

# DESIGN AND IMPLEMENTATION OF A SECURE QR PAYMENT SYSTEM BASED ON VISUAL CRYPTOGRAPHY

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## ABSTRACT

In this project, we will depict the design and implementation of a solid installation framework based on QR codes. These QR codes have been widely used recently because they speed up the payment cycle and provide clients with extreme convenience. However, as beneficial as they may appear, QR-based web-based installment frameworks are defenseless against various types of assaults. As a result, exchange handling must be sufficiently secure to ensure the trustworthiness and privacy of each and every payment cycle. Furthermore, the web-based payment framework should provide legitimacy to both the source and beneficiary of every transaction. The proposed QR-based framework's security is demonstrated in this project using visual cryptography.

## INTRODUCTION

In this project, we are going to depict the plan and execution of a payment system that is secure using QR (Quick Response) codes. The Quick Response codes are broadly utilized lately since they accelerate the payment process and make the clients experience the convenience to use. Nonetheless, as helpful as they sound, online payments using QR codes are prone to various kinds of assaults. Therefore, swaps must be sufficiently secure to ensure the dependability and security of each and every installment. The internet-based installation should also grant legitimacy to both the sender and the recipient of each and every interaction. Visual cryptography is used to ensure the security of the suggested QR code system in this instance. Visual cryptography is used by a web application that is part of the proposed system. This programme offers a fundamental and straightforward method for comprehending the point of interaction for users to exchange connections via QRCode. The online transactions should be adequately secure to safeguard the uprightness and secrecy of every payment. Here, by leveraging visual cryptography, the proposed QR-based structure's security is demonstrated. The suggested structure has a web application that uses visual cryptography to secure data. The programme provides a necessary and simple connection point for users to exchange connections using QRCode. A two-layered grid scanner tag called a QR code can encode and store a lot of data. Because of its speed as well as accommodation, QR codes have been utilized widely in numerous fundamental applications like wellbeing, schooling, and finance. Various secured QR-based payment framework is proposed in writing. In various payment models, each gives various degrees of fastness and secureness is introduced. This kind of model incorporates the Administrator Centric Model and Peer-To-Peer Model. As electronic picture expects a critical part of media development, it ends up being more significant for the clients to keep up with security. Likewise, to give such kind of security and security to the customer, picturized encryption is vital to safeguard from any unverified client/customer access. visualized encryption has applications in various fields including web correspondence, blended media structures, clinical imaging, and Tele-drug and military correspondence. Variety pictures are communicated and taken care of in immense aggregate over the Internet and far-off associations, which exploit quick progression in blended media and association advances. The picture encryption procedures are unique in relation to the information encryption methods. Furthermore, there are a few security issues related to computerized picture handling and transmissions, so keeping up with the trustworthiness and the secrecy of the image is vital. In addition, advanced pictures are nearly less delicate than information on the grounds that any single change in the pixels doesn't change the whole picture. All in all, a little change of digital images is OK contrasted with information yet it is more inclined to aggressors.

## LITERATURE SURVEY

### [1] S. Tiwari, "An Introduction to QR Code Technology":

"Quick Response" code is a two-Dimensional network code which is arranged by holding two focuses viable, for instance, it needs to store gigantic proportions of information(data) when stood out from 1D normalized distinguishing pieces of proof and any portable device, such as a phone, should be able to quickly decode it. High information storage capacity, quick verification, omnidirectional clarity, and additional benefits like error correction (so that a damaged code can still be read correctly) and multiple options are all fully provided by QR codes. Customers can choose from a variety of QR code image collections, including logo QR codes, scrambled QR codes, and iQR Code, depending on their needs.

## [2] Kamal, Sawsan & Ameen, Basheer. (2016). A New Method for Ciphering a Message Using QRCode:

Here, we have presented another information concealing calculation, where the message is changed over completely to QR code (Quick Response Code) and created QR for cover (Key). QR Codes are for the most part used to convey or store messages because of higher or huge capacity limits when compared to other typical regular 'standardized identifications'. In the current work, the creators have presented the encryption procedure using XORing part (series of pieces) of QR message with a similar piece of QR veil (key) to scramble any message and afterward implanting the key into the came about QR.

