



**SRI RAMAKRISHNA INSTITUTE OF TECHNOLOGY**  
**COIMBATORE-10**  
**(An Autonomous Institution)**

(Approved by AICTE, New Delhi – Affiliated to Anna University, Chennai)  
Pachapalayam, Perur Chettipalayam, Coimbatore – 641 010.  
Accredited by NAAC with ‘A’ Grade



## **LABORATORY RECORD**

<b>Course Code</b>	
<b>Course Name</b>	

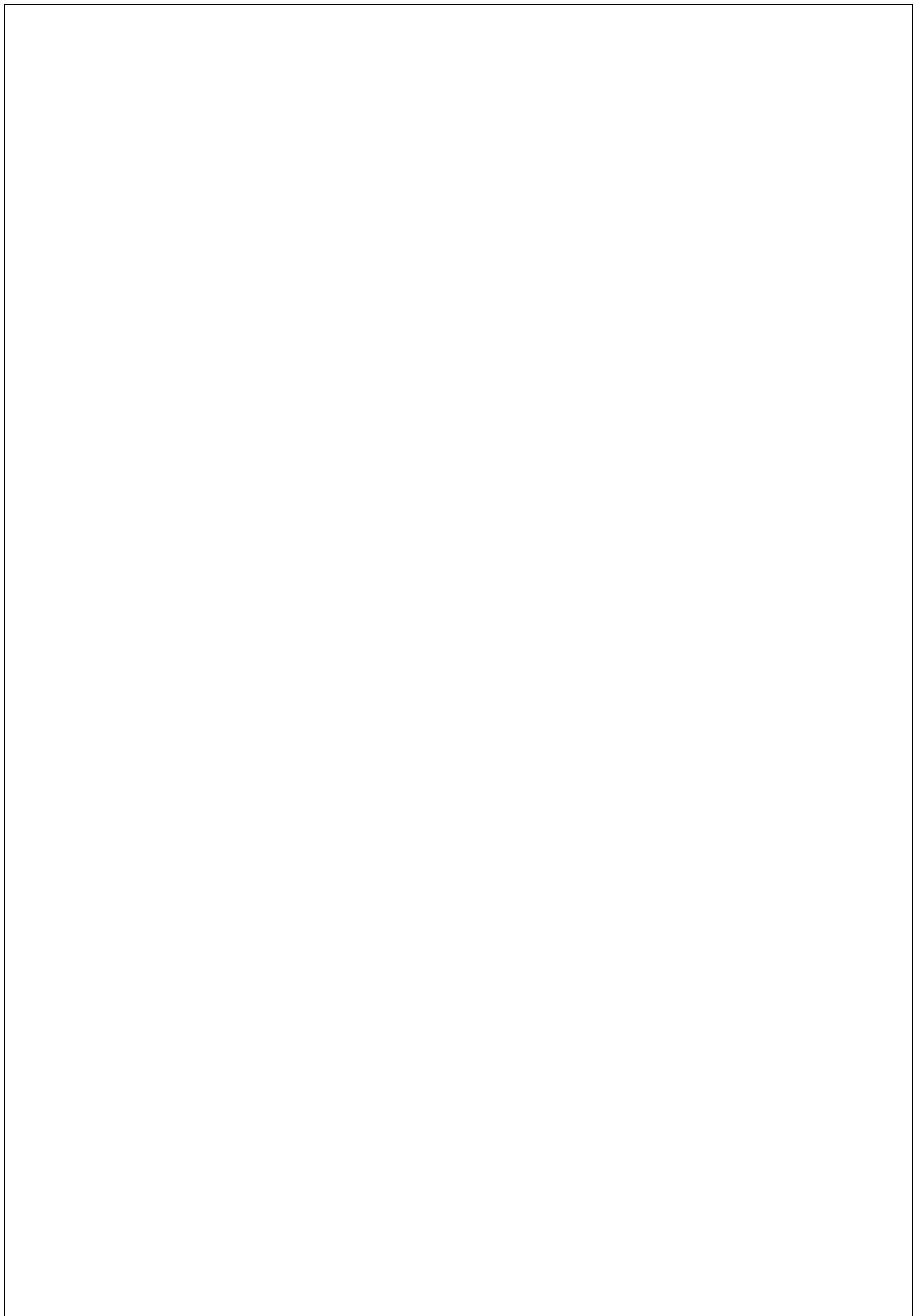
<b>Name</b>	:
<b>Register Number</b>	:
<b>Branch</b>	:
<b>Semester</b>	:

Department Of

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Academic Year

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EXP NO:01

DATE:

# Health Monitoring System

## 1.PROJECT AIM AND OBJECTIVES

### 1.1 Project Aim:

To develop a health monitoring system using python flask and MySQL.

### 1.2 Objectives:

The primary objective of the health monitoring system is to provide a user-friendly platform for individuals to monitor their vital health parameters, such as heart rate, blood pressure, and body mass index (BMI). It seeks to offer real-time tracking of these metrics, allowing users to gain valuable insights into their health status. The system will feature an intuitive interface, making it easy for users to input and view their data. Additionally, the system will include data analysis and visualization tools, helping users understand health trends over time. The project also focuses on secure data storage, ensuring privacy and confidentiality, and will integrate with wearable devices for seamless data collection. By providing personalized health reports and recommendations, the system aims to empower users to make informed decisions and improve their overall well-being.

## 2.SYSTEM ANALYSIS

### 2.1 Problem Statement:

In today's fast-paced world, maintaining good health is essential but often neglected due to busy schedules. To address this, a Health Monitoring System is proposed to assist individuals in tracking their basic health parameters such as Body Mass Index (BMI), Blood Pressure (BP), and Pulse Rate. The system aims to provide real-time insights into an individual's health status and help them take timely actions to maintain or improve their well-being.

## **2.2 Software and Hardware requirements:**

### **Software:**

Tools: VS Code, Workbench

### **Hardware:**

Processor: Intel Core i8

RAM: 16GB

Storage: 512GB SSD

## **2.3 Software tools used:**

### **2.3.1 Frontend.**

1. HTML
2. CSS
3. Bootstrap

### **2.3.2 Backend.**

1. MySQL
2. Python(Flask)

## **3.SYSTEM DESIGN**

### **3.1 Table Design:**

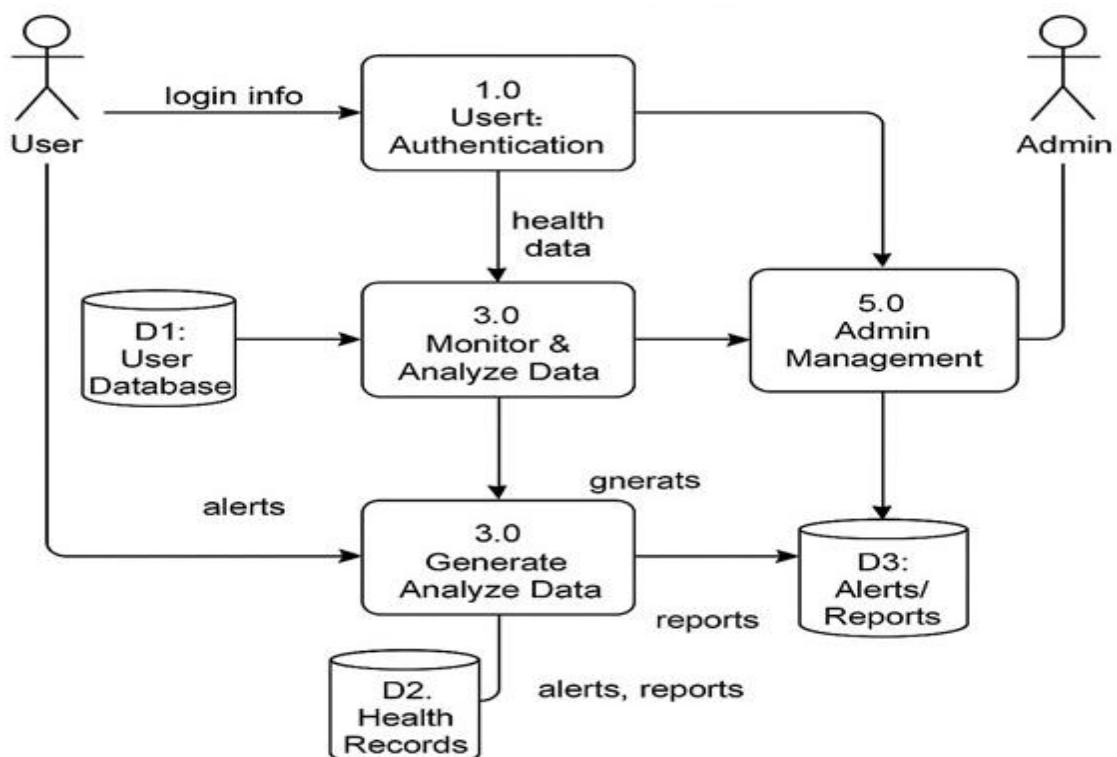
	<b>id</b>	<b>username</b>	<b>password</b>	<b>email</b>
▶	1	abi	scrypt:32768:8:1\$ArSMLkZfJy1PlQ0H\$a4c74f2...	vmabirami2005@gmail.com
	2	wizard	scrypt:32768:8:1\$MiAr30F45Gnjx1Fb\$013f965...	a@gmail.com
	9	abirami	scrypt:32768:8:1\$CEI2AWwqaa6ZOct7\$ee957...	abirami.2206003@srit.org
	10	priya	scrypt:32768:8:1\$9oDjv9oyPMEO2BeI\$e36096...	priyadharshinidevaraj4@gmail.com
*	NULL	NULL	NULL	NULL

<b>id</b>	<b>user_id</b>	<b>systolic</b>	<b>diastolic</b>	<b>timestamp</b>
1	1	80	50	2025-01-26 12:36:35
2	1	80	50	2025-01-26 12:42:42
3	1	125	90	2025-01-26 12:43:02
4	1	125	90	2025-01-26 12:43:48
5	10	120	90	2025-01-26 13:59:56
<b>NULl</b>	<b>NULl</b>	<b>NULl</b>	<b>NULl</b>	<b>NULl</b>

<b>id</b>	<b>user_id</b>	<b>bmi</b>	<b>timestamp</b>
1	1	17.78	2025-01-26 11:51:15
2	1	17.78	2025-01-26 11:52:37
3	1	26.67	2025-01-26 11:52:59
4	1	19.53	2025-01-26 12:09:20
5	1	13.84	2025-01-26 12:15:43
6	1	13.84	2025-01-26 12:16:45
7	1	13.84	2025-01-26 12:17:18
8	1	16.98	2025-01-26 12:21:17
9	1	16.98	2025-01-26 12:22:08
10	1	16.98	2025-01-26 12:23:50
11	1	18.69	2025-01-26 12:24:13
12	1	18.69	2025-01-26 12:25:51
13	1	30.56	2025-01-26 12:26:06

<b>id</b>	<b>user_id</b>	<b>pulse_rate</b>	<b>timestamp</b>
1	1	125	2025-01-26 13:53:34
2	1	175	2025-01-26 13:53:41
3	1	175	2025-01-26 13:54:18
4	10	200	2025-01-26 14:00:16
5	10	210	2025-01-26 14:00:21
<b>NULl</b>	<b>NULl</b>	<b>NULl</b>	<b>NULl</b>

### 3.2 Dataflows Diagram:



## 4.SYSTEM IMPLEMENTATION

### 4.1 Screenshot for Homepage:



### 4.2 Module description:

```
import plotly.graph_objects as go
import plotly.express as px
from flask import Flask, render_template, request, redirect, session
import mysql.connector
from werkzeug.security import generate_password_hash, check_password_hash

app = Flask(__name__)
app.secret_key = 'your_secret_key'

# Database connection
db = mysql.connector.connect(
    host="localhost",
    user="root",
    password="Abirami@2005",
    database="health_management"
)
cursor = db.cursor()

@app.route('/')
def landing():
    return render_template('landing.html')
@app.route('/home')
def home():
    return render_template('home.html')

@app.route('/register', methods=['GET', 'POST'])
```

```

def register():
    if request.method == 'POST':
        username = request.form['username']
        password = generate_password_hash(request.form['password'])
        email = request.form['email']
        query = "INSERT INTO users (username, password, email) VALUES (%s, %s, %s)"
        cursor.execute(query, (username, password, email))
        db.commit()
        return render_template('login.html')
    return render_template('register.html')

@app.route('/login', methods=['GET', 'POST'])
def login():
    if request.method == 'POST':
        username = request.form['username']
        password = request.form['password']
        query = "SELECT id, password FROM users WHERE username = %s"
        cursor.execute(query, (username,))
        result = cursor.fetchone()
        if result and check_password_hash(result[1], password):
            session['user_id'] = result[0] # Store user_id in session
            return render_template('home.html')
        else:
            return "Invalid username or password"
    return render_template('login.html')

@app.route('/bmi', methods=['GET', 'POST'])
def bmi():
    bmi = None
    bmi_history = []
    error_message = None

    # Get the user_id from session (Assume user is logged in)
    user_id = session.get('user_id')

    if not user_id:
        error_message = "Please log in to view your BMI history and calculate new BMI."

    if request.method == 'POST' and user_id:
        try:
            weight = float(request.form['weight'])
            height = float(request.form['height'])

            # Ensure positive values for weight and height

```

```

if weight <= 0 or height <= 0:
    error_message = "Weight and Height must be positive values."
else:
    # Calculate BMI
    bmi = weight / (height ** 2)
    bmi = round(bmi, 2) # Round BMI to 2 decimal points

try:
    # Store the BMI in the database in the user_bmi table
    query = "INSERT INTO user_bmi (user_id, bmi) VALUES (%s, %s)"
    cursor.execute(query, (user_id, bmi))
    db.commit()

    # Fetch BMI history for the current user (including new BMI)
    query_history = "SELECT bmi, timestamp FROM user_bmi WHERE
user_id = %s ORDER BY timestamp ASC"
    cursor.execute(query_history, (user_id,))
    bmi_history = cursor.fetchall()

except mysql.connector.Error as err:
    error_message = f'Error while storing BMI: {err}'

except ValueError:
    error_message = "Invalid input. Please enter valid numbers for weight and
height."

# Fetch BMI history if not already retrieved
if user_id and not bmi_history:
    try:
        query_history = "SELECT bmi, timestamp FROM user_bmi WHERE user_id
= %s ORDER BY timestamp ASC"
        cursor.execute(query_history, (user_id,))
        bmi_history = cursor.fetchall()

    except mysql.connector.Error as err:
        error_message = f'Error while fetching BMI history: {err}'

# Prepare data for the graph if BMI history exists
if bmi_history:
    timestamps = [record[1] for record in bmi_history]
    bmis = [record[0] for record in bmi_history]

# Create a Plotly graph for BMI history
fig = go.Figure()

