a bonafide work carried out by them under the supervision of Mr. Kadam R.C. and it is submitted towards the partial fulfillment of the requirement of MSBTE, Mumbai for the Award of the Diploma of Computer Engineering

Mr. Kadam R.C.

(Internal Guide)

Mrs. Nazirkar S.B.

(H.O.D)

Place:- Someshwarnagar

Mr. Hajare S.K

(PRINCIPAL)

## **ACKNOWLEDGEMENT**

We express our sincere thanks Mr. Kadam R.C. Whose supervision, inspiration and valuable discussion has helped us tremendously to complete our project. Her guid an ceproven To them mos valuable to overcome all the hurdles in the fulfillment to this project on

We gratefull to Mrs .Nazirkar S.B. Head of COMPUTER Dept. for direct or in direct help in the completion of this project. Last but not least, this acknowledgment would be incomplete without rendering my sincere gratitude to all those who have helped us in the completion of this project.

**Yours Sincerely,**

**Jadhav Sakshi**

**Sutar Rupali**

**Rane Isha**

**Kharade Shravani**

## Evaluation sheet for the Micro Project

**AcademicYear: 2023-24    Name of Faculty :Mr.Kadam R.C.**

**Course: Computer                      Course Code: CO6-I**

**Subject : NIS                              Code:22620**

**Title of the Project:-QR Code Generator**

**Major Learning Outcomes Achived By student by doing  
the projects:**

**(a)Practical Outcomes**

**1.**

<i>Roll No.</i>	<i>Student Name</i>	<i>Markoutof06 Performance Oral/Presentation (D5Col.8)</i>	<i>Markoutof04 Performance Oral/Presentation (D5Col.9)</i>	<i>TotalOutOf (Marks=10)</i>	
1	Jadhav Sakshi Mansing				
2	Sutar Rupali Sopan				
3	Rane Isha Dilip				
4	Kharade Shravani Shriram				

**(Name and Signature of Faculty)**

### **Micro Project Evaluation Sheet**

**Name of student :Jadhav Sakshi Mansing**

**Enrollment No: 2115200044**

**Name of Programmer: Computer      Semester: sixth**

**Course Title: NIS      Code:22620**

**Title of the Micro-project :QR Code Generator**

<b>Sr. No.</b>	<b>Characteristics to be assessed</b>	<b>Poor (Marks1-3)</b>	<b>Average (Marks(4-5)</b>	<b>Good (Marks 6-8)</b>	<b>Excellent (Marks 9-10)</b>	<b>Sub Total</b>
<b>(K)Process And Product Assessment(Convert abovetotalmarksoutof6marks)</b>						
<b>1</b>	<b>Relevance to the course</b>					
<b>2</b>	<b>Literature Review/ information Collection</b>					
<b>3</b>	<b>Completion of the Target as per project proposal</b>					
<b>4</b>	<b>Analysis of Dataand representation</b>					
<b>5</b>	<b>Quality of Prototype/ Model</b>					
<b>6</b>	<b>Report Presentation</b>					
<b>(L)IndividualPresentation/Vivo(Convertabovetotalmarksoutof4Marks)</b>						
<b>7</b>	<b>Presentation</b>					
<b>8</b>	<b>Viva</b>					

<b>(A) Process and Product Assessment(6Marks )</b>	<b>(B) Individual Presentation/Vivo(4Marks )</b>	<b>Total Marks 10</b>

**Comments/Suggestions about team work/leadership/inter-personalcommunication(ifany).....**

.....

**NameoftheTeacher:-Mr.KadamR.C.**

**Dated signature:-**

### **Micro Project Evaluation Sheet**

Name of student: Kharade Shravani Shriram Enrollment No: 2115200047

Name of Programmer: Computer Semester: sixth

Course Title: NIS Code: 22620

Title of the Micro-project : QR Code Generator

Sr. No.	Characteristics to be assessed	Poor (Marks 1-3)	Average (Marks 4-5)	Good (Marks 6-8)	Excellent (Marks 9-10)	Sub Total
(K) Process And Product Assessment (Convert above total marks out of 6 marks)						
1	Relevance to the course					
2	Literature Review/ information Collection					
3	Completion of the Target as per project proposal					
4	Analysis of Data and representation					
5	Quality of Prototype/ Model					
6	Report Presentation					
(L) Individual Presentation/Viva (Convert above total marks out of 4 Marks)						
7	Presentation					
8	Viva					

(A) Process and Product Assessment (6 Marks)	(B) Individual Presentation/Viva (4 Marks)	Total Marks 10

Comments/Suggestions about team work/leadership/inter-personal communication (if any).....