## [3] Application of QR Code to Secure Medical Management by X. Yan and Y.Lu:

Here, we shall depict the plan and execution of a secured payment system given QR codes. These QR codes are genuinely widely used because they accelerate the payment process and provide clients with extraordinary convenience. Notwithstanding, as advantageous as it might sound, QR-based online payment system is vulnerable to various sorts of assaults. In this manner, exchange handling should be adequately secure to safeguard the uprightness and privacy of each payment cycle. Also, the online payment system should give genuineness to both the owner and customer of every exchange. Here, the secureness of the proposed QR- based framework is given by utilizing image cryptography. The proposed framework comprises a portable app and also a payment gateway server that executes visualized cryptography. The app gives a straightforward and easy-to-understand interface for clients to do transactions in easy to use secured climate.

## EXISTING METHOD

A Quick Response code is a two-D framework standardized identification that will encode and will store a lot of information. Because of the fastness and comfort, QR codes are utilized broadly in numerous fundamental applications like wellbeing, schooling, and many more. Different QR-based web-based payment systems have been proposed and are available in hard form. Different payment plans are offered, with each one offering varying degrees of security and expediency. The Administrator Centric Model and the Peer-to-Peer Model are combined in these models.

### Disadvantages:

1. NotSecure

## PROPOSED SYSTEM

We propose an original system in light of the image encryption and QR Code for sharing the connections. First, the URL will be switched over completely to QR Code and afterward, the QR code will be scrambled and the URL of the encoded QR Code will be again changed over completely to QR Code. This way the QR Code will be safer regardless of whether we share the QR Code nobody will actually want to get close enough to the genuine URL just those with picture unscrambling systems will want to decode the QR Code and get to the connection.

### Advantages:

1. More Secure

## RESULTS

### FACE SPOOFING

This is the home page of the application.



Fig: Home page

This will describe the project briefly

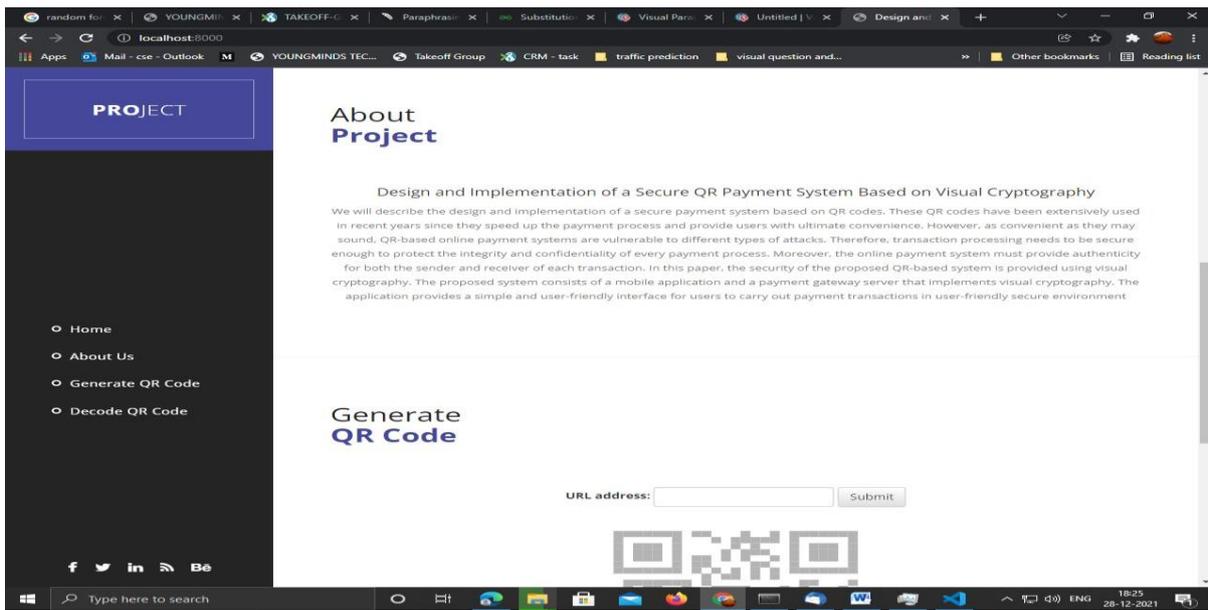


Fig: about the project

This is the prediction output page where you can run the algorithm.