```

```

        fig.add_trace(go.Scatter(x=timestamps,      y=bmis,      mode='lines+markers',
name='BMI'))
        fig.update_layout(title='BMI History', xaxis_title='Date', yaxis_title='BMI')
        graph_html = fig.to_html(full_html=False)
    else:
        graph_html = None

    return render_template('bmi.html', bmi=bmi, graph_html=graph_html,
error_message=error_message)

@app.route('/bp', methods=['GET', 'POST'])
def bp():
    systolic = diastolic = None
    user_id = session.get('user_id') # Get user_id from session

    if request.method == 'POST':
        systolic = int(request.form['systolic'])
        diastolic = int(request.form['diastolic'])

        # Store BP data in the user_blood_pressure table
        if user_id:
            try:
                # Insert BP data into the user_blood_pressure table
                query = "INSERT INTO user_blood_pressure (user_id, systolic, diastolic)
VALUES (%s, %s, %s)"
                cursor.execute(query, (user_id, systolic, diastolic))
                db.commit()
            except mysql.connector.Error as err:
                print(f'Error: {err}')

        # Retrieve BP history for the user
        query = "SELECT systolic, diastolic, timestamp FROM user_blood_pressure
WHERE user_id = %s ORDER BY timestamp DESC LIMIT 10"
        cursor.execute(query, (user_id,))
        bp_history = cursor.fetchall()

        # Create a Plotly graph for BP history
        timestamps = [str(record[2]) for record in bp_history]
        systolic_values = [record[0] for record in bp_history]
        diastolic_values = [record[1] for record in bp_history]

        fig = go.Figure()
        fig.add_trace(go.Scatter(x=timestamps, y=systolic_values, mode='lines+markers',
name='Systolic'))

```

```

fig.add_trace(go.Scatter(x=timestamps, y=diastolic_values, mode='lines+markers',
name='Diastolic'))

fig.update_layout(title='Blood Pressure History',
                  xaxis_title='Timestamp',
                  yaxis_title='Pressure (mmHg)')

graph_html = fig.to_html(full_html=False) # Convert to HTML for embedding

return render_template('bp.html', systolic=systolic, diastolic=diastolic,
graph_html=graph_html)

@app.route('/pulse', methods=['GET', 'POST'])
def pulse():
    pulse_rate = None
    pulse_history = []
    interpretation = None

    if request.method == 'POST':
        pulse_rate = int(request.form['pulse_rate'])

        # Interpret pulse rate
        if pulse_rate < 60:
            interpretation = "Low"
        elif 60 <= pulse_rate <= 100:
            interpretation = "Normal"
        else:
            interpretation = "High"

        # Get user_id from session
        user_id = session.get('user_id')

        if user_id:
            try:
                # Store pulse rate in the database
                query = "INSERT INTO user_pulse (user_id, pulse_rate) VALUES (%s, %s)"
                cursor.execute(query, (user_id, pulse_rate))
                db.commit()

                # Fetch pulse rate history for the current user
                query_history = "SELECT pulse_rate, timestamp FROM user_pulse WHERE user_id = %s ORDER BY timestamp ASC"
                cursor.execute(query_history, (user_id,))
                pulse_history = cursor.fetchall()
            except Exception as e:
                print(f"Error: {e}")

```

```

        except mysql.connector.Error as err:
            print(f'Error: {err}') # Print any database errors to the console

        # Prepare data for the graph
        if pulse_history:
            timestamps = [record[1] for record in pulse_history]
            pulse_rates = [record[0] for record in pulse_history]

            # Create a Plotly graph for pulse rate history
            fig = go.Figure()
            fig.add_trace(go.Scatter(x=timestamps, y=pulse_rates, mode='lines+markers',
                                     name='Pulse Rate'))
            fig.update_layout(title='Pulse Rate History', xaxis_title='Date', yaxis_title='Pulse
Rate')
            graph_html = fig.to_html(full_html=False)
        else:
            graph_html = None

        return render_template('pulse.html', pulse_rate=pulse_rate,
graph_html=graph_html, interpretation=interpretation)
    
```

```

if __name__ == '__main__':
    app.run(debug=True)

```

## 5.CONCLUSION

The implementation of a health monitoring system software application represents a significant advancement in managing and improving personal health. By integrating real-time data collection, analysis, and visualization, this software empowers users to track vital health metrics efficiently. It promotes preventive healthcare by identifying potential health issues early and encourages users to adopt healthier lifestyles through actionable insights. In conclusion, this health monitoring system is a crucial step toward leveraging technology for a healthier, more informed, and proactive society. Its ongoing development and refinement hold the potential to further revolutionize the healthcare landscape.

S.No	Particulars	Max.Marks	Marks awarded
1.	Inference	10	
2.	Presentation	3	
3.	On-time submission	2	
	Total	15	

## RESULT:

Thus the simple and efficient Health Monitoring System was developed successfully.

EXP NO:02	<b>E-Learning System</b>
DATE:	

## 1.PROJECT AIM AND OBJECTIVES

### 1.1 Project Aim:

To develop a e-learning system using python flask and MySQL.

### 1.2 Objectives:

The primary objective of the e-learning system is to design and develop a comprehensive platform that provides an interactive and engaging learning experience for students, while enhancing access to quality education and training regardless of geographical location or time constraints. The system will offer personalized learning experiences through tailored learning paths, adaptive assessments, and real-time feedback, enabling learners to take ownership of their learning journey. The system will also ensure accessibility and inclusivity, accommodating diverse learning needs and abilities, and integrate with existing systems and tools, including Learning Management Systems and Student Information Systems, to provide a seamless and streamlined learning experience.

## 2.SYSTEM ANALYSIS

### 2.1 Problem Statement:

Traditional learning methods often lack accessibility, flexibility, and efficiency, making it challenging for students to access quality education at their convenience. Many existing e-learning platforms are either too complex, expensive, or lack essential features such as user-friendly course management, interactive learning materials, and secure payment options. The platform will include admin and student dashboards, course registration, secure payments, and content management features to enhance the learning experience.

## **2.2 Software and Hardware requirements:**

### **Software:**

Tools: VS Code, Workbench

### **Hardware:**

Processor: Intel Core i8

RAM: 16GB

Storage: 512GB SSD

## **2.3 Software tools used:**

### **2.3.1 Frontend.**

1. HTML
2. CSS
3. Bootstrap
4. Javascript

### **2.3.2 Backend.**

1. MySQL
2. Python(Flask)

## **3.SYSTEM DESIGN**

### **3.1 Table Design:**

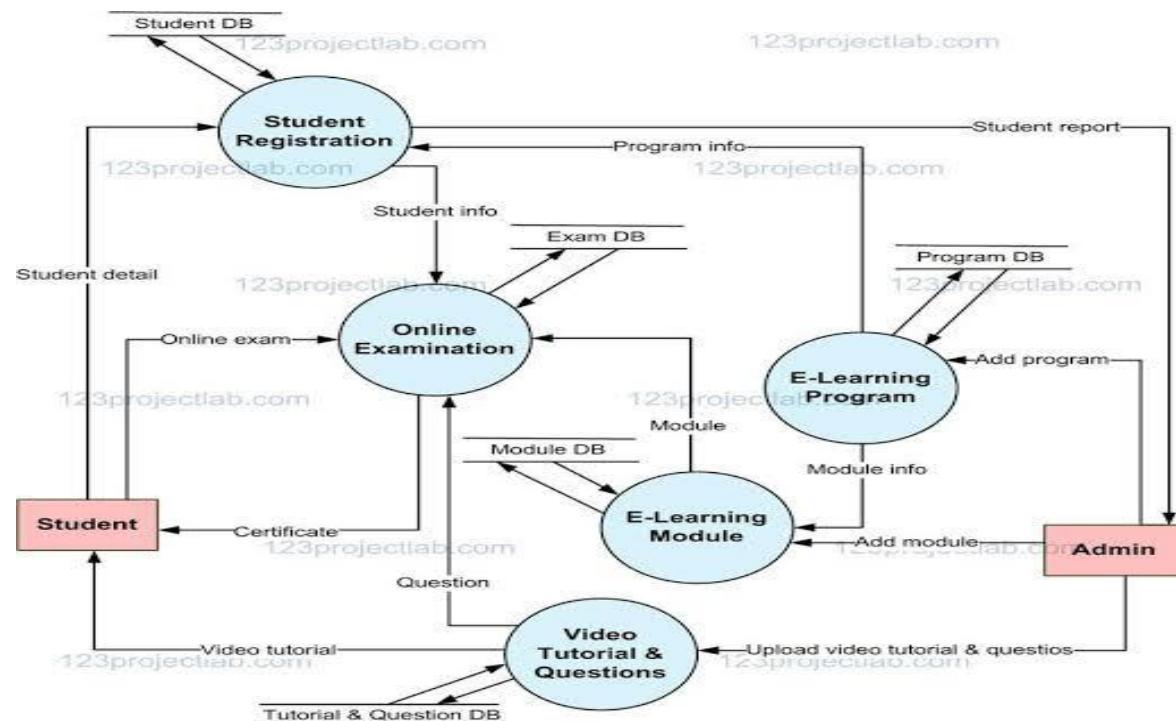
#	Name	Type	Collation	Attributes	Null	Default	C
1	<b>LessonID</b> 	int(11)			No	None	
2	<b>LessonChapter</b>	varchar(90)	latin1_swedish_ci		No	None	
3	<b>LessonTitle</b>	varchar(90)	latin1_swedish_ci		No	None	
4	<b>FileLocation</b>	text	latin1_swedish_ci		No	None	
5	<b>Category</b>	varchar(90)	latin1_swedish_ci		No	None	

#	Name	Type	Collation	Attributes	Null	Default	Character Set
1	USERID	int(11)			No	None	utf8
2	NAME	varchar(90)	latin1_swedish_ci		No	None	utf8
3	UEMAIL	varchar(90)	latin1_swedish_ci		No	None	utf8
4	PASS	varchar(90)	latin1_swedish_ci		No	None	utf8
5	TYPE	varchar(30)	latin1_swedish_ci		No	None	utf8

#	Name	Type	Collation	Attributes	Null	Default
1	ExerciseID	int(11)			No	None
2	LessonID	int(11)			No	None
3	Question	text	latin1_swedish_ci		No	None
4	ChoiceA	text	latin1_swedish_ci		No	None
5	ChoiceB	text	latin1_swedish_ci		No	None
6	ChoiceC	text	latin1_swedish_ci		No	None
7	ChoiceD	text	latin1_swedish_ci		No	None
8	Answer	varchar(90)	latin1_swedish_ci		No	None
9	ExercisesDate	date			No	None

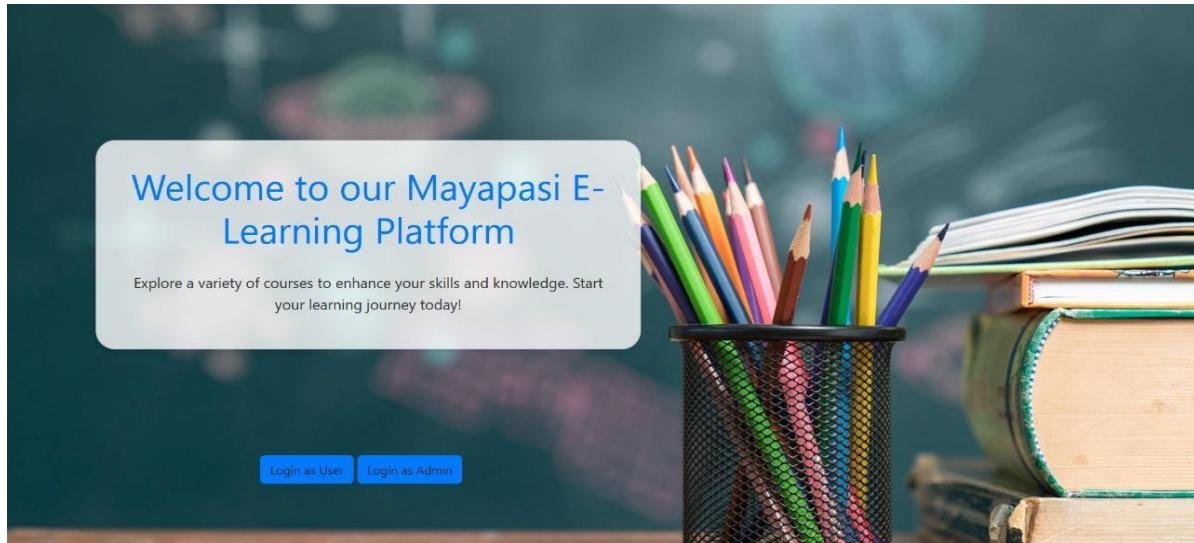
#	Name	Type	Collation	Attributes	Null	Default
1	SQID	int(11)			No	None
2	ExerciseID	int(11)			No	None
3	LessonID	int(11)			No	None
4	StudentID	int(11)			No	None
5	Question	varchar(90)	latin1_swedish_ci		No	None
6	CA	varchar(90)	latin1_swedish_ci		No	None
7	CB	varchar(90)	latin1_swedish_ci		No	None
8	CC	varchar(90)	latin1_swedish_ci		No	None
9	CD	varchar(90)	latin1_swedish_ci		No	None
10	QA	varchar(90)	latin1_swedish_ci		No	None

### 3.2 Dataflows Diagram:



## 4.SYSTEM IMPLEMENTATION

### 4.1 Screenshot for Homepage:



### 4.2 Module description:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>E-Learning Platform</title>
  <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0-alpha1/dist/css/bootstrap.min.css" rel="stylesheet">
<style>
  body {
    background-image: url('style/landing.jpg'); /* Replace with your image name */
    background-size: cover;
    background-position: center;
    height: 100vh;
    margin: 0;
  }
  .container {
    position: absolute;
    top: 45%; /* Move the card a bit higher */
    left: 50%;
    transform: translate(-50%, -50%);
    text-align: center;
  }

```

```
.card {
    background-color: rgba(255, 255, 255, 0.8); /* Semi-transparent white background
for the card */
    border-radius: 25px;
    padding: 30px;
    max-width: 700px; /* Reduce card's width */
    width: 100%;
    box-shadow: 0 4px 8px rgba(0, 0, 0, 0.1);
}
h1 {
    font-size: 3rem; /* Adjusted font size */
    color: #007bff; /* Color for the title */
}
p {
    font-size: 1.2rem; /* Description font size */
    color: #333; /* Darker text color for the description */
    margin-top: 20px; /* Space between title and description */
}
.btn-container {
    position: absolute;
    top: 80%;
    left: 30%;
    transform: translateX(-50%);
}
.btn {
    margin-top: 10px;
    background-color: #007bff; /* Uniform blue color */
    border-color: #007bff; /* Same border color */
}
.btn:hover {
    background-color: #0056b3; /* Darker blue when hovered */
    border-color: #0056b3; /* Darker border color */
}
</style>
</head>
<body>
    <div class="container">
        <div class="card">
            <h1>Welcome to our E-Learning Platform</h1>
            <p>Explore a variety of courses to enhance your skills and knowledge. Start your
learning journey today!</p>
        </div>
    </div>