.....

Name of the Teacher: - Mr. Kadam R.C.

Dated signature: -

### **Micro Project Evaluation Sheet**

**Name of student:** Sutar Rupali Sopan    **EnrollmentNo:**2115200073

**Name of Programmer:** Computer      **Semester:** sixth

**Course Title:** NIS                              **Code:**22620

**Title of the Micro-project :**QR Code Generator

Sr. No.	Characteristics to be assessed	Poor (Marks1-3)	Average (Marks(4-5)	Good (Marks 6-8)	Excellent (Marks 9-10)	Sub Total
(K)Process And Product Assessment(Convert abovetotalmarksoutof6marks)						
1	Relevance to the course					
2	Literature Review/ Information Collection					
3	Completion of the Target as per project proposal					
4	Analysis of Data and Representation					
5	Quality of Prototype/ Model					
6	Report Presentation					
(L)Individual Presentation/Vivo (Convertabovetotalmarksoutof4Marks)						
7	Presentation					
8	Viva					

(A) Process and Product Assessment(6Marks )	(B) Individual Presentation/Vivo(4Marks )	Total Marks 10

**Comments/Suggestions about team work/leadership/inter-  
personalcommunication(ifany).....**  
.....

**Name of the Teacher:-Mr.KadamR.C.**

**Dated signature:-**

### **MicroProjectEvaluationSheet**

**Name of student: Rane Isha Dilip**

**EnrollmentNo:2215200253**

**Name of Programmer: Computer  
Course Title:NIS**

**Semester: Sixth  
Code:22620**

**Title of the Micro-project :QR Code Generator**

Sr. No .	Characteristics to be Assessed	Poor (Marks1-3)	Average (Marks(4-5)	Good (Marks 6-8)	Excellent (Marks 9-10)	Sub Total
(K)Process And Product Assessment(Convert abovetotalmarksoutof6marks)						
1	Relevance to the course					
2	Literature Review/ Information Collection					
3	Completion of the Target as per project proposal					
4	Analysis of Dataand representation					
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6	Report Presentation					
(L)IndividualPresentation/Vivo(Convertabovetotalmarksoutof4Marks)						
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(A) Process and Product Assessment(6Marks )	(B) Individual Presentation/Vivo(4Marks )	Total Marks 10

**Comments/Suggestions about team work/leadership/inter-  
personalcommunication(ifany).....**  
 .....

**Name of the Teacher:-Mr.KadamR.C.**

**Dated signature:-**



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### **Abstract:-**

QR Code, or quick response Code, is a Code that is quickly readable by a cell phone (hence the Word “quick” in the name). Using a combination of spacing as a type of Matrix Barcode (a 2-D Barcode), when a QR Code is scanned, it conveys a wide multitude of information. QR Codes have a wide range of uses across all types of industries such as retail, marketing, and logistics. A barcode, consisting of bars and spaces, is a machine - readable representation of numerals and characters. Today, stripes as shown below on packages of products sold at supermarkets, convenience stores and other stores are ubiquitous. These are barcodes. A barcode consists of bars and spaces of varying width that can be read with an optical barcode scanner. While QR Codes and Barcodes are similar in practice, QR Codes contain more information because they have the ability to hold information both horizontally and vertically. Barcodes only use horizontal information. While Barcodes work wonderfully for situations like scanning supermarket items, QR Codes have a much higher capability of transferring information, likely what has made them increasingly popular due to their versatility. Keywords: QR code, Barcode

