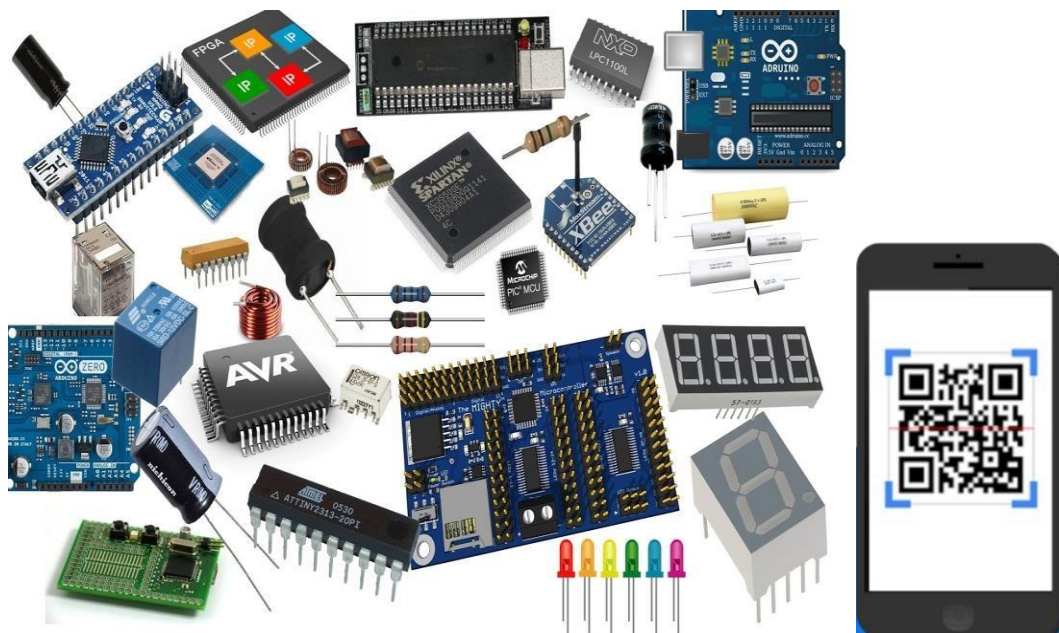# COMPONENTS STORE USING QR SCANNER

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ABSTRACT:

Component Store management system, which is a QR based system, plays a significant role in the management of components for any store. The project which is going to be implemented will helped the components store manager to avoid the maintenance of components record book.

This project is targeted for a store which maintains records of components in a register, and maintenance of such important information in a register is very crucial for any store, as the register may get into bad condition as and when the time passes, we may do some mistakes while registering details of the components. Also searching for a unique component is difficult, which becomes time consuming. So, this project simplifies all the problems mentioned above and helps them to carry out their task at a far greater speed. Now the user can directly scan the QR code which is attached to the item and then the component will be added to his components list and the information will also be stored in managers system.

CONTENTS:

1. INTRODUCTION:

The whole Project is divided in two parts the front end and the back end.

Front end is designed using of **HTML, CSS.**

HTML -Hyper Text Markup Language is the main markup language for creating web pages and other information that can be displayed in a web browser.HTML is written in the form of HTML elements consisting of tags enclosed in angle brackets, within the web page content. The purpose of a web browser is to read HTML documents and compose them into visible or audible web pages. The browser does not display the HTML tags, but uses the tags to interpret the content of the page.HTML elements form the building blocks of all websites.

CSS- Cascading Style Sheets is a style sheet language used for describing the look and formatting of a document written in a markup language. While most often used to style web pages and interfaces written in HTML and XHTML, the language can be applied to any kind of XML document, including plain XML, SVG and XUL. CSS is a cornerstone specification of the web and almost all web pages use CSS style sheets to describe their presentation.CSS is designed primarily to enable the separation of document content from document presentation, including elements such as the layout, colours, and fonts. This separation can improve content accessibility, provide more flexibility and control in the specification.

Back-end is designed using **PHP.**

PHP is a **backend** development language only. PHP belongs to the LAMP stack, which stands for Linux, Apache, MySQL, and PHP/Perl/Python. To develop a web app with this technology stack, a software engineer needs to know four different syntax systems, as well as HTML and CSS.

And also **QR SCANNER (mobile/laptop camera)**

QR codes have become common in consumer advertising. Typically, a smartphone camera or a laptop camera 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). By scanning the QR code we can add the component list in user and manager sides.