    <div class="btn-container">
```

```
<button class="btn mt-4" onclick="location.href='login.html?role=user'">Login as  
User</button>  
<button class="btn mt-4" onclick="location.href='login.html?role=admin'">Login  
as Admin</button>  
</div>  
  
<script src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0-  
alpha1/dist/js/bootstrap.bundle.min.js"></script>  
</body>  
</html>
```

## 5.CONCLUSION

The E-Learning System is a comprehensive and interactive platform that revolutionizes the way we learn. By providing a user-friendly interface, personalized learning experiences, and real-time feedback, the system enhances learner engagement, retention, and academic achievement. With its accessibility features, collaborative tools, and seamless integrations, the E-Learning System breaks down geographical and temporal barriers, making quality education accessible to all. As technology continues to evolve, the E-Learning System is poised to transform the education landscape, empowering learners to achieve their full potential.

S.No	Particulars	Max.Marks	Marks awarded
1.	Inference	10	
2.	Presentation	3	
3.	On-time submission	2	
	Total	15	

## RESULT:

Thus the simple and efficient E-Learning system was developed successfully.

EXP NO:03	<b>Ticket Reservation System</b>
DATE:	

## 1.PROJECT AIM AND OBJECTIVES

### 1.1 Project Aim:

To develop a ticket reservation system using python flask and MySQL.

### 1.2 Objectives:

The primary objective of the ticket reservation system is to develop a user-friendly and efficient platform that enables customers to book tickets online for various events, such as concerts, movies, and sports. The project objectives include providing a user-friendly interface, enabling online ticket booking, managing event information, tracking ticket sales and customer information, ensuring secure payment processing, providing reporting and analytics, integrating with social media and email, and ensuring scalability and reliability. By achieving these objectives, the Ticket Reservation System will improve the overall ticket booking experience for customers and provide a valuable tool for event organizers to manage their events effectively.

## 2.SYSTEM ANALYSIS

### 2.1 Problem Statement:

The current bus ticket reservation process is often inefficient, leading to issues such as long queues at ticket counters, overbooking, inaccurate seat allocation, and lack of real-time updates on bus schedules and availability. There is a need for an automated Bus Ticket Reservation System that allows passengers to search for buses, check seat availability, book and cancel tickets, and make secure payments online. The system should also enable bus operators to manage schedules, track bookings, and generate reports, ensuring a seamless and efficient ticketing experience for both passengers and operators.

## **2.2 Software and Hardware requirements:**

### **Software:**

Tools: VS Code, Workbench

### **Hardware:**

Processor: Intel Core i8

RAM: 16GB

Storage: 512GB SSD

## **2.3 Software tools used:**

### **2.3.1 Frontend.**

1. HTML
2. CSS
3. Bootstrap
4. Javascript

### **2.3.2 Backend.**

1. MySQL
2. Python(Flask)

## **3.SYSTEM DESIGN**

### **3.1 Table Design:**

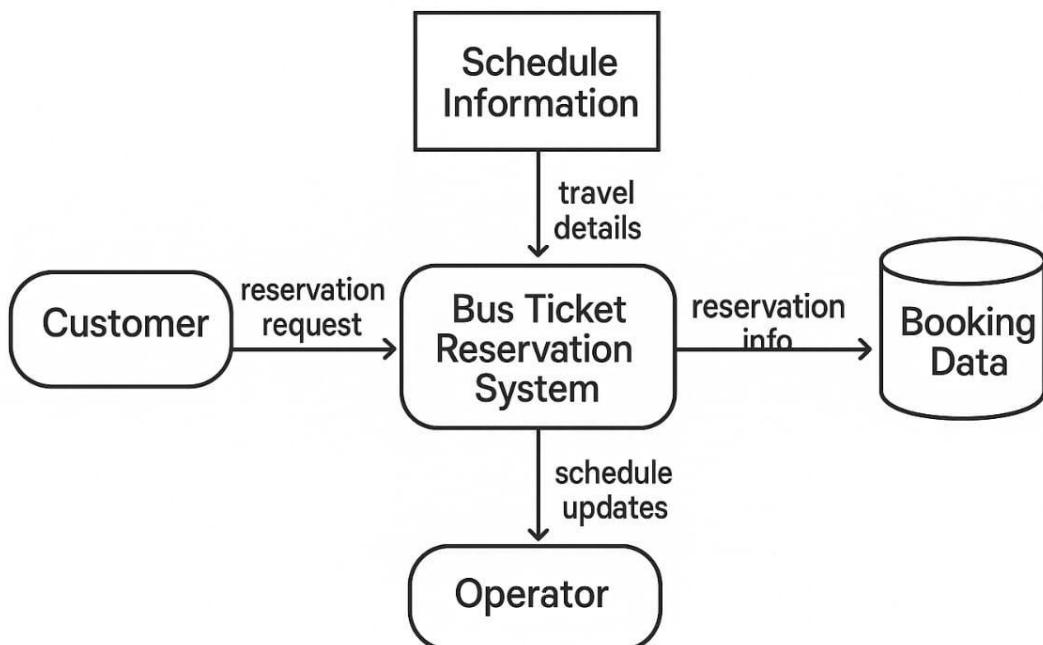
2	<b>firstname</b>	varchar(250)	utf8mb4_general_ci	No	<i>None</i>
3	<b>middlename</b>	text	utf8mb4_general_ci	Yes	<i>NULL</i>
4	<b>lastname</b>	varchar(250)	utf8mb4_general_ci	No	<i>None</i>
5	<b>username</b>	text	utf8mb4_general_ci	No	<i>None</i>
6	<b>password</b>	text	utf8mb4_general_ci	No	<i>None</i>
7	<b>avatar</b>	text	utf8mb4_general_ci	Yes	<i>NULL</i>
8	<b>last_login</b>	datetime		Yes	<i>NULL</i>
9	<b>type</b>	tinyint(1)		No	0
10	<b>status</b>	int(1)		No	1

#	Name	Type	Collation	Attributes	Null	Default	C
1	<b>id</b> 	int(30)			No	None	
2	<b>code</b>	varchar(100)	utf8mb4_general_ci		No	None	
3	<b>name</b>	text	utf8mb4_general_ci		No	None	
4	<b>first_class_capacity</b>	float			No	0	
5	<b>economy_capacity</b>	float			No	0	
6	<b>delete_flag</b>	tinyint(1)			No	0	
7	<b>date_created</b>	datetime			No	current_timestamp()	
8	<b>date_updated</b>	datetime			Yes	NULL	

#	Name	Type	Collation	Attributes	Null	Default
1	<b>id</b> 	int(30)			No	None
2	<b>seat_num</b>	varchar(50)	utf8mb4_general_ci		No	None
3	<b>schedule_id</b> 	int(30)			No	None
4	<b>schedule</b>	datetime			No	None
5	<b>firstname</b>	text	utf8mb4_general_ci		No	None
6	<b>middlename</b>	text	utf8mb4_general_ci		No	None
7	<b>lastname</b>	text	utf8mb4_general_ci		No	None
8	<b>seat_type</b>	tinyint(1)			No	1
9	<b>fare_amount</b>	float			No	0
10	<b>date_created</b>	datetime			No	current_timestamp
11	<b>date_updated</b>	datetime			Yes	NULL

### 3.2 Dataflows Diagram:



## 4.SYSTEM IMPLEMENTATION

### 4.1 Screenshot for Homepage:



### 4.2 Module description:

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Bus Ticket Booking</title>
    <link rel="stylesheet"
        href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/css/bootstrap.min.css">
    <link rel="stylesheet" href="styles.css">
    <style>
        body {
            background: url('styles/login.jpg') no-repeat center center fixed;
            background-size: cover;
        }
        .btn-custom {
            background: rgba(255, 255, 255, 0.2);
            color: black;
            border: none;
            backdrop-filter: blur(5px);
        }
        .btn-custom:hover {
            background: rgba(255, 255, 255, 0.3);
        }
        .card-transparent {
```

```

        background: rgba(255, 255, 255, 0.2);
        border-radius: 10px;
        padding: 20px;
        backdrop-filter: blur(10px);
    }

```

</style>

</head>

<body>

```

<div class="container text-center mt-5">
    <div class="card card-transparent">
        <div class="card-body">
            <h1>Welcome to Online Bus Ticket Booking</h1>
            <p>Book your tickets easily and conveniently.</p>
        </div>
    </div>
    <div class="mt-3">
        <a href="login.html" class="btn btn-custom">Login</a>
        <a href="register.html" class="btn btn-custom">Register</a>
    </div>
</div>

```

</body>

</html>

## 5.CONCLUSION

An automated Bus Ticket Reservation System is essential to address the inefficiencies of traditional ticketing methods. By providing real-time updates on bus schedules and seat availability, enabling secure online payments, and streamlining the booking and cancellation processes, the system significantly reduces long queues, overbooking, and inaccurate seat allocations. Additionally, it empowers bus operators to manage schedules, track bookings, and generate insightful reports for better operational decisions. Overall, the implementation of such a system enhances user convenience, improves operational efficiency, and ensures a seamless ticketing experience for both passengers and bus operators.

S.No	Particulars	Max.Marks	Marks awarded
1.	Inference	10	
2.	Presentation	3	
3.	On-time submission	2	
	Total	15	

## RESULT:

Thus the simple and efficient Ticket Reservation System was developed successfully.

EXP NO:04	<h1>Expert System</h1>
DATE:	

## 1.PROJECT AIM AND OBJECTIVES

### 1.1 Project Aim:

To develop a expert system in recipe management using PHP and MySQL.

### 1.2 Objectives:

The primary objective of the expert system is to develop a knowledge-based system that mimics the decision-making abilities of a human expert in a specific domain, providing accurate and reliable advice, solutions, or diagnoses to users. It develops a comprehensive knowledge base that represents the expertise and knowledge of a human expert in the specific domain, designing an inference engine that can reason and draw conclusions based on the knowledge base and user input, providing a user-friendly interface that allows users to interact with the system, provide input, and receive advice or solutions, ensuring accuracy and reliability through validation and verification techniques, enabling knowledge updating and maintenance to ensure the system remains current and accurate, evaluating system performance through metrics such as accuracy, reliability, and user satisfaction, and ensuring scalability and flexibility to allow for easy integration with other systems and adaptation to changing requirements.

## 2.SYSTEM ANALYSIS

### 2.1 Problem Statement:

Managing a restaurant efficiently is challenging due to factors like ingredient wastage, overproduction, inconsistent quality, and fluctuating customer demand. Traditional methods often lead to financial losses and customer dissatisfaction. This system will assist shop owners by tracking inventory, ensuring timely restocking of ingredients, and suggesting optimal

production quantities based on demand patterns. It will also help maintain quality control by ensuring accurate ingredient proportions and standardized recipes.

## **2.2 Software and Hardware requirements:**

### **Software:**

Tools: VS Code, Xampp

### **Hardware:**

Processor: Intel Core i8

RAM: 16GB

Storage: 512GB SSD

## **2.3 Software tools used:**

### **2.3.1 Frontend.**

1. HTML
2. CSS
3. Bootstrap
4. Javascript

### **2.3.2 Backend.**

1. MySQL
2. PHP

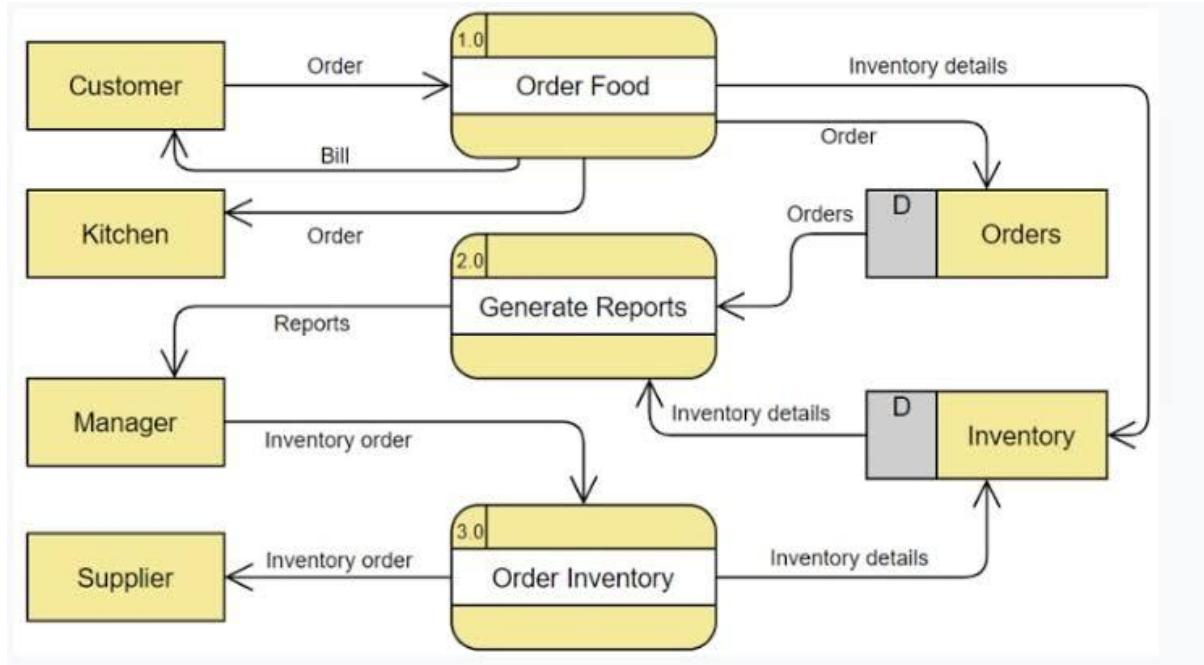
## **3.SYSTEM DESIGN**

### **3.1 Table Design:**

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	<b>id</b> 	int(11)			No	None		AUTO_INCREMENT	 Change  Drop More
2	<b>name</b> 	varchar(255)	utf8mb4_general_ci		No	None			 Change  Drop More
3	<b>email</b> 	varchar(255)	utf8mb4_general_ci		No	None			 Change  Drop More
4	<b>password</b>	varchar(255)	utf8mb4_general_ci		No	None			 Change  Drop More