## **Introduction:-**

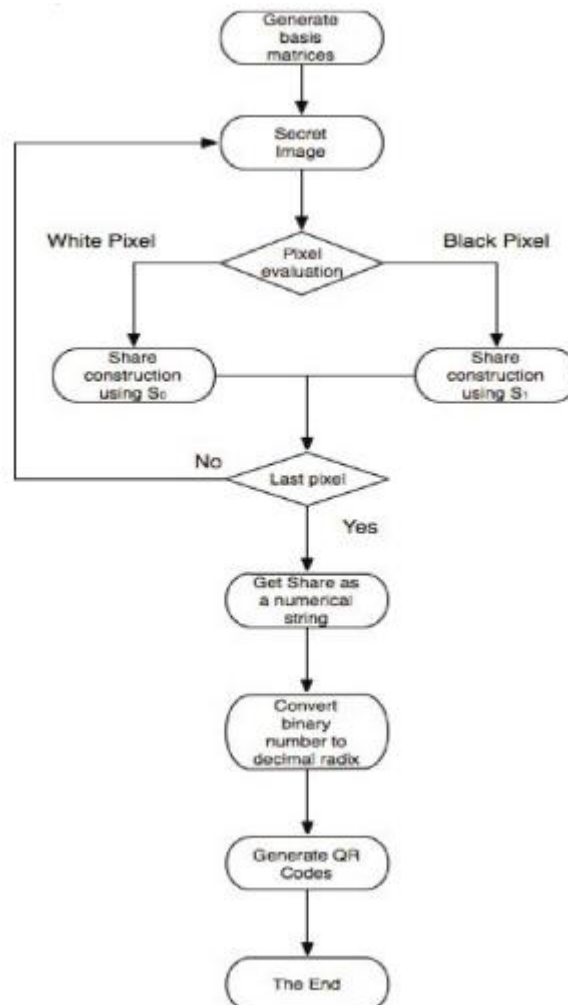
A Quick Response Code‘ also known as QR code is a two-dimensional type of barcode that Denso Wave develops, a Japanese barcode developer, in 1994. QR codes are scan-able using smartphones devices, which are natively developed to scan/detect QR codes. These codes are generated using an online QR code generator that displays online information to the scanner when scanned. Today, QR codes are generally used in advertising, business, health care, and education. However, business sectors, especially in the advertising and operations, most widely use QR codes.

Aside from these sectors, the restaurant industry also employs an interactive restaurant menu QR code software and QR code generators to generate menu QR code for their business. You can find QR codes in brochures, flyers, posters, billboards, items and products, business cards, and even online websites such as social media and shopping sites. QR codes have become common in consumer advertising. Typically, a smartphone is used as a QR code scanner, displaying the code and converting it to some useful form (such as a standard URL for a website, thereby obviating the need for a user to type it into a web browser). QR code has become a focus of advertising strategy, since it provides a way to access a brand's website more quickly than by manually entering a URL.

Beyond mere convenience to the consumer, the importance of this capability is that it increases the conversion rate: the chance that contact with the advertisement will convert to a sale. It coaxes interested prospects further down the conversion funnel with little delay or effort, bringing the viewer to the advertiser's website immediately, whereas a longer and more targeted sales pitch may lose the viewer's interest. Although initially used to track parts in vehicle manufacturing, QR codes are used over a much wider range of applications.

These include commercial tracking, entertainment and transport ticketing, product and loyalty marketing and in-store product labeling. Examples of marketing include where a company's discounted and percent discount can be captured using a QR code decoder which is a mobile app, or storing a company's information such as address and related information alongside its alpha-numeric text data as can be seen in Yellow Pages directories. They can also be used in storing personal information for use by organizations. An example of this is Philippines National Bureau of Investigation (NBI) where NBI clearances now come with a QR code. Many of these applications target mobile-phone users (via mobile tagging).

## Flowchart:-



### **Features:-**

- Customizable Options
- Supported data types
- Tracking and Analytic
- Ease of use
- Scalability
- Compatablity and integration

## Source Code:-

### HTML CODE

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta http-equiv="X-UA-Compatible" content="IE=edge">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<link rel="stylesheet" href="style.css">
<title>QR Code Generator |Code Traversal</title>
</head>
<body>
<div class="box">
<div class="qr-header">
<h1>Generate QR Code</h1>
<input type="text" placeholder="Type your text or URL" id="qr-text">
<div>
<label for="sizes">Select Size:</label>
<select id="sizes">
<option value="100">100x100</option>
<option value="200">200x200</option>
<option value="300">300x300</option>
<option value="400">400x400</option>
<option value="500">500x500</option>
<option value="600">600x600</option>
<option value="700">700x700</option>
<option value="800">800x800</option>
<option value="900">900x900</option>
<option value="1000">1000x1000</option>
</select>
</div>
```

```

</div>
<div class="qr-body"></div>

<div class="qr-footer">
<a href="" id="generateBtn">Generate</a>
<a href="" id="downloadBtn" download="QR_Code.png">Download</a>
</div>
</div>

<script src="script.js"></script>
<script src="https://cdnjs.cloudflare.com/ajax/libs/qrcodejs/1.0.0/qrcode.min.js"></script>
</body>
</html>

```

## SCRIPT CODE