The main advantage of the QR code over a normal bar code is that twodimensional barcode contains information in both vertical and horizontal directions, whereas a classical barcode has only one direction of data, usually the horizontal one (Rouillard, 2008). This means substantially greater amounts of information (textual information, numerical values and binary data) can be stored within the QR code. The information is decoded by a smartphone with an embedded camera and a code reading software installed. The explanation of the term used to name this code (Quick Response) lies precisely in the fact that it allows quick access to information (such as websites addresses, e-mails, phone numbers, geographical coordinates etc.) through mobile devices.

MOTIVATION IN DOING THIS PROJECT:

This project is mainly to help the component store manager, the case which inspired us to do this project is when we went to component store in our college, we took some components required for mini project and we have written our names, roll numbers and the list of components which we took. Store manager didn't note down our name and the components in a register because the manager could not find the register and then he noted it in his class notes.
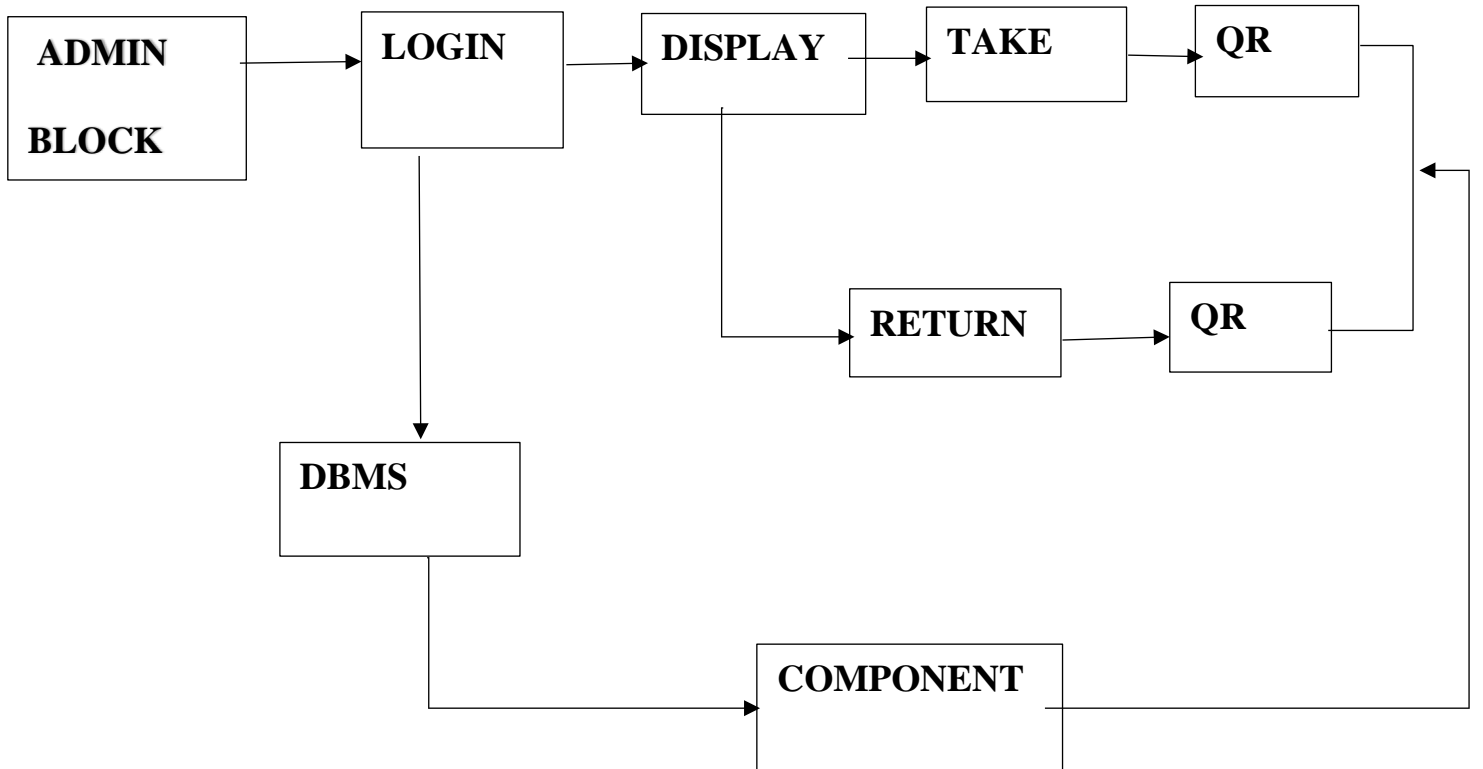
To avoid carrying register, making mistakes and the difficulty in searching for unique component in the register and to save the time we created this project Components store using QR scanner.