	<input type="button" value="←"/>	<input type="button" value="→"/>	<input type="button" value="id"/>	<input type="button" value="name"/>	<input type="button" value="country"/>	<input type="button" value="ingredients"/>	<input type="button" value="instructions"/>	<input type="button" value="image_url"/>	<input type="button" value="image"/>
<input type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Copy"/>	<input type="button" value="Delete"/>	1 Gulab Jamun	India	Milk powder, Sugar, Cardamom, Rose water	Deep fry dough balls and soak in sugar syrup	gulab_jamun.jpg	gulab_jamun.jpg
<input type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Copy"/>	<input type="button" value="Delete"/>	2 Rasgulla	India	Chhena, Sugar, Water	Boil chhena balls in sugar syrup	rasgulla.jpg	NULL
<input type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Copy"/>	<input type="button" value="Delete"/>	3 Jalebi	India	Flour, Yogurt, Sugar, Saffron	Fry in coil shape and soak in sugar syrup	jalebi.jpg	NULL
<input type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Copy"/>	<input type="button" value="Delete"/>	4 Kaju Katli	India	Cashew nuts, Sugar, Ghee	Blend cashew and cook into smooth fudge	kaju_katli.jpg	NULL
<input type="checkbox"/>	<input type="button" value="Edit"/>	<input type="button" value="Copy"/>	<input type="button" value="Delete"/>	5 Mysore Pak	India	Gram flour, Ghee, Sugar	Cook gram flour in ghee and sugar	mysore_pak.jpg	NULL

## 3.2 Dataflows Diagram:



## 4.SYSTEM IMPLEMENTATION

### 4.1 Screenshot for Homepage:



## 4.2 Module description:

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Expert System - Home</title>
    <link rel="stylesheet" href="styles.css">
    <style>
        /* Ensure full-page background image */
        body {
            font-family: "Times New Roman", serif;
            text-align: center;
            background: url('images/lan.jpg') no-repeat center center fixed;
            background-size: cover;
            color: white; /* Ensure text is visible */
            height: 100vh;
            display: flex;
            flex-direction: column;
            justify-content: center;
            align-items: center;
            margin: 0;
        }
        .header {
            width: 100%;
            position: absolute;
            top: 0;
            left: 0;
            display: flex;
            justify-content: space-between;
            align-items: center;
            padding: 20px;
            color: white;
            font-size: 20px;
            font-weight: bold;
        }
        .buttons {
            display: flex;
            gap: 10px;
            margin-right: 20px;
        }
        /* Transparent Glassmorphic Buttons */
        button {
            background: rgba(255, 255, 255, 0.2); /* Transparent white */
            color: white;
```

```
border: 2px solid rgba(255, 255, 255, 0.5);
padding: 10px 20px;
font-size: 16px;
cursor: pointer;
border-radius: 5px;
backdrop-filter: blur(10px); /* Blur effect */
transition: all 0.3s ease-in-out;
}
button:hover {
    background: rgba(255, 255, 255, 0.4);
}
/* Transparent Card */
.card {
    background: rgba(255, 255, 255, 0.2); /* White with transparency */
    padding: 40px;
    border-radius: 15px;
    backdrop-filter: blur(10px); /* Adds blur effect */
    box-shadow: 0px 4px 10px rgba(0, 0, 0, 0.2);
    text-align: center;
    width: 50%;
}
.title {
    font-size: 50px; /* Increased font size */
    font-weight: bold;
    color: white; /* Ensure visibility */
}
</style>
</head>
<body>
<div class="header">
    <div></div> <!-- Empty div to push buttons to the right -->
    <div class="buttons">
        <button onclick="location.href='login.html'">Login</button>
        <button onclick="location.href='register.html'">Register</button>
    </div>
</div>

<!-- Card Wrapper for Content -->
<div class="card">
    <div class="title">
        Welcome to Recipe Expert System
    </div>
</div>
</body>
</html>
```

## **5.CONCLUSION**

The Expert System for Recipe Management offers an efficient and intelligent solution to the challenges faced by sweets shop owners. By automating inventory tracking, optimizing production planning, ensuring quality control, and analyzing customer preferences, the system helps reduce waste, improve efficiency, and enhance customer satisfaction. With data-driven decision-making, shop owners can streamline their operations, minimize losses, and maximize profitability. Implementing this expert system will not only simplify sweets management but also contribute to a more sustainable and successful business.

S.No	Particulars	Max.Marks	Marks awarded
1.	Inference	10	
2.	Presentation	3	
3.	On-time submission	2	
	Total	15	

## **RESULT:**

Thus the simple and efficient Expert System for recipe management was developed successfully.

EXP NO:05	<h1>Portfolio Website</h1>
DATE:	

## 1.PROJECT AIM AND OBJECTIVES

### 1.1 Project Aim:

To develop a portfolio website using HTML and CSS.

### 1.2 Objectives:

The primary objective of a portfolio website are multifaceted, aiming to effectively showcase my work and projects, while demonstrating my expertise and capabilities to potential employers, clients, or collaborators. By establishing a strong personal brand, I intend to differentiate myself in my field and increase my online visibility. Additionally, the website will provide easy access to my resume and contact information, facilitating meaningful connections and opportunities that can enhance my career growth and professional development. Ultimately, the website will serve as a dynamic platform that highlights my strengths and accomplishments.

## 2.SYSTEM ANALYSIS

### 2.1 Problem Statement:

The lack of a professional online presence poses a significant challenge for individuals seeking to showcase their skills and experience to potential employers, clients, or collaborators. Without a centralized platform to effectively demonstrate accomplishments and connect with relevant opportunities, it can be difficult to stand out in a competitive job market or establish a strong professional reputation. By establishing a strong online presence, individuals can increase their visibility, build their personal brand, and access new opportunities that can help them achieve their career goals.

## **2.2 Software and Hardware requirements:**

### **Software:**

Tools: VS Code

### **Hardware:**

Processor: Intel Core i8

RAM: 16GB

Storage: 512GB SSD

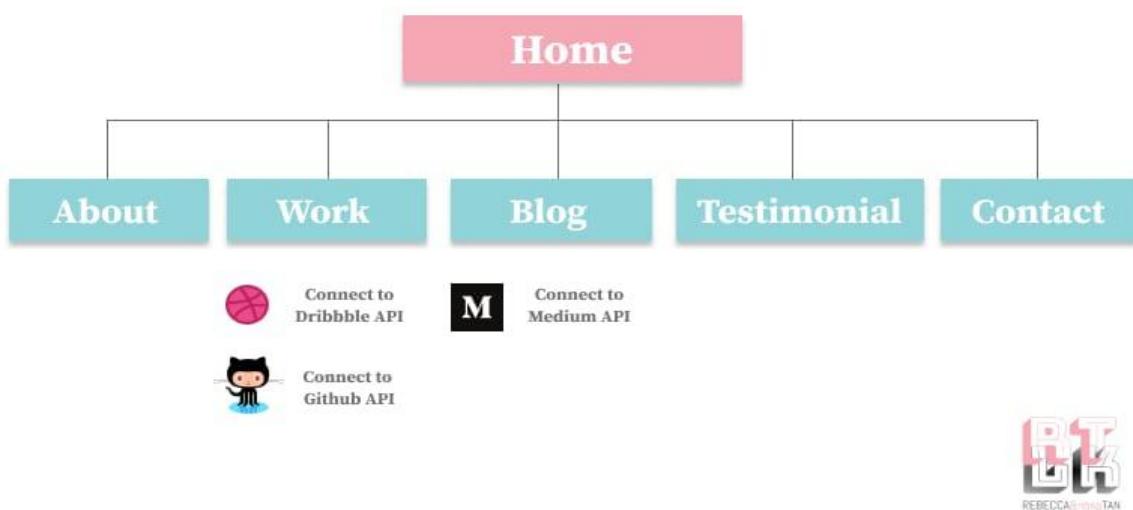
## **2.3 Software tools used:**

### **2.3.1 Frontend.**

1. HTML
2. CSS
3. Bootstrap
4. Javascript

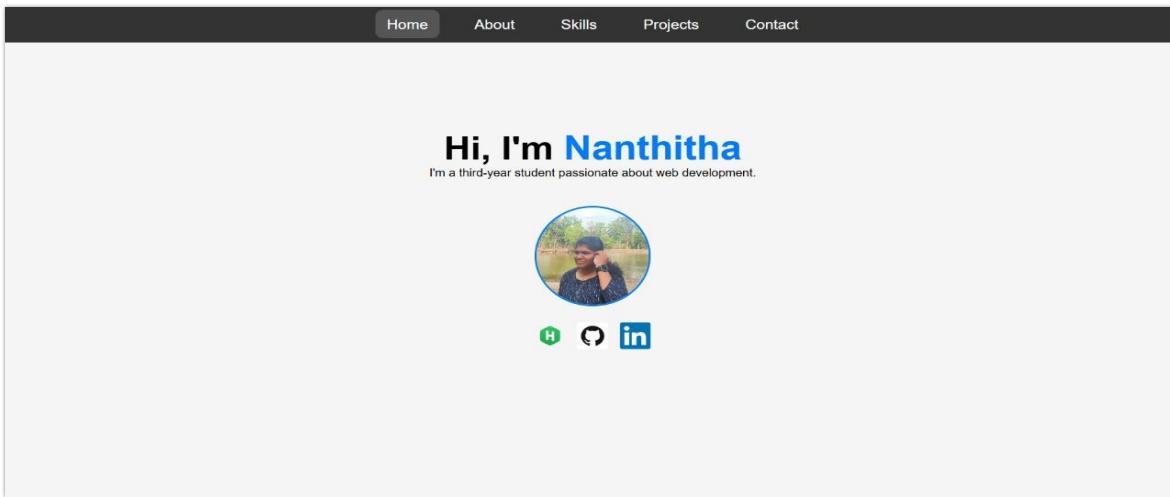
## **3.SYSTEM DESIGN**

### **3.1 Dataflows Diagram:**



## 4.SYSTEM IMPLEMENTATION

### 4.1 Screenshot for Homepage:



### 4.2 Module description:

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>My Portfolio</title>
    <link rel="stylesheet" href="styles.css">
</head>
<body>
    <nav>
        <ul>
            <li><a href="index.html" class="active">Home</a></li>
            <li><a href="about.html">About</a></li>
            <li><a href="skills.html">Skills</a></li>
            <li><a href="projects.html">Projects</a></li>
            <li><a href="contact.html">Contact</a></li>
        </ul>
    </nav>

    <section class="home">
        <h1>Hi, I'm <span class="name">Nanthitha</span></h1>
        <p>I'm a third-year student passionate about web development.</p>

        <div class="profile">
            
        </div>
```

```
<div class="social-links">
    <a href="https://www.hackerrank.com/profile/nanthithanandhu4"
target="_blank">
        
    </a>
    <a href="https://github.com/Nandhu13-coder" target="_blank">
        
    </a>
    <a href="https://www.linkedin.com/in/nanthitha-l-425047260/"
target="_blank">
        
    </a>
</div>
</section>

<script src="script.js"></script>
</body>
</html>
```

## 5.CONCLUSION

This portfolio website serves as a comprehensive showcase of my skills, experience, and accomplishments. Through this platform, I aim to establish a strong online presence, demonstrate my expertise, and connect with potential employers, clients, or collaborators. By providing easy access to my portfolio, resume, and contact information, I hope to facilitate meaningful connections and opportunities that can enhance my career growth and professional development. I am excited to continue updating and expanding this platform as my career evolves, and I look forward to exploring new opportunities and collaborations.

S.No	Particulars	Max.Marks	Marks awarded
1.	Inference	10	
2.	Presentation	3	
3.	On-time submission	2	
	Total	15	

## RESULT:

Thus the simple and efficient portfolio website was developed successfully.

EXP NO:06	<b>Quiz App</b>
DATE:	

## 1.PROJECT AIM AND OBJECTIVES

### 1.1 Project Aim:

To develop a quiz app using PHP and MySQL.

### 1.2 Objectives:

The primary objective of a quiz app is to design an engaging and interactive platform that assesses users' knowledge and understanding of various subjects, while providing a fun and educational experience. The app aims to cater to diverse learning needs, offering a range of quizzes and assessments that challenge users and help them track their progress. By incorporating features such as scoring, leaderboards, and feedback, the app seeks to motivate users to learn and improve, while also fostering a sense of community and competition among users. Ultimately, the app strives to make learning enjoyable, accessible, and effective.

## 2.SYSTEM ANALYSIS

### 2.1 Problem Statement:

The rise of digital learning has created a demand for interactive and engaging educational tools, yet many existing quiz platforms lack personalization, user-friendly interfaces, or comprehensive content, making it difficult for learners to stay motivated and track their progress effectively. This quiz app project seeks to address these limitations by developing an intuitive and adaptive platform that offers a vast library of quizzes, real-time feedback, and tailored learning paths. By harnessing the power of technology, the app aims to revolutionize the way people learn and assess their knowledge, providing a seamless and enjoyable experience that fosters academic success and personal growth, while also catering to diverse learning styles.