```

const qrText = document.getElementById('qr-text');
const sizes = document.getElementById('sizes');
const generateBtn = document.getElementById('generateBtn');
const downloadBtn = document.getElementById('downloadBtn');
const qrContainer = document.querySelector('.qr-body');

let size = sizes.value;
generateBtn.addEventListener('click', (e) => {
  e.preventDefault();
  isEmptyInput();
});

sizes.addEventListener('change', (e) => {
  size = e.target.value;
  isEmptyInput();
});

downloadBtn.addEventListener('click', () => {
  let img = document.querySelector('.qr-body img');

  if (img !== null) {
    let imgAttr = img.getAttribute('src');
    downloadBtn.setAttribute("href", imgAttr);
  }
});

```

```

}
else{
downloadBtn.setAttribute("href", ${document.querySelector('canvas').toDataURL()});
}
});

function isEmptyInput(){

// if(qrText.value.length> 0){
//   generateQRCode();
// }
// else{
//   alert("Enter the text or URL to generate your QR code");
// }
qrText.value.length> 0 ? generateQRCode() : alert("Enter the text or URL to generate your QR
code");;
}
function generateQRCode(){
qrContainer.innerHTML = "";
new QRCode(qrContainer, {
text:qrText.value,
height:size,
width:size,
colorLight:"#fff",
colorDark:"#000",
});
}
}

```

## CSS CODE

```

:root{
  --bcg-color:;
  --primary-color: #155e75;
  --border-radius: 8px;
  --secondary-color: #fff;
  --border-color: #7fb7c9;
}
*{
  margin: 0;
  padding: 0;
  box-sizing: border-box;
}

```



```
    font-family: sans-serif;
}

body{
    width: 100%;
    height: 100vh;
    display: flex;

    justify-content: center;
    align-items: center;
    background-color: var(--bcg-color);
}

.box{
    background-color: var(--primary-color);
    padding: 30px;
    width: 400px;
    border-radius: var(--border-radius);
}

.qr-header h1{
    font-size: 26px;
    text-align: center;
    color: var(--secondary-color);
    margin-bottom: 24px;
    text-transform: uppercase;
}

.qr-header input{
    width: 100%;
    margin-block: 12px;
}
```

```
.qr-header input, select{  
  padding: 8px;  
  border-radius: var(--border-radius);  
  font-size: 18px;  
  outline: none;  
  border: 2px solid var(--border-color);  
}
```

```
.qr-header label{  
  
  color: var(--secondary-color);  
  font-size: 20px;  
}
```

```
.qr-header div{  
  display: flex;  
  justify-content: space-between;  
}
```

```
.qr-footer{  
  display: flex;  
  justify-content: center;  
}
```

```
.qr-footer a{  
  background-color: var(--secondary-color);  
  text-decoration: none;  
  font-size: 20px;  
  padding: 14px 36px;  
  margin-inline: 2px;  
  color: var(--primary-color);
```

```

    font-weight: 600;
    border-radius: var(--border-radius);
}

.qr-body{
    display: grid;
    place-items: center;
    padding:20px;
}

.qr-body img{
    max-width: 100%;

    max-height: 100%;
    margin-block: 10px;

    padding: 20px;
    border: 0.5px solid var(--border-color);
    border-radius: var(--border-radius);
}

@media screen and (max-width:520px){
    .box{
        width: 80%;
    }
    .qr-footer a{
        padding: 12px;
        font-size: 16px;
    }
}


```

 Output:-

### GENERATE QR CODE

Select Size: 

600x600 ▾



Generate

Download

### **Conclusion:-**

- QR code store the more information than BAR code. QR Code stores the information matrix form which stores the information on both axes horizontally or vertically.
- Thus we have also generated the QR Code of College data where we are embedded the details of the college like College Logo, Principals name, college mail address, postal address, etc..
- QR codes can store contents such as text, URL links, automatic SMS messages, or any other information that can be well-established in a two-dimensional barcode.
- This programmed data can be decoded by scanning the barcode with a mobile device that is equipped with a camera and QR reader software. Although QR codes are very flexible and have been around for over eighteen years, their use in many fields.

.

### **References:-**

- <https://bytescout.com/blog/2019/04/qr-code-advantages-and-limitations.html>
- [https://www.researchgate.net/publication/318125149\\_An\\_Introduction\\_to\\_QR\\_Code\\_Technology](https://www.researchgate.net/publication/318125149_An_Introduction_to_QR_Code_Technology)