2. LITERATURE REVIEW

Component store management using QR code scanner is done with a QR code and a QR scanner. Quick Response code is usually authenticated with the help of the camera of one's mobile phone or camera of a laptop. QR codes can easily scanned through mediums like Tablets, laptops and personal computer desktops. The system automatically generates the ID of the user and its password. The characteristic which makes QR codes stand out is they can still be scanned even if they are partially damaged. QR codes are a 2dimensional printing code on a paper or a screen which makes it vulnerable from various type of cyber-attacks. one must verify the origin of a particular QR code and must have a full understanding of the data type of that QR code. There are many attacks involving QR codes as well as their solutions. QR codes are becoming quite popular nowadays because of the rapid increase in smart devices by the normal people around the world. Obviously, 2D QR code is way better and store huge amount of encoded information compared to the old traditional 1D codes. People are using smartphones to do authentications and for this the QR codes are the most ideal way to do it. Many types of QR codes are getting popular nowadays including logo QR code, encrypted QR code, iQR Code etc. QR codes are becoming popular day by day in the upcoming generation as it offers way easier authentication that the traditional old fashioned user id and password. QR codes offers many advantages such as greater storage capacity, fast readability, 360 degree reading, small print size, error correction, support for more languages and durability against soil and damage. As the encoded data is meant to be machine readable only, one cannot differentiate between a legitimate and a harmful corrupted QR code.

BLOCK DIAGRAM

```
┌───────────┐      ┌──────────┐      ┌───────────┐      ┌──────────┐      ┌──────────┐
│  ADMIN    │ ───► │  LOGIN   │ ───► │  DISPLAY  │ ───► │  TAKE    │ ───► │   QR     │
│  BLOCK    │      │          │      │           │      │          │      │          │
└───────────┘      └──────────┘      └───────────┘      └──────────┘      └──────────┘
                         │                 │
                         ▼                 ▼
                                    ┌──────────┐      ┌──────────┐
                                    │  RETURN  │ ───► │   QR     │
                                    └──────────┘      └──────────┘
                   ┌──────────┐
                   │  DBMS    │
                   └──────────┘
                         │
                         ▼
                                    ┌──────────────┐
                                    │  COMPONENT   │
                                    └──────────────┘
```

EXPLANATION AND IMPLEMENTATION FLOW

Components and students related information is currently recorded in the register(book) which is very difficult to maintain and searching for a unique component in the register is difficult and consumes more time and sometimes becomes tedious.

QR code comes into the picture for the above problems. This QR code will be given every component or one QR code will be given to scan and add the components to the list.

- Firstly the user has to login through smartphone or a laptop from the website link given to the users.
- After that user had to click on add new item or new component on the page.
- After clicking, this will automatically open the camera to scan the QR code

- Then the component will be added to user list. And if user want to add the same component then user should scan the QR code again. If he scan the QR code for 10 times then the quantity of the component becomes 10.
- If the user want to add another component then user had to scan that component QR code.

FIRST PAGE: LOGIN PAGE
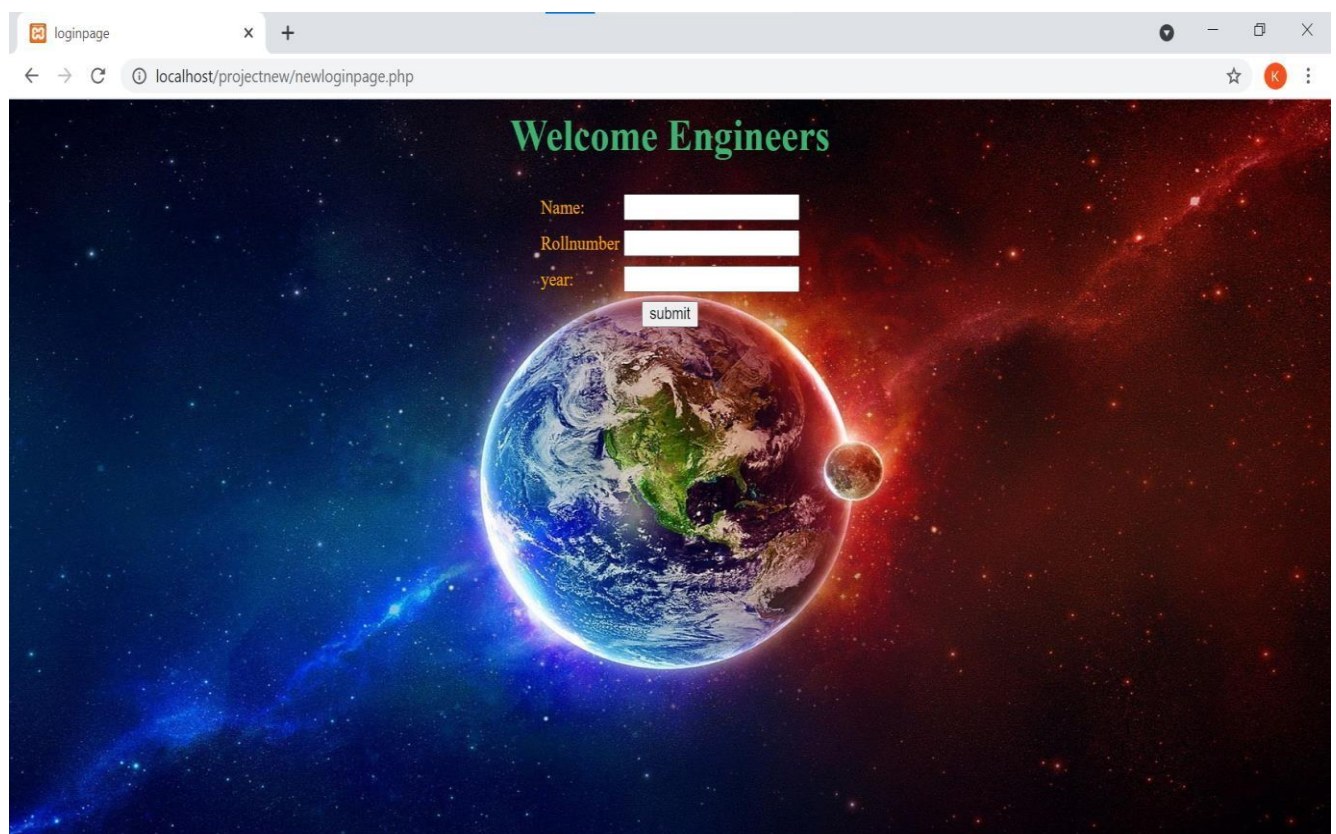
The proposed system consist of three parts:

Adding records of new components in the database of manager side or server side.

Adding records of the components name in the user side or client side.

Each item is given a unique Scanning QR code or one QR code will be given to scan and add the components to the list.

SECOND PAGE: ADDING COMPONENTS BY SCANNING QR CODE.
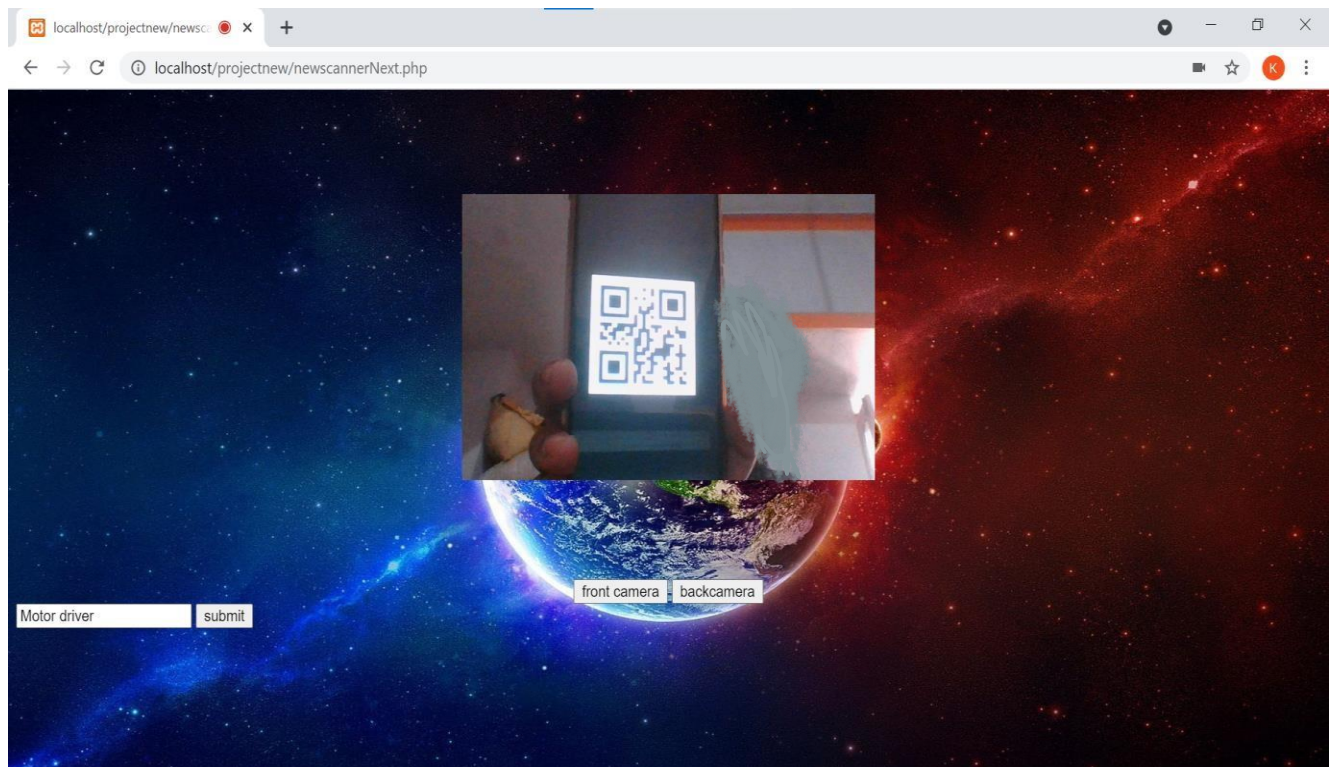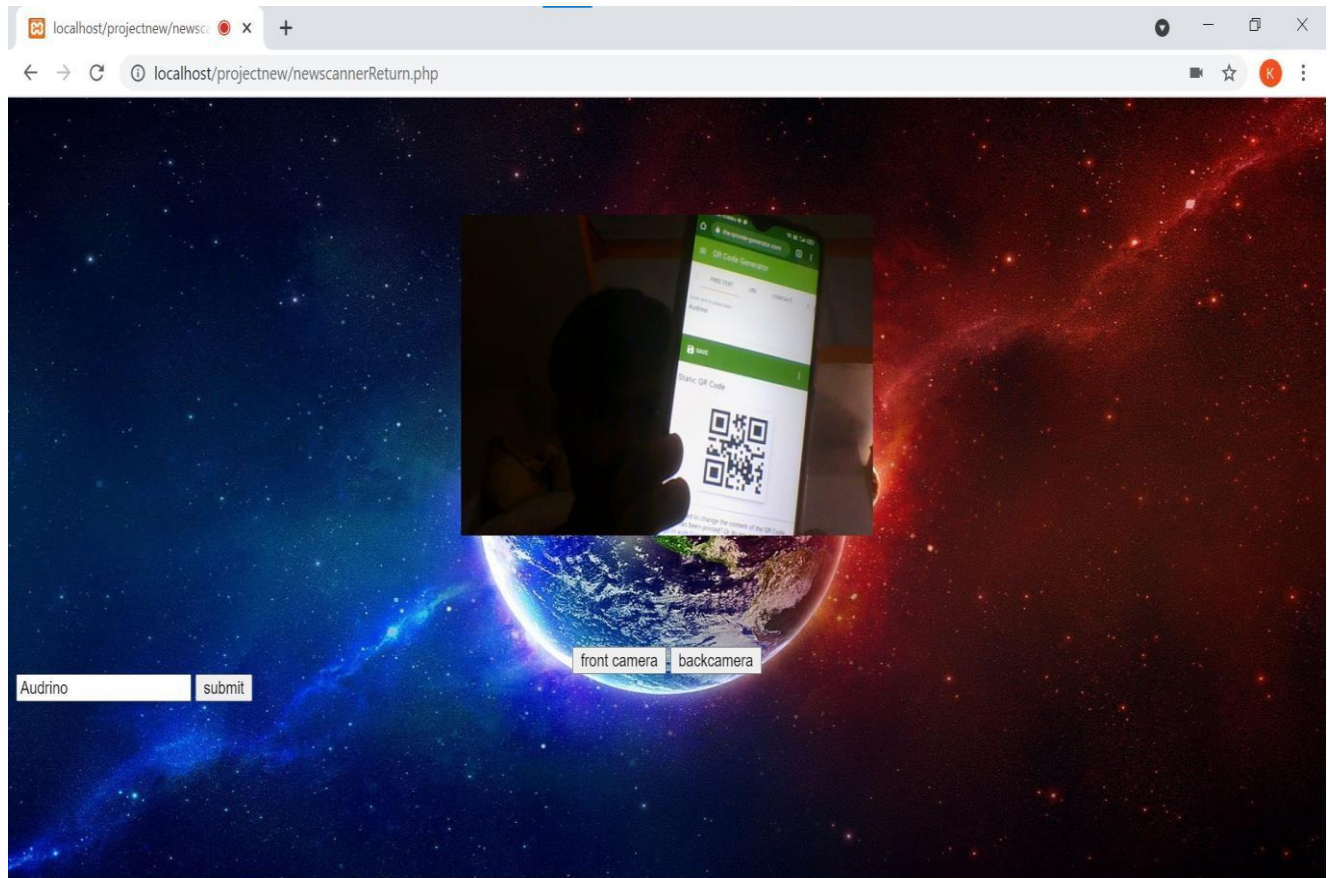
THIRD: LIST OF ADDED COMPONENTS