## **2.2 Software and Hardware requirements:**

### **Software:**

Tools: VS Code, Xampp

### **Hardware:**

Processor: Intel Core i8

RAM: 16GB

Storage: 512GB SSD

## **2.3 Software tools used:**

### **2.3.1 Frontend.**

1. HTML
2. CSS
3. Bootstrap
4. Javascript

### **2.3.2 Backend.**

1. MySQL
2. PHP

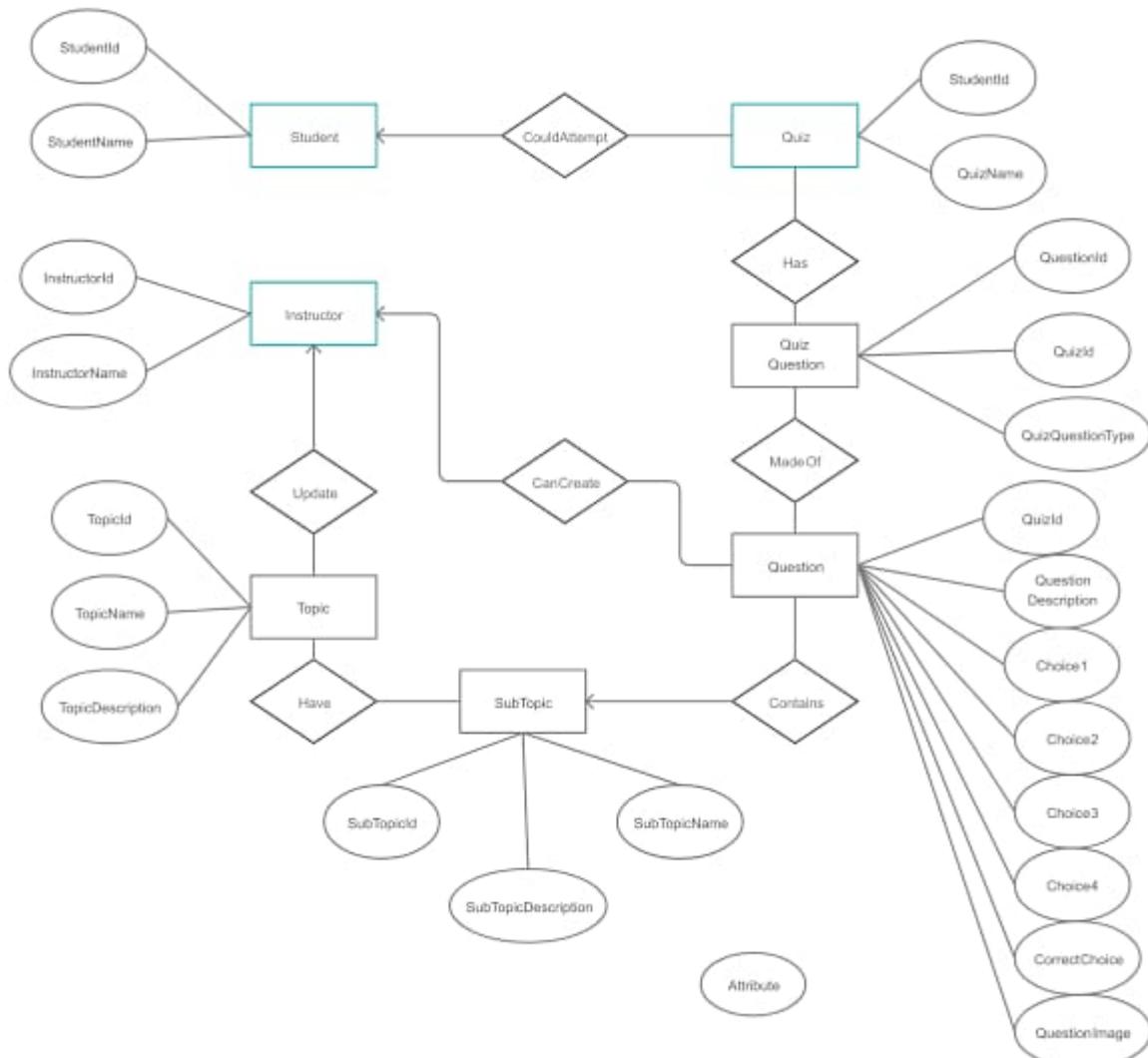
## **3.SYSTEM DESIGN**

### **3.1 Table Design:**

#	Name	Type	Collation	Attributes	Null	Default	C
1	<b>LessonID</b> 	int(11)			No	None	
2	<b>LessonChapter</b>	varchar(90)	latin1_swedish_ci		No	None	
3	<b>LessonTitle</b>	varchar(90)	latin1_swedish_ci		No	None	
4	<b>FileLocation</b>	text	latin1_swedish_ci		No	None	
5	<b>Category</b>	varchar(90)	latin1_swedish_ci		No	None	

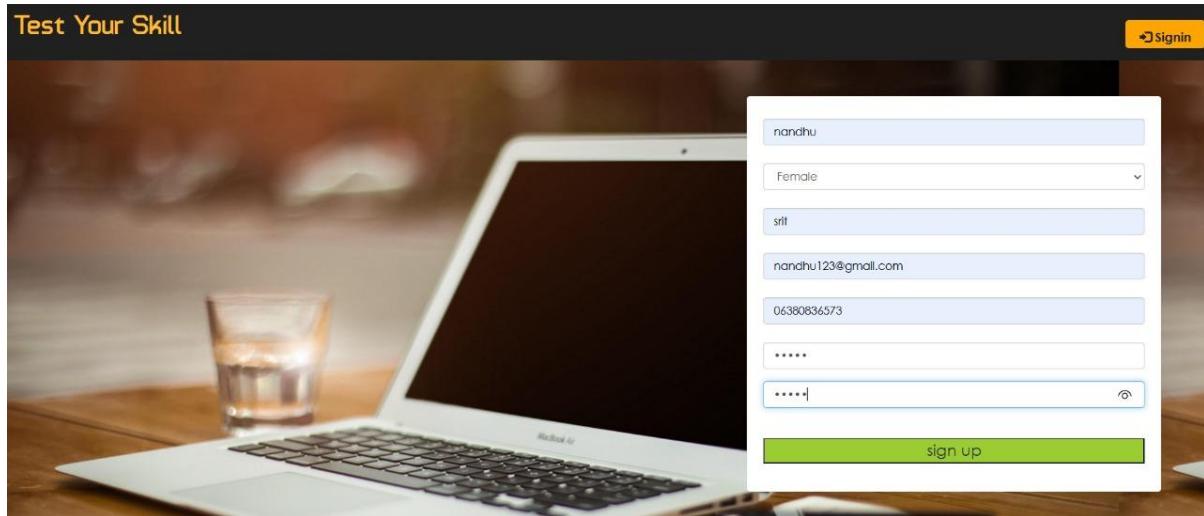
#	Name	Type	Collation	Attributes	Null	Default
1	ExerciseID 🍔	int(11)			No	None
2	LessonID	int(11)			No	None
3	Question	text	latin1_swedish_ci		No	None
4	ChoiceA	text	latin1_swedish_ci		No	None
5	ChoiceB	text	latin1_swedish_ci		No	None
6	ChoiceC	text	latin1_swedish_ci		No	None
7	ChoiceD	text	latin1_swedish_ci		No	None
8	Answer	varchar(90)	latin1_swedish_ci		No	None
9	ExercisesDate	date			No	None

### 3.2 Dataflows Diagram:



## 4.SYSTEM IMPLEMENTATION

### 4.1 Screenshot for Homepage:



### 4.2 Module description:

```
<?php  
session_start();  
include 'db.php'; // Ensure this correctly connects to your database  
  
// Fetch topics securely  
$query = "SELECT DISTINCT id, name FROM topics";  
$result = $conn->query($query);  
  
if (!$result) {  
    die("Database query failed: " . $conn->error);  
}  
?>  
  
<!DOCTYPE html>  
<html lang="en">  
<head>  
    <meta charset="UTF-8">  
    <meta name="viewport" content="width=device-width, initial-scale=1.0">  
    <title>Quiz Topics</title>  
    <link  
        href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/css/bootstrap.min.css"  
        rel="stylesheet">  
    <style>  
        body {  
            background: url('assets/img/index.png') no-repeat center center fixed;  
        }</style>
```

```
background-size: cover;
font-family: Arial, sans-serif;
}
.container {
    background: rgba(255, 255, 255, 0.2);
    padding: 20px;
    border-radius: 15px;
    box-shadow: 0 4px 10px rgba(0, 0, 0, 0.2);
    backdrop-filter: blur(10px);
    margin-top: 50px;
    max-width: 600px;
    text-align: center;
}
.list-group-item {
    background: rgba(255, 255, 255, 0.5);
    border: none;
    transition: all 0.3s ease-in-out;
}
.list-group-item:hover {
    background: rgba(255, 255, 255, 0.7);
    transform: scale(1.02);
}
.auth-container {
    background: rgba(255, 255, 255, 0.2);
    backdrop-filter: blur(10px);
    padding: 15px;
    border-radius: 15px;
    display: flex;
    justify-content: center;
}
.btn-primary {
    background: #007bff;
    border: none;
    transition: background 0.3s ease-in-out;
}
.btn-primary:hover {
    background: #0056b3;
}
</style>
</head>
<body>

<div class="container mt-5">
    <!-- Auth Button Centered -->
    <div class="auth-container">
```

```

<?php if (isset($_SESSION["username"])): ?>
    <a href="logout.php" class="btn btn-danger">Logout (<?php echo
$_SESSION["username"]; ?>)</a>
<?php else: ?>
    <a href="login.php" class="btn btn-primary">Login</a>
<?php endif; ?>
</div>

<!-- Quiz Topics -->
<?php if ($result->num_rows > 0): ?>
<ul class="list-group mt-4">
    <?php while ($row = $result->fetch_assoc()) { ?>
        <li class="list-group-item d-flex justify-content-between align-items-
center">
            <span><?php echo htmlspecialchars($row['name']); ?></span>
            <a href="quiz.php?topic_id=<?php echo $row['id']; ?>" class="btn btn-
primary">Start Quiz</a>
        </li>
    <?php } ?>
</ul>
<?php else: ?>
    <div class="alert alert-warning mt-3">No topics found. Please add topics to the
database.</div>
<?php endif; ?>
</div>

<!-- Bootstrap JS -->
<script
src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/js/bootstrap.bundle.min.js"></
script>
</body>
</html>

```

## 5.CONCLUSION

The quiz app offers a dynamic and engaging platform for users to test their knowledge, learn new concepts, and track their progress. By providing an interactive and user-friendly experience, the app aims to make learning enjoyable and effective, catering to diverse needs and preferences. With its potential to reach a wide audience, the quiz app can become a valuable tool for education and personal development.

S.No	Particulars	Max.Marks	Marks awarded
1.	Inference	10	
2.	Presentation	3	
3.	On-time submission	2	
	Total	15	

## RESULT:

Thus the simple and efficient Quiz app was developed successfully.

EXP NO:07	<b>Student Management System</b>
DATE:	

## 1.PROJECT AIM AND OBJECTIVES

### 1.1 Project Aim:

To develop a student management system using PHP and MySQL.

### 1.2 Objectives:

The primary objective of a Student Management System are multifaceted, focusing on streamlining student data management, automating administrative tasks, and enhancing communication between students, teachers, and parents. By providing real-time access to student information, the system enables informed decision-making, improves student outcomes, and increases institutional effectiveness. Additionally, it aims to reduce administrative burdens, enhance data accuracy, and promote transparency, ultimately creating a more efficient, organized, and supportive educational environment that benefits all stakeholders. The system seeks to leverage technology to drive positive change and improvement in educational institutions.

## 2.SYSTEM ANALYSIS

### 2.1 Problem Statement:

The manual and fragmented nature of traditional student data management processes poses significant challenges for educational institutions, including inefficiencies, inaccuracies, and delays in administrative tasks such as student registration, attendance tracking, and grade management. The lack of real-time access to student information hinders effective communication between students, teachers, and parents, making it difficult to identify and support students' needs in a timely manner. By streamlining student data management, the system aims to enable educators to focus on delivering high-quality education and support to students.

## **2.2 Software and Hardware requirements:**

### **Software:**

Tools: VS Code, Xampp

### **Hardware:**

Processor: Intel Core i8

RAM: 16GB

Storage: 512GB SSD

## **2.3 Software tools used:**

### **2.3.1 Frontend.**

1. HTML
2. CSS
3. Bootstrap
4. Javascript

### **2.3.2 Backend.**

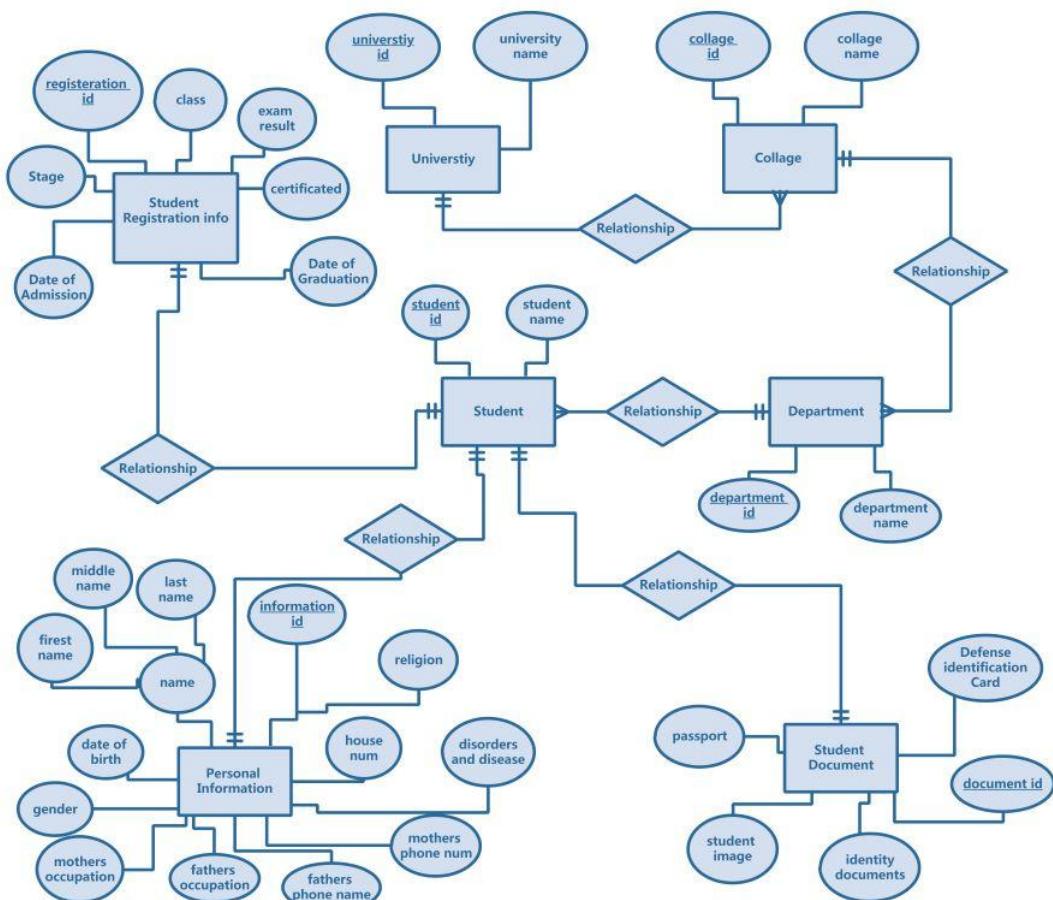
1. MySQL
2. PHP

## **3.SYSTEM DESIGN**

### **3.1 Table Design:**

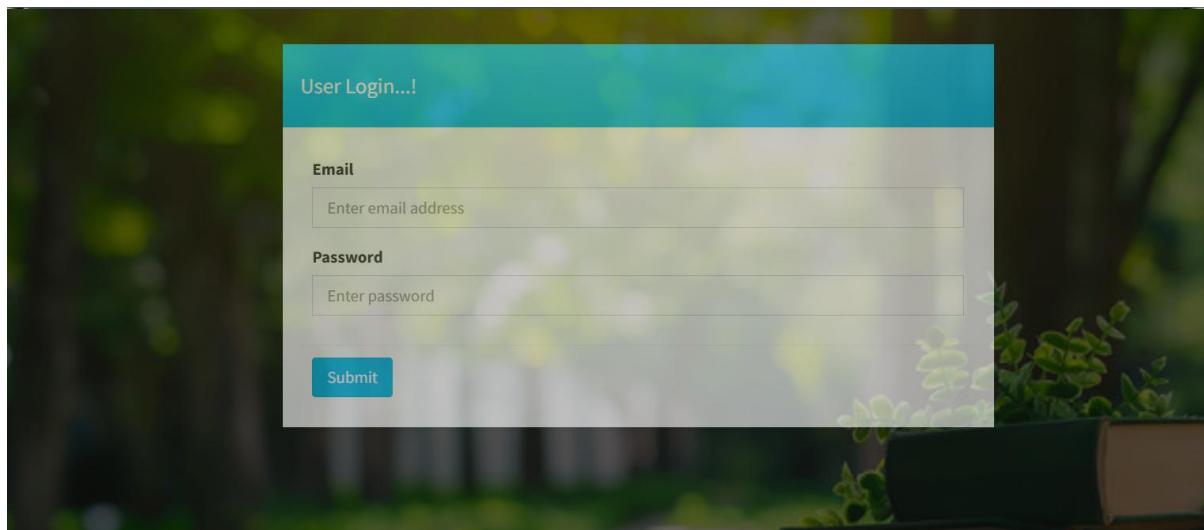
2	<b>firstname</b>	varchar(250)	utf8mb4_general_ci	No	<i>None</i>
3	<b>middlename</b>	text	utf8mb4_general_ci	Yes	<i>NULL</i>
4	<b>lastname</b>	varchar(250)	utf8mb4_general_ci	No	<i>None</i>
5	<b>username</b>	text	utf8mb4_general_ci	No	<i>None</i>
6	<b>password</b>	text	utf8mb4_general_ci	No	<i>None</i>
7	<b>avatar</b>	text	utf8mb4_general_ci	Yes	<i>NULL</i>
8	<b>last_login</b>	datetime		Yes	<i>NULL</i>
9	<b>type</b>	tinyint(1)		No	0
10	<b>status</b>	int(1)		No	1