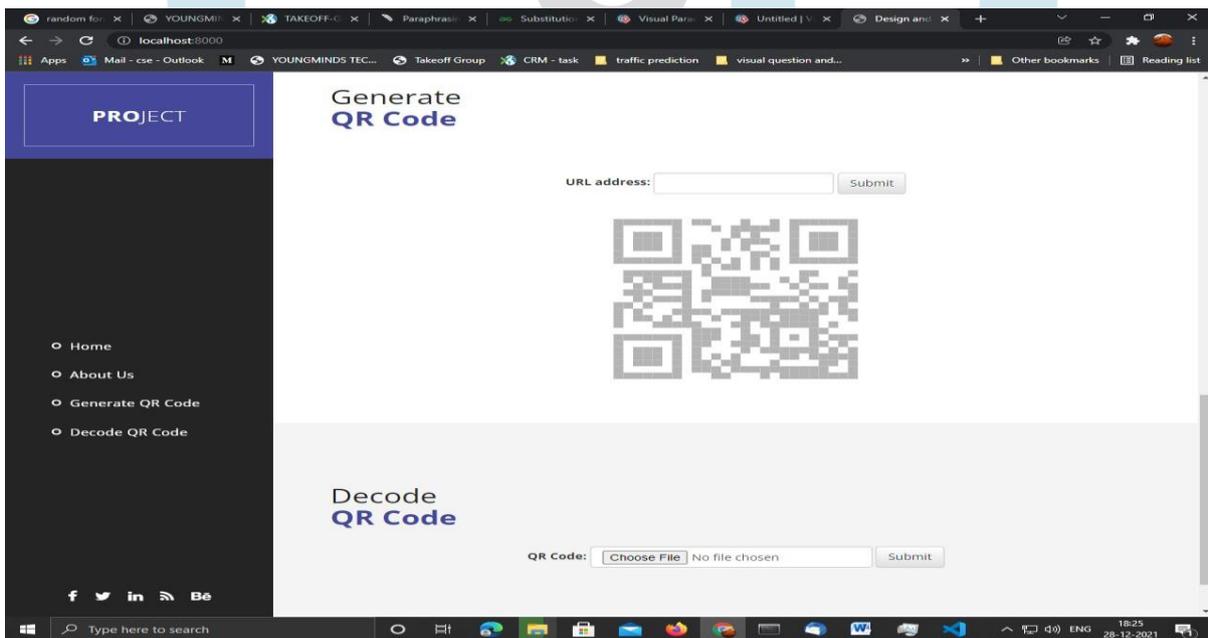


Fig: Predicted output page  
TEST CASES

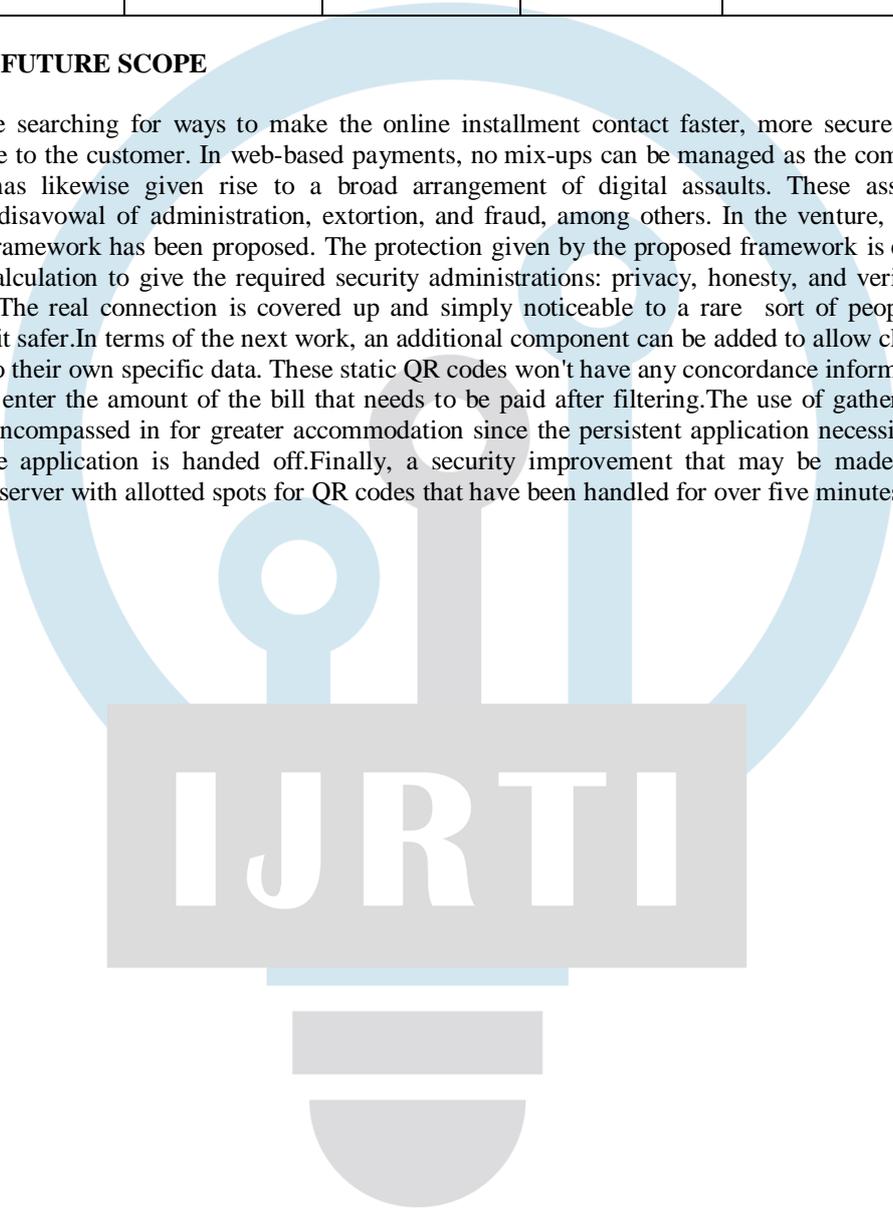
Input	Yield	Result
Input features	Tried for different features given by the user.	Success

Experiment Model

SerialNO	Test cases	I/O	Expected Output	Actual Output	P/F
1	Reading the datasets.	Dataset's way/path.	Datasets need to be successful.	Datasets collected are successful.	It produced P. If this is not, F will come
2	Verifying the features and generates the result.	Input image	Output is classified as different real or fake faces	Output is classified as different real or fake faces	It produced P. If this is not, it will undergo F

## CONCLUSION AND FUTURE SCOPE

Mechanical trades are searching for ways to make the online installment contact faster, more secure, and imaginative because it is intangible to the customer. In web-based payments, no mix-ups can be managed as the comfort of the online installment process has likewise given rise to a broad arrangement of digital assaults. These assaults incorporate information robbery, disavowal of administration, extortion, and fraud, among others. In the venture, a solid QR-based web-based payment framework has been proposed. The protection given by the proposed framework is extraordinary as it adjusts a one-in-all calculation to give the required security administrations: privacy, honesty, and verification, utilizing visual cryptography. The real connection is covered up and simply noticeable to a rare sort of people who approach subsequently making it safer. In terms of the next work, an additional component can be added to allow clients to explicitly link static QR codes to their own specific data. These static QR codes won't have any concordance information other than a field for the payee to enter the amount of the bill that needs to be paid after filtering. The use of gatherings may also be used to keep clients encompassed in for greater accommodation since the persistent application necessitates the client to sign in each time the application is handed off. Finally, a security improvement that may be made is to familiarize multithreading on the server with allotted spots for QR codes that have been handled for over five minutes and killed.



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