Full Name:	**R hari**		
Roll Number:	**160218735014**		
Year :	**2**		
component:	aurdino	date :	2021-06-24 13:08:56
component:	Motor driver	date :	2021-06-24 13:13:50

NEXT   RETURN

HOME

Full Name:	**R hari**		
Roll Number:	**160218735014**		
Year :	**2**		
component:	Nodemcu	date :	2021-06-24 13:08:37
component:	aurdino	date :	2021-06-24 13:08:56
component:	Motor driver	date :	2021-06-24 13:13:50

NEXT   RETURN

HOME

PAGE FOR INCORRECT ROLL NUMBER.
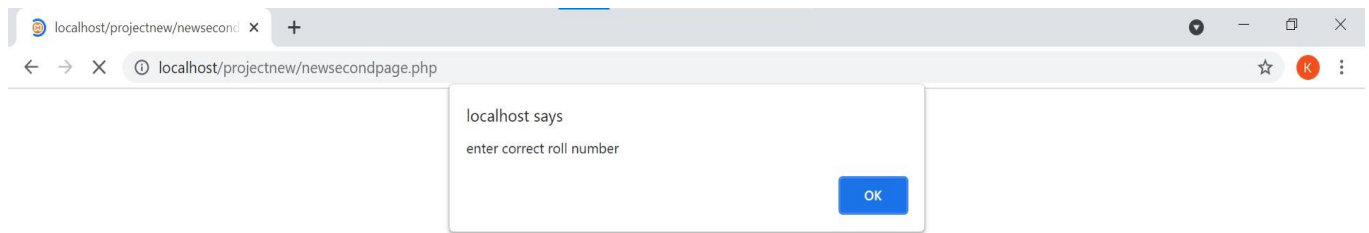
PAGE FOR COMPONENT NOT FOUND
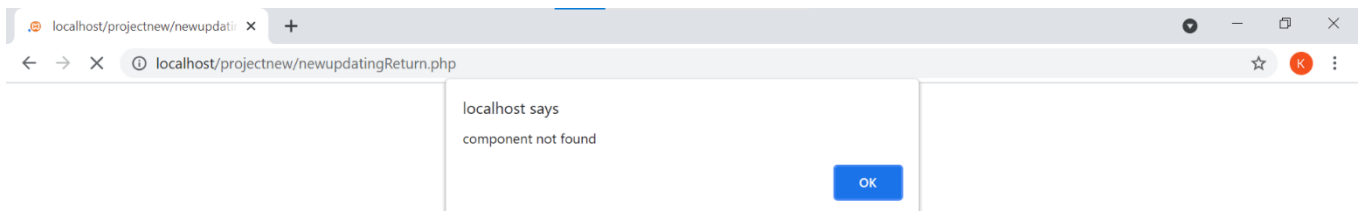
Scanning QR code consists of scanning of QR code which are attached to each item and after the QR Code is scanned the item related information is shown on the screen. Generating QR Code for an item involves generation of QR Code which can be used to attach it to each item. Afterwards the generated QR code can then be printed by Label printer or can be seen on smartphone.

CODE for Creating Database

```php
<?php
$servername = "localhost";
$username = "root";
$password = "";

// Create connection
$conn = new mysqli($servername, $username, $password);

// Check connection if
($conn->connect_error) {
  die("Connection failed: " . $conn->connect_error);
}
echo "Connected successfully";
// Create database
```

```php
$sql = "CREATE DATABASE components";

if ($conn->query($sql) === TRUE) {   echo

"Database created successfully";

} else {

  echo "Error creating database: " . $conn->error;

}


$conn->close();

?>
```