## 3.2 Dataflows Diagram:



## 4.SYSTEM IMPLEMENTATION

### 4.1 Screenshot for Homepage:



## 4.2 Module description:

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Student Management System</title>
    <link rel="stylesheet" href="css/styles.css">
    <script defer src="js/script.js"></script>
    <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/6.4.2/css/all.min.css">
</head>
<body>
    <header>
        <h1>🎓 Student Management System</h1>
    </header>

    <main class="center-content">
        <h2>Welcome to the Student Management System</h2>
        <p>Manage student records with ease.</p>
        <div class="button-group">
            <a href="admin-login.html" class="btn">🔑 Admin Login</a>
            <a href="user-login.html" class="btn">👤 Student Login</a>
        </div>
    </main>
</body>
</html>
```

## 5.CONCLUSION

The Student Management System offers a comprehensive and integrated solution for educational institutions, streamlining student data management, automating administrative tasks, and enhancing communication between stakeholders. By providing real-time access to student information and facilitating data-driven decision-making, the system improves student outcomes and institutional effectiveness. Ultimately, the Student Management System has the potential to transform the educational experience, enabling educators to focus on delivering high-quality education and support to students, and empowering institutions to achieve their goals more efficiently.

S.No	Particulars	Max.Marks	Marks awarded
1.	Inference	10	
2.	Presentation	3	
3.	On-time submission	2	
	Total	15	

## RESULT:

Thus the simple and efficient Student management system was developed successfully.

EXP NO:08

DATE:

# **Restaurant Management System**

## **1.PROJECT AIM AND OBJECTIVES**

### **1.1 Project Aim:**

To develop a restaurant management system using Python flask and MySQL.

### **1.2 Objectives:**

The primary objective of a Restaurant Management System are to streamline restaurant operations, enhance customer experience, and improve profitability. The system aims to automate tasks such as order management, inventory control, and billing, reducing manual errors and increasing efficiency. Additionally, it seeks to provide real-time insights and analytics, enabling informed decision-making and optimizing restaurant performance. By achieving these objectives, the system will enable restaurants to deliver high-quality service, increase customer satisfaction, and ultimately drive business growth and profitability. Effective management of tables, orders, and staff will also be key outcomes.

## **2.SYSTEM ANALYSIS**

### **2.1 Problem Statement:**

Traditional methods of managing orders, inventory, and billing can be time-consuming and prone to mistakes, resulting in lost revenue and poor customer experiences. Furthermore, the lack of real-time insights and analytics hinders effective decision-making, making it difficult for restaurants to optimize operations, manage staff efficiently, and improve profitability. By developing an integrated Restaurant Management System, the project seeks to automate tasks, provide accurate and up-to-date information, and facilitate data-driven decision-

making, ultimately enhancing customer satisfaction, streamlining operations, and driving business growth.

## **2.2 Software and Hardware requirements:**

### **Software:**

Tools: VS Code, Workbench

### **Hardware:**

Processor: Intel Core i8

RAM: 16GB

Storage: 512GB SSD

## **2.3 Software tools used:**

### **2.3.1 Frontend.**

1. HTML
2. CSS
3. Bootstrap
4. Javascript

### **2.3.2 Backend.**

1. MySQL
2. Python(Flask)

## **3.SYSTEM DESIGN**

### **3.1 Table Design:**



The screenshot shows a MySQL Workbench interface with a 'Result Grid' tab selected. The grid displays data from a table with columns: id, table\_number, status, and visibility. There are three rows of data:

	<b>id</b>	<b>table_number</b>	<b>status</b>	<b>visibility</b>
▶	1	3	reserved	visible
▼	3	4	available	visible
*	NULL	NULL	NULL	NULL

Table Create Table

orders CREATE TABLE `orders` ( `id` int NOT NULL A...

	id	username	password	role
▶	1	admin	admin123	admin
*	2	customer	customer123	customer

Result Grid | Filter Rows: | Edit: | Export/Import:

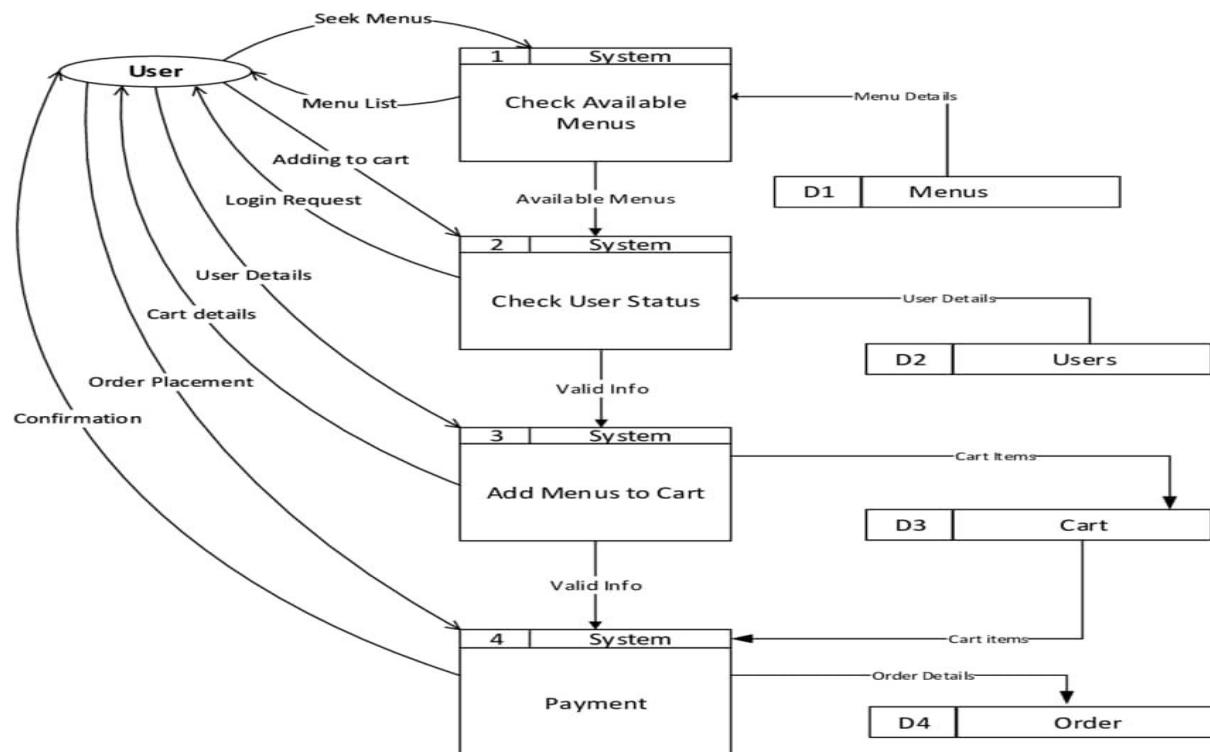
	id	name	price	description	category	available	image_url
▶	1	noodels	200.00	little spice	fast food	1	NULL
	2	briyani	150.00	ck	main course	1	NULL
*	4	dosa	25.00	roast	main	1	NULL
*	5	chicken fried rice	120.00	chennai daba	main course	1	NULL

Result Grid | Filter Rows: | Edit: | Export/Import:

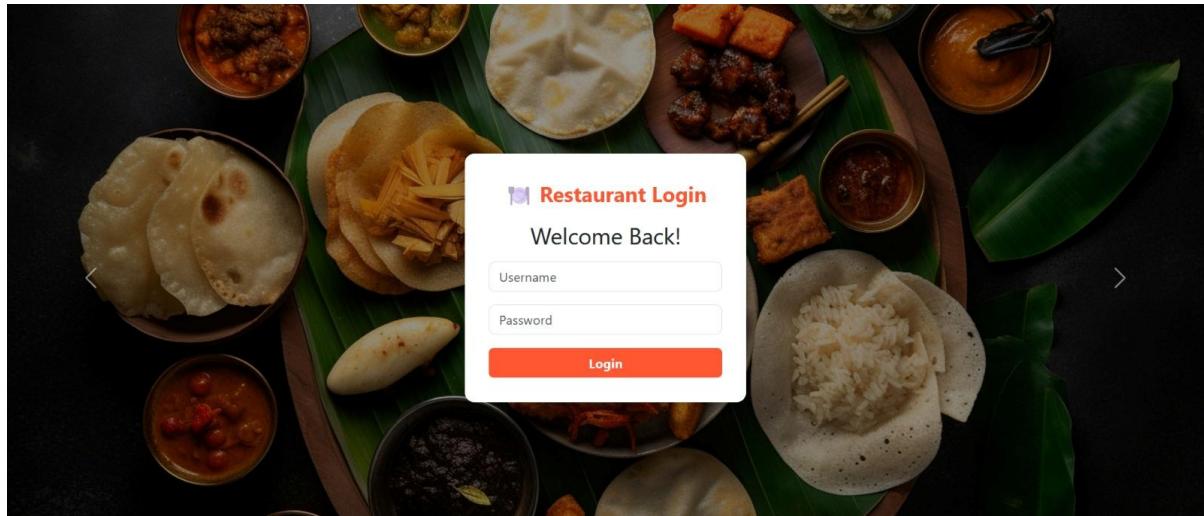
	id	order_id	menu_item_id	quantity	total_price
▶	3	1	5	1	120.00
*	5	1	4	1	25.00
*	NULL	NULL	NULL	NULL	NULL

### 3.2 Dataflows Diagram:



## 4.SYSTEM IMPLEMENTATION

### 4.1 Screenshot for Homepage:



### 4.2 Module description:

```
from flask import Flask, render_template, request, redirect, url_for, flash, session  
from flask_mysqldb import MySQL  
import time # Add this at the top of your file
```

```
app = Flask(__name__)  
  
# MySQL Configuration  
app.config['MYSQL_HOST'] = 'localhost'  
app.config['MYSQL_USER'] = 'root'  
app.config['MYSQL_PASSWORD'] = 'Manasa24$' # Change this  
app.config['MYSQL_DB'] = 'restaurant_db'  
app.config['MYSQL_CURSORCLASS'] = 'DictCursor'  
  
mysql = MySQL(app)  
app.secret_key = 'your_secret_key' # Change this for security  
@app.route('/')  
def landing():  
    return render_template('landing.html')  
  
# 🔑 User Login  
@app.route('/login.html', methods=['GET', 'POST'])  
def login():  
    if request.method == 'POST':  
        username = request.form['username']  
        password = request.form['password']
```

```

        cur = mysql.connection.cursor()
        cur.execute("SELECT * FROM users WHERE username=%s AND
password=%s", (username, password))
        user = cur.fetchone()
        cur.close()

    if user:
        session['loggedin'] = True
        session['username'] = user['username']
        session['role'] = user['role']

        if user['role'] == 'admin':
            return redirect(url_for('admin_dashboard'))
        else:
            return redirect(url_for('customer_dashboard'))

    return "Invalid username or password"

return render_template('login.html')

```

```

# 🖊 Admin Dashboard
@app.route('/admin')
def admin_dashboard():
    if 'loggedin' in session and session['role'] == 'admin':
        return render_template('admin_dashboard.html')
    return redirect(url_for('login'))

```

```

# ✅ View Menu Items
@app.route('/admin/menu')
def view_menu():
    if 'loggedin' in session and session['role'] == 'admin':
        cur = mysql.connection.cursor()
        cur.execute("SELECT * FROM menu")
        menu_items = cur.fetchall()
        cur.close()
        return render_template('admin_menu.html', menu_items=menu_items)
    return redirect(url_for('login'))

```

```

# ✅ Add Menu Item
@app.route('/admin/menu/add', methods=['GET', 'POST'])
def add_menu():

```

```

if 'loggedin' in session and session['role'] == 'admin':
    if request.method == 'POST':
        name = request.form['name']
        price = request.form['price']
        description = request.form['description']
        category = request.form['category']

        cur = mysql.connection.cursor()
        cur.execute("INSERT INTO menu (name, price, description, category)
VALUES (%s, %s, %s, %s)",
                    (name, price, description, category))
        mysql.connection.commit()
        cur.close()
        return redirect(url_for('view_menu'))

    return render_template('add_menu.html')
    return redirect(url_for('login'))

```

```

# ✅ Delete Menu Item
@app.route('/admin/menu/delete/<int:id>')
def delete_menu(id):
    if 'loggedin' in session and session['role'] == 'admin':
        cur = mysql.connection.cursor()
        cur.execute("DELETE FROM menu WHERE id = %s", (id,))
        mysql.connection.commit()
        cur.close()
        return redirect(url_for('view_menu'))
    return redirect(url_for('login'))
import MySQLdb.cursors # Import MySQLdb.cursors
# ✅ View Orders (Admin)

@app.route('/admin/orders')
def view_orders():
    if 'loggedin' in session and session['role'] == 'admin':
        cur = mysql.connection.cursor()

        # Adjust the query based on existing columns in 'orders'
        cur.execute("""
            SELECT orders.id, orders.customer_name, tables.table_number
            FROM orders
            JOIN tables ON orders.table_id = tables.id
        """)

        orders = cur.fetchall()

```

```
    cur.close()
    return render_template('admin_orders.html', orders=orders)
    return redirect(url_for('login'))
```