CODE for Creating new table in Database

```php
<?php

$servername = "localhost";

$username = "root";

$password = "";

$dbname = "components";


// Create connection

$conn = new mysqli($servername, $username, $password,

$dbname); // Check

connection if ($conn-

>connect_error) {
```

```php
  die("Connection failed: " . $conn->connect_error);
}

// sql to create table
$sql = "CREATE TABLE newcomponents (
rollnumber BIGINT(15) CHECK (rollnumber>=160200000000), name
VARCHAR(30) NOT NULL,
year INT(3) NOT NULL CHECK (year >0 AND year <=4),
component1 VARCHAR(30) DEFAULT NULL, d1
TIMESTAMP DEFAULT CURRENT_TIMESTAMP,
component2 VARCHAR(30) DEFAULT NULL, d2
TIMESTAMP DEFAULT CURRENT_TIMESTAMP,
component3 VARCHAR(30) DEFAULT NULL, d3
TIMESTAMP DEFAULT CURRENT_TIMESTAMP,
component4 VARCHAR(30) DEFAULT NULL, d4
TIMESTAMP DEFAULT CURRENT_TIMESTAMP,
component5 VARCHAR(30) DEFAULT NULL, d5
TIMESTAMP DEFAULT CURRENT_TIMESTAMP,
component6 VARCHAR(30) DEFAULT NULL, d6
TIMESTAMP DEFAULT CURRENT_TIMESTAMP,
component7 VARCHAR(30) DEFAULT NULL, d7
```

```php
  TIMESTAMP DEFAULT CURRENT_TIMESTAMP,

  component8 VARCHAR(30) DEFAULT NULL, d8

  TIMESTAMP DEFAULT CURRENT_TIMESTAMP,

  component9 VARCHAR(30) DEFAULT NULL, d9

  TIMESTAMP DEFAULT CURRENT_TIMESTAMP,

  component0 VARCHAR(30) DEFAULT NULL, d0

  TIMESTAMP DEFAULT CURRENT_TIMESTAMP,

  PRIMARY KEY (rollnumber)


)";


if ($conn->query($sql) === TRUE) {

  echo "Table components created successfully";

} else {

  echo "Error creating table: " . $conn->error;

}


$conn->close();

?>
```
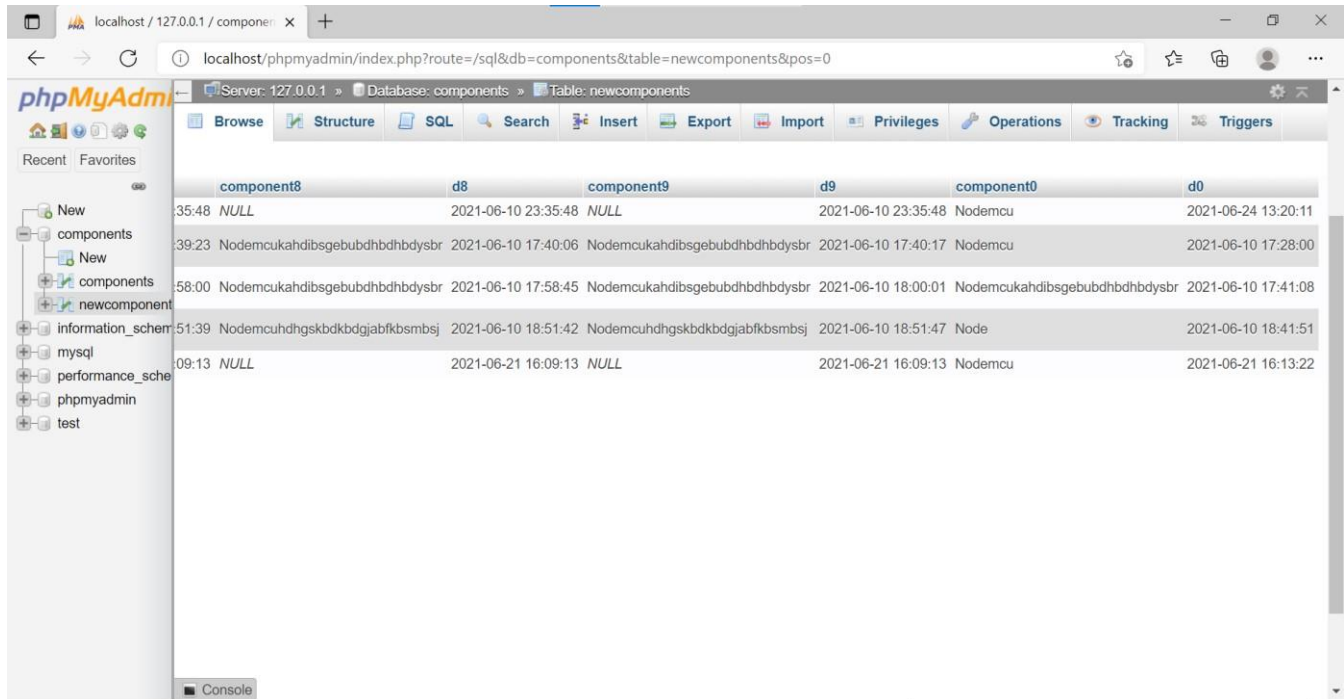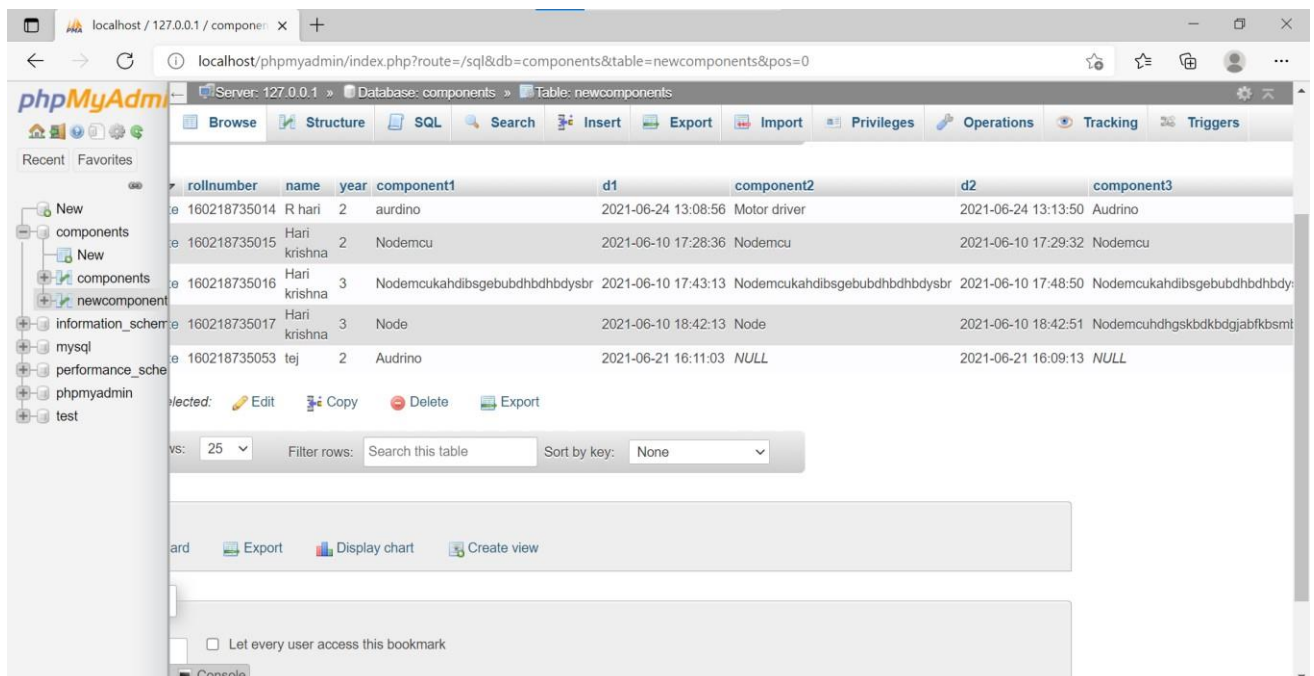
RESULTS:

CONCLUSION AND FUTURE SCOPE:

Any new technology needs to be perceived as being useful for it to be accepted and assimilated into people's daily routines. For this reason, this study aimed to present the applicability and usefulness perceived by the users of this QR code. By knowing and understanding how people act and react to QR codes, industries like retail and marketing could better design and adopt codes that are more precisely targeted and tailored to customer preferences, and more useful to customers in the buying process. The key to successful adoption of QR code is to understand why people might use this technology and the grounds for refusal or ignorance, and these motivations and attitudes identified in this research, indicating that most of the surveyed consumers were knowledgeable of QR codes and many of the respondents have scanned QR codes. The main reason for scanning QR codes (most of them being observed on products packaging and scanned in the store or at home) was to access information about products or services, but we found that consumers are also use QR codes to buy products, to access contact information or to get discount vouchers and coupons. We also found that the degree of use and the intention to use QR codes in the future vary according to the age of respondents, because most users are young (aged 18 to 24 years) and the intention to use QR codes in the future is also more pronounced among young people. But the most important aspect is that consumers are positive about the characteristics of the QR codes and understand the role played by codes in the individual shopping process and in improving shopping experience for users. Taking into account the data was obtained by using a web-based survey among the personal contacts of authors and the main limitation of the research is the non-representativeness of the sample, we consider that future research developed among large survey sample, with more diverse backgrounds, could provide a better understanding of consumer attitude regarding the usage of QR codes. Although QR codes can only be used by

owners of mobile devices, the sheer number of smartphone users in Romania provides businesses with a demanding clientele in terms of mobile content and willing to purchase products and services while on the move, the possibility to exploit the potential of these technologies to enrich the shopping experience and offer the customer real value through informing, involving and rewarding. Given the interest of the Romanian mobile users, more and more firms will become interested in applying QR codes on their products or on their promotional materials and in employing codes in their marketing campaigns. The potential for further adoption of QR codes is enormous and businesses that act now will get ahead of the emerging QR code trend for a competitive advantage and better customer experiences.

REFERENCES:

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