```
#  View & Manage Tables (Admin)
@app.route('/admin/tables')
def view_tables():
    if 'loggedin' in session and session['role'] == 'admin':
        cur = mysql.connection.cursor()
        cur.execute("SELECT * FROM tables")
        tables = cur.fetchall()
        cur.close()
        return render_template('admin_tables.html', tables=tables)
    return redirect(url_for('login'))
```

```
#  Add Table (Admin)
@app.route('/admin/tables/add', methods=['POST'])
def add_table():
    if 'loggedin' in session and session['role'] == 'admin':
        table_number = request.form['table_number']
        cur = mysql.connection.cursor()
        cur.execute("INSERT INTO tables (table_number, status) VALUES (%s,
'available')", (table_number,))
        mysql.connection.commit()
        cur.close()
        return redirect(url_for('view_tables'))
    return redirect(url_for('login'))
```

```
#  Delete Table (Admin)
@app.route('/admin/tables/delete/<int:id>')
def delete_table(id):
    if 'loggedin' in session and session['role'] == 'admin':
        cur = mysql.connection.cursor()
        cur.execute("DELETE FROM tables WHERE id=%s", (id,))
        mysql.connection.commit()
        cur.close()
        return redirect(url_for('view_tables'))
    return redirect(url_for('login'))
```

```
@app.route('/customer/tables')
def customer_tables():
```

```

if 'loggedin' in session and session['role'] == 'customer':
    cur = mysql.connection.cursor()
    cur.execute("SELECT id, table_number, status FROM tables WHERE
status='available'")

    tables = cur.fetchall()
    print("Fetched Tables:", tables) # DEBUGGING STATEMENT

    cur.close()
    return render_template('customer_tables.html', tables=tables)

    return redirect(url_for('login'))
@app.route('/customer/tables/reserve/<int:table_id>')
def reserve_table(table_id):
    if 'loggedin' in session and session['role'] == 'customer':
        cur = mysql.connection.cursor()

        #  Use id instead of table_id
        cur.execute("SELECT * FROM tables WHERE id = %s AND status =
'available'", (table_id,))
        table = cur.fetchone()

        if table:
            #  Use id instead of table_id
            cur.execute("UPDATE tables SET status = 'reserved' WHERE id = %s",
(table_id,))
            mysql.connection.commit()
            cur.close()
            return redirect(url_for('customer_tables')) # Redirect after reserving

        cur.close()
        return "Table is not available", 400 # Error message if table is not available

    return redirect(url_for('login')) # Redirect if not logged in

#  Customer: Place Order
@app.route('/customer/order', methods=['POST'])
def place_order():
    if 'loggedin' in session and session['role'] == 'customer':
        table_id = request.form['table_id']
        customer_name = request.form['customer_name']
        order_details = request.form['order_details']
        cur = mysql.connection.cursor()

```

```

        cur.execute("INSERT INTO orders (table_id, customer_name, order_details)
VALUES (%s, %s, %s)",
            (table_id, customer_name, order_details))
mysql.connection.commit()
cur.close()
return redirect(url_for('customer_tables'))
return redirect(url_for('login'))



@app.route('/customer/dashboard', methods=['GET'])
def customer_dashboard():
    if 'loggedin' in session and session['role'] == 'customer':
        customer_name = session['username']

    cur = mysql.connection.cursor()

    # ✅ Fetch available tables
    cur.execute("SELECT id, table_number, status FROM tables")
    tables = cur.fetchall()

    # ✅ Debugging Print Statement
    print("Fetched Tables:", tables) # DEBUGGING OUTPUT

    # ✅ Fetch menu items
    cur.execute("SELECT id, name, price FROM menu WHERE available =
    TRUE")
    menu = cur.fetchall()

    # ✅ Fetch current order for the customer
    cur.execute("""
        SELECT oi.id, m.name, oi.total_price
        FROM order_items oi
        JOIN menu m ON oi.menu_item_id = m.id
        JOIN orders o ON oi.order_id = o.id
        WHERE o.customer_name = %s AND o.order_status = 'pending'
    """, (customer_name,))
    order_items = cur.fetchall()

    total_amount = sum(item['total_price'] for item in order_items) if order_items
    else 0

    cur.close()

```

```

        return render_template('customer_dashboard.html',
                               customer_name=customer_name,
                               tables=tables,
                               menu=menu,
                               order_items=order_items,
                               total_amount=total_amount)

@app.route('/add_to_order/<int:item_id>')
def add_to_order(item_id):
    if 'loggedin' in session and session['role'] == 'customer':
        cur = mysql.connection.cursor()

        # Get item price
        cur.execute("SELECT price FROM menu WHERE id = %s", (item_id,))
        item = cur.fetchone()

        if item:
            total_price = item['price']
            customer_name = session['username']

            # Check if the user has an open order
            cur.execute("SELECT id FROM orders WHERE customer_name = %s AND
order_status = 'pending'", (customer_name,))
            order = cur.fetchone()

            if not order:
                # Create a new order if none exists
                cur.execute("INSERT INTO orders (customer_name, order_status)
VALUES (%s, 'pending')", (customer_name,))
                mysql.connection.commit()
                cur.execute("SELECT LAST_INSERT_ID() AS order_id")
                order = cur.fetchone()

            order_id = order['id']

            # Add item to the order
            cur.execute("INSERT INTO order_items (order_id, menu_item_id,
total_price) VALUES (%s, %s, %s)",
                       (order_id, item_id, total_price))
            mysql.connection.commit()

            cur.close()
            return redirect(url_for('customer_dashboard'))

    return redirect(url_for('login'))

```

```

        return redirect(url_for('login'))

# ━ Logout Route
@app.route('/logout')
def logout():
    session.clear()
    return redirect(url_for('login'))


@app.route('/remove_from_order/<int:item_id>')
def remove_from_order(item_id):
    if 'loggedin' in session and session['role'] == 'customer':
        cur = mysql.connection.cursor()

        # Delete the item from the order
        cur.execute("DELETE FROM order_items WHERE id = %s", (item_id,))
        mysql.connection.commit()

        cur.close()
        return redirect(url_for('customer_dashboard'))


    return redirect(url_for('login'))

@app.route('/payment', methods=['GET', 'POST'])
def payment():
    if 'loggedin' in session:
        if request.method == 'POST':
            # Process payment details here
            order_type = request.form.get('order_type')
            address = request.form.get('address') if order_type == "delivery" else None
            payment_method = request.form.get('payment_method')

            # You can store these details in a database or process them as needed
            return render_template('payment.html', message="Payment details submitted successfully!")

        return render_template('payment.html')
        return redirect(url_for('login'))


@app.route('/process_payment', methods=['POST'])
def process_payment():

```

```

if 'loggedin' in session:
    order_type = request.form['order_type']
    payment_method = request.form['payment_method']

    # ✖ Process the payment logic here (store in database, validate, etc.)

    flash("Payment successful!", "success")
    return redirect(url_for('payment_success', order_type=order_type,
                           payment_method=payment_method))

return redirect(url_for('login'))

@app.route('/payment_success')
def payment_success():
    if 'loggedin' in session:
        order_type = request.args.get('order_type', 'N/A')
        payment_method = request.args.get('payment_method', 'N/A')
        return render_template("payment_success.html", order_type=order_type,
                           payment_method=payment_method)

    return redirect(url_for('login'))

if __name__ == '__main__':
    app.run(debug=True)

```

## 5.CONCLUSION

The Restaurant Management System offers a comprehensive solution to streamline restaurant operations, enhance customer experience, and improve profitability. By automating tasks, providing real-time insights, and facilitating data-driven decision-making, the system enables restaurants to deliver high-quality service, optimize operations, and drive business growth. Ultimately, the Restaurant Management System has the potential to transform the restaurant industry, empowering businesses to achieve operational excellence, increase customer satisfaction, and stay competitive in a rapidly evolving market.

S.No	Particulars	Max.Marks	Marks awarded
1.	Inference	10	
2.	Presentation	3	
3.	On-time submission	2	
	Total	15	

## RESULT:

Thus the simple and efficient Restaurant manage system was developed successfully.

EXP NO:09	<b>E-Commerce Application System</b>
DATE:	

## 1.PROJECT AIM AND OBJECTIVES

### 1.1 Project Aim:

To develop a e-commerce application system using PHP and MySQL.

### 1.2 Objectives:

The primary objective of an E-commerce Application System are to provide a user-friendly interface for customers to browse and purchase products, offer a secure and efficient payment gateway, and enable effective product management and inventory control. The system aims to streamline order management and fulfillment processes, enhance customer experience through personalized recommendations and support, and increase sales and revenue through online channels. By achieving these objectives, the system will drive business growth, improve customer engagement and retention, and establish a strong online presence, ultimately leading to increased competitiveness and success in the e-commerce market.

## 2.SYSTEM ANALYSIS

### 2.1 Problem Statement:

Create a dynamic and user-friendly e-commerce web application that facilitates seamless online shopping experiences. The application will include a secure login system to authenticate users, allowing only registered users to access the platform. A visually appealing home page with a welcoming message and it will showcase available products, categorized for easy navigation. Users can add products to their cart and view only the selected items in the cart page. The checkout process will feature a payment system that generates a QR code linked to a unique customer ID for secure transactions. After payment, the system will confirm the order and display a delivery confirmation page.

## **2.2 Software and Hardware requirements:**

### **Software:**

Tools: VS Code, Xampp

### **Hardware:**

Processor: Intel Core i8

RAM: 16GB

Storage: 512GB SSD

## **2.3 Software tools used:**

### **2.3.1 Frontend.**

1. HTML
2. CSS
3. Bootstrap
4. Javascript

### **2.3.2 Backend.**

1. MySQL
2. PHP

## **3.SYSTEM DESIGN**

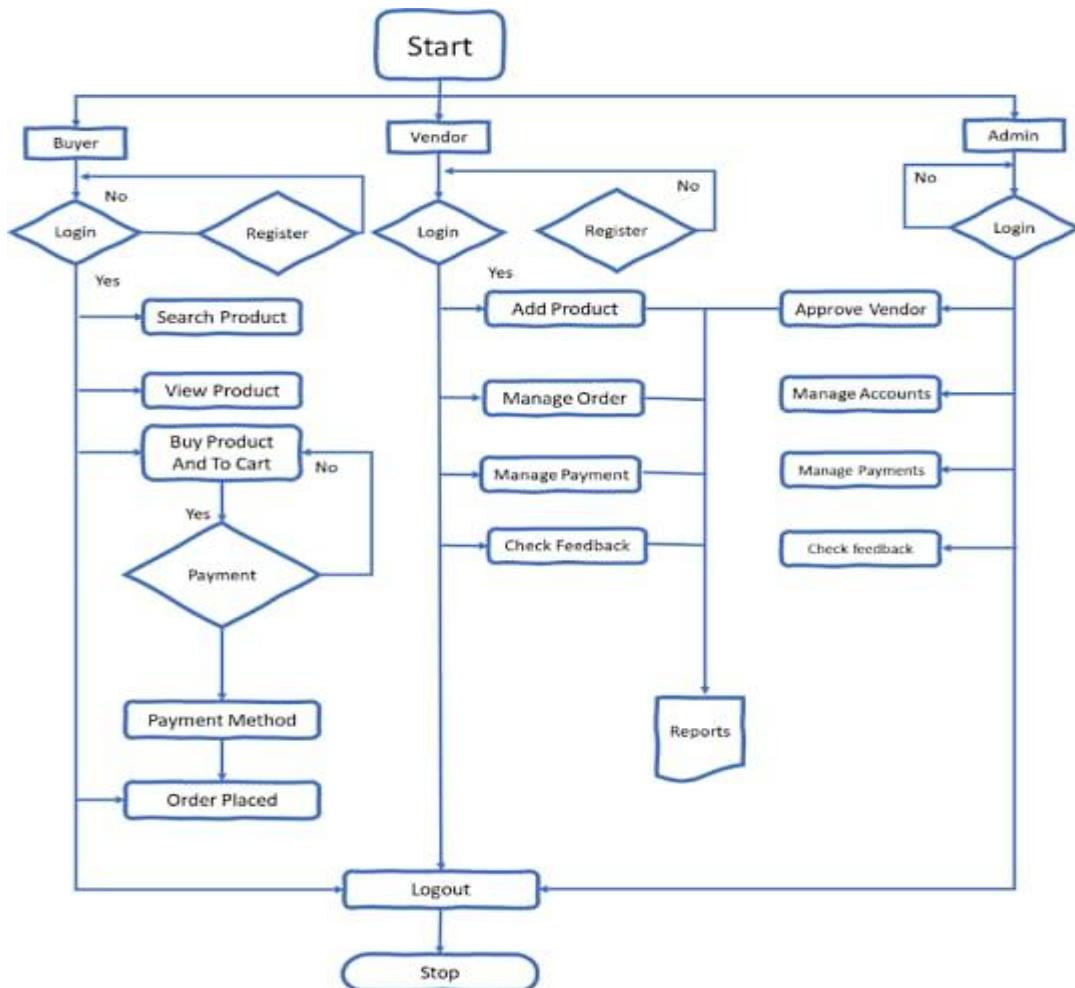
### **3.1 Table Design:**

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	ClientID 	int(11)		No	None			AUTO_INCREMENT
2	FirstName	varchar(255)	utf8mb4_general_ci	No	None			
3	LastName	varchar(255)	utf8mb4_general_ci	No	None			
4	Email 	varchar(255)	utf8mb4_general_ci	No	None			
5	PasswordHash	varchar(255)	utf8mb4_general_ci	No	None			
6	Address	varchar(255)	utf8mb4_general_ci	Yes	NULL			
7	PhoneNumber	varchar(20)	utf8mb4_general_ci	Yes	NULL			

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	OrderDetailID	int(11)			No	None	AUTO_INCREMENT	Change	Drop More
2	OrderID	int(11)			Yes	NULL		Change	Drop More
3	ProductID	int(11)			Yes	NULL		Change	Drop More
4	Quantity	int(11)			Yes	NULL		Change	Drop More
5	Subtotal	decimal(10,2)			Yes	NULL		Change	Drop More

#	Name	Type	Collation	Attributes	Null	Default
1	ProductID	int(11)			No	None
2	ProductName	varchar(255)	utf8mb4_general_ci		No	None
3	Description	text	utf8mb4_general_ci		Yes	NULL
4	Category	text	utf8mb4_general_ci		Yes	NULL
5	SupplierID	varchar(100)	utf8mb4_general_ci		Yes	NULL
6	OldPrice	decimal(10,2)			No	None
7	SpecialPrice	decimal(10,2)			Yes	NULL
8	QuantityInStock	int(11)			Yes	NULL
9	DateAdded	date			Yes	NULL
10	LastUpdated	timestamp			No	current_timestamp()
11	Discount	decimal(5,2)			Yes	NULL
12	ImageURL	varchar(255)	utf8mb4_general_ci		Yes	NULL
13	Rating	decimal(3,2)			Yes	NULL
14	Status	varchar(20)	utf8mb4_general_ci		Yes	NULL
15	Brand	varchar(40)	utf8mb4_general_ci		Yes	NULL

## 3.2 Dataflows Diagram:



## 4.SYSTEM IMPLEMENTATION

### 4.1 Screenshot for Homepage:

The screenshot shows a web browser window with the URL `localhost/ecomm/ecomm/users_area/user_registration.php`. The page title is "New User Registration". The form contains the following fields:

- Username: A text input field with placeholder text "Enter your username".
- Email: A text input field with placeholder text "Enter your email".
- User Image: A file upload input field with placeholder text "Choose File" and "No file chosen".
- Password: A text input field with placeholder text "Enter your password".
- Confirm Password: A text input field with placeholder text "Confirm your password".
- Address: A text input field with placeholder text "Enter your address".
- Mobile: A text input field with placeholder text "Enter your mobile".

### 4.2 Module description:

```
<?php
    include('../includes/connect.php');
    include('../functions/common_functions.php');
    session_start();
    if(isset($_SESSION['admin_username'])){
        $admin_name = $_SESSION['admin_username'];
        $get_admin_data = "SELECT * FROM admin_table WHERE admin_name
= '$admin_name'";
        $get_admin_result = mysqli_query($con,$get_admin_data);
        $row_fetch_admin_data = mysqli_fetch_array($get_admin_result);
        $admin_name = $row_fetch_admin_data['admin_name'];
        $admin_image = $row_fetch_admin_data['admin_image'];
    }else{
        echo "<script>window.open('./admin_login.php','_self');</script>";
    }
?>
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Ecommerce Admin Dashboard</title>
    <link rel="stylesheet" href="../assets/css/bootstrap.css" />
    <link rel="stylesheet" href="../assets/css/main.css" />
```

```

</head>
<body>
    <!-- upper-nav -->
    <div class="upper-nav primary-bg p-2 px-3 text-center text-break">
        <span>Admin Dashboard And Free Express Delivery</span>
    </div>
    <!-- upper-nav -->
    <!-- Start NavBar -->
    <nav class="navbar navbar-expand-lg navbar-light bg-light">
        <div class="container">
            <a class="navbar-brand fw-bold" href="#">A1</a>
            <button class="navbar-toggler" type="button" data-bs-toggle="collapse" data-bs-target="#navbarSupportedContentad" aria-controls="navbarSupportedContentad" aria-expanded="false" aria-label="Toggle navigation">
                <span class="navbar-toggler-icon"></span>
            </button>
            <div class="collapse navbar-collapse" id="navbarSupportedContentad">
                <ul class="navbar-nav ms-auto mb-2 mb-lg-0">
                    <li class="nav-item">
                        <a class="nav-link active" aria-current="page" href="#">Welcome
                        <?php echo $admin_name;?></a>
                    </li>
                    <li class="nav-item">
                        <button class="btn btn-primary p-0 px-1">
                            <a href=".//admin_logout.php" class="nav-link text-light">Logout</a>
                        </button>
                    </li>
                </ul>
            </div>
        </div>
    </nav>
    <!-- End NavBar -->
    <!-- Start Control Buttons -->
    <div class="control">
        <div class="container pt-4 pb-0">
            <div class="categ-header">
                <div class="sub-title">
                    <span class="shape"></span>
                    <span class="title">Admin Dashboard</span>
                </div>
                <h2>Manage Details Of Ecommerce</h2>
            </div>
            <div class="row align-items-center">

```

```
<div class="col-md-2">
    <div class="admin-image">
        <a href=".index.php"></a>
            <p><?php echo $admin_name;?></p>
        </div>
    </div>
    <div class="col-md-10">
        <div class="buttons">
            <button class="btn btn-outline-primary m-2">
                <a href=".insert_product.php" class="nav-link">Insert
Products</a>
            </button>
            <button class="btn btn-outline-primary m-2">
                <a href="index.php?view_products" class="nav-link">View
Products</a>
            </button>
            <button class="btn btn-outline-primary m-2">
                <a href="index.php?insert_category" class="nav-link">Insert
Categories</a>
            </button>
            <button class="btn btn-outline-primary m-2">
                <a href="index.php?view_categories" class="nav-link">View
Categories</a>
            </button>
            <button class="btn btn-outline-primary m-2">
                <a href="index.php?insert_brand" class="nav-link">Insert
Brands</a>
            </button>
            <button class="btn btn-outline-primary m-2">
                <a href="index.php?view_brands" class="nav-link">View
Brands</a>
            </button>
            <button class="btn btn-outline-primary m-2">
                <a href="index.php?list_orders" class="nav-link">All
Orders</a>
            </button>
            <button class="btn btn-outline-primary m-2">
                <a href="index.php?list_payments" class="nav-link">All
Payments</a>
            </button>
            <button class="btn btn-outline-primary m-2">
                <a href="index.php?list_users" class="nav-link">List
Users</a>
            </button>
```

```
        </div>
        </div>
        </div>
        </div>
<!-- End Control Buttons -->
<!-- divider -->
<div class="container">
    <div class="divider"></div>
</div>
<!-- divider -->
<!-- Start Changed Page -->
<div class="change-page">
    <div class="container">
        <?php
        if(isset($_GET['insert_category'])){
            include('./insert_categories.php');
        }
        if(isset($_GET['insert_brand'])){
            include('./insert_brands.php');
        }
        if(isset($_GET['view_products'])){
            include('./view_products.php');
        }
        if(isset($_GET['edit_product'])){
            include('./edit_product.php');
        }
        if(isset($_GET['delete_product'])){
            include('./delete_product.php');
        }
        if(isset($_GET['view_categories'])){
            include('./view_categories.php');
        }
        if(isset($_GET['edit_category'])){
            include('./edit_category.php');
        }
        if(isset($_GET['delete_category'])){
            include('./delete_category.php');
        }
    </body>
</html>
```

## **5.CONCLUSION**

The E-commerce Application System offers a comprehensive solution to streamline online business operations, enhance customer experience, and drive growth. By automating tasks, providing real-time insights, and facilitating data-driven decision-making, the system enables businesses to stay competitive, increase sales, and improve customer satisfaction. With its potential to transform the online shopping experience, the E-commerce Application System is poised to play a vital role in the success of businesses in the digital age. Effective implementation will be key to unlocking its full potential and achieving long-term success in the e-commerce industry.

S.No	Particulars	Max.Marks	Marks awarded
1.	Inference	10	
2.	Presentation	3	
3.	On-time submission	2	
	Total	15	

## **RESULT:**

Thus the simple and efficient E-Commerce application system was developed successfully.

EXP NO:10	<b>Library Management System</b>
DATE:	

## 1.PROJECT AIM AND OBJECTIVES

### 1.1 Project Aim:

To develop a library management system using PHP and MySQL.

### 1.2 Objectives:

The primary objective of a Library Management System are to automate and streamline library operations, enhancing efficiency and productivity. The system aims to manage book collections, track circulation, and maintain accurate records of borrowing and returning books. Additionally, it seeks to provide easy access to information for users, enable efficient searching and retrieval of books, and improve overall user experience. By achieving these objectives, the system will enable librarians to focus on providing better services, support research and learning, and ensure effective utilization of library resources. It will also facilitate better decision-making through data analysis and reporting.

## 2.SYSTEM ANALYSIS

### 2.1 Problem Statement:

Traditional library management systems rely on manual processes for book cataloging, student record maintenance, book issuance, and fine management. These methods are time-consuming, prone to human errors, and inefficient in handling large volumes of data. The Library Management System (LMS) aims to digitize and automate these operations, providing a streamlined, efficient, and secure platform for managing library resources. The system enables librarians to add and manage students and books, track book issuance and returns, enforce security measures such as password encryption, and generate reports for better decision-making.

## **2.2 Software and Hardware requirements:**

### **Software:**

Tools: VS Code, Xampp

### **Hardware:**

Processor: Intel Core i8

RAM: 16GB

Storage: 512GB SSD

## **2.3 Software tools used:**

### **2.3.1 Frontend.**

1. HTML
2. CSS
3. Bootstrap
4. Javascript

### **2.3.2 Backend.**

1. MySQL
2. PHP

## **3.SYSTEM DESIGN**

### **3.1 Table Design:**

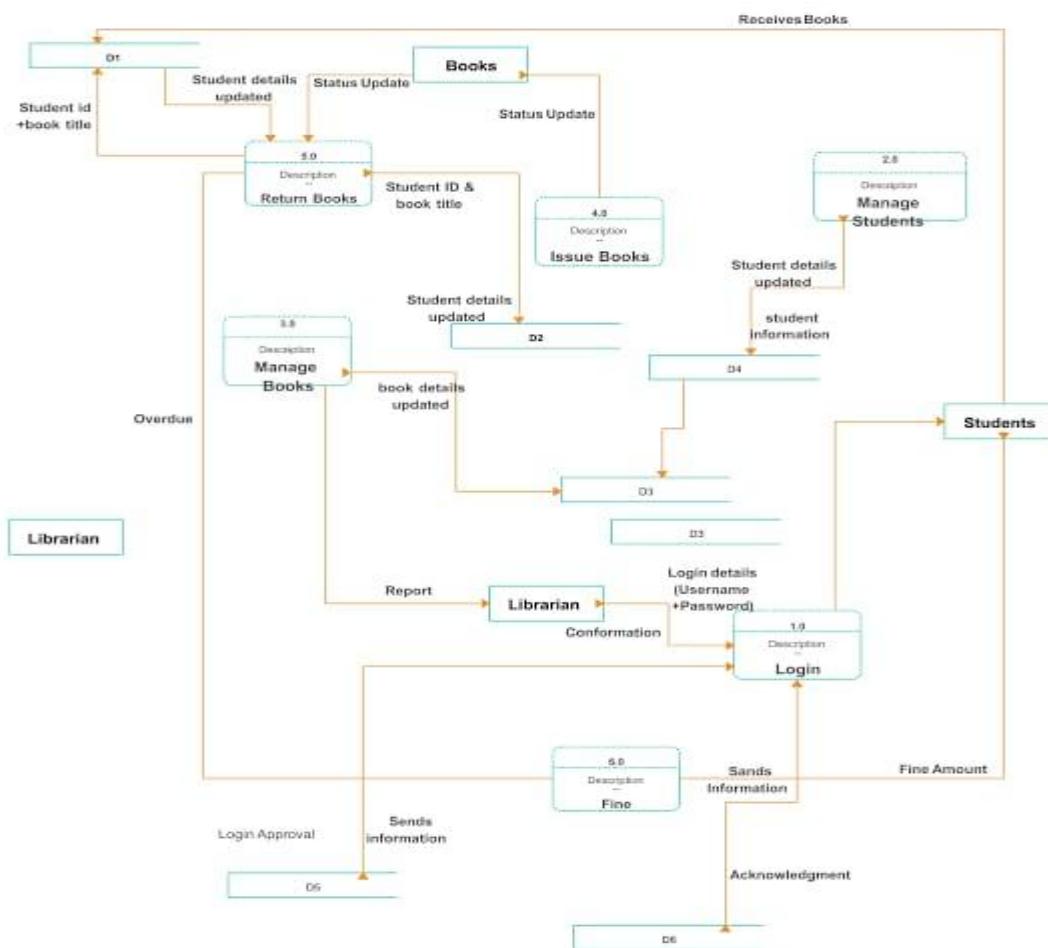
#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	<b>id</b> 🤖	int(11)			No	None		AUTO_INCREMENT
2	<b>FullName</b>	varchar(100)	latin1_swedish_ci		Yes	NULL		
3	<b>AdminEmail</b>	varchar(120)	latin1_swedish_ci		Yes	NULL		
4	<b>UserName</b>	varchar(100)	latin1_swedish_ci		No	None		
5	<b>Password</b>	varchar(100)	latin1_swedish_ci		No	None		
6	<b>updationDate</b>	timestamp			No	0000-00-00 00:00:00		ON UPDATE CURRENT_TIMESTAMP()

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	<b>StudentID</b>	varchar(11)	latin1_swedish_ci		No	None		
2	<b>StudentName</b>	varchar(40)	latin1_swedish_ci		No	None		
3	<b>MobNumber</b>	varchar(11)	latin1_swedish_ci		No	None		
4	<b>Fine</b>	int(11)			No	None		

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	<b>id</b> 📃	int(11)			No	None	AUTO_INCREMENT	
2	<b>BookName</b>	varchar(255)	latin1_swedish_ci		Yes	NULL		
3	<b>Copies</b>	int(3)			No	None		
4	<b>IssuedCopies</b>	int(3)			No	None		
5	<b>CatId</b>	int(11)			Yes	NULL		
6	<b>AuthorId</b>	int(11)			Yes	NULL		
7	<b>ISBNNumber</b>	int(11)			Yes	NULL		
8	<b>BookPrice</b>	int(11)			Yes	NULL		
9	<b>RegDate</b>	timestamp			Yes	current_timestamp()		
10	<b>UpdationDate</b>	timestamp			Yes	NULL	ON UPDATE CURRENT_TIMESTAMP()	

## 3.2 Dataflows Diagram:



## 4.SYSTEM IMPLEMENTATION

### 4.1 Screenshot for Homepage:

The screenshot shows a user registration form titled "USER SIGNUP". The form is titled "SINGUP FORM" at the top. It contains six input fields: "Enter Full Name", "Mobile Number", "Enter Email", "Enter Password", and "Confirm Password". Below these fields is a red "Register Now" button.

### 4.2 Module description:

```
<?php
session_start();
error_reporting(0);
include('includes/config.php');
if($_SESSION['login']!=''){
$_SESSION['login']=";
}
if(isset($_POST['login']))
{
$email=$_POST['emailid'];
$password=md5($_POST['password']);
$sql ="SELECT FullName,EmailId,Password,StudentId,Status FROM tblstudents
WHERE EmailId=:email and Password=:password";
$query= $dbh -> prepare($sql);
$query-> bindParam(':email', $email, PDO::PARAM_STR);
$query-> bindParam(':password', $password, PDO::PARAM_STR);
$query-> execute();
$results=$query->fetchAll(PDO::FETCH_OBJ);
if($query->rowCount() > 0)
{
foreach ($results as $result) {
$_SESSION['stdid']=$result->StudentId;
$_SESSION['username']=$result->FullName;
if($result->Status==1)
{
$_SESSION['login']=$_POST['emailid'];
```

```
echo "<script type='text/javascript'> document.location ='dashboard.php';</script>";
} else {
} else {
echo "<script>alert('Your Account Has been blocked .Please contact admin');</script>";}
else{
echo "<script>alert('Invalid Details');</script>";
}
?>
<!DOCTYPE html>
<html xmlns="http://www.w3.org/1999/xhtml">
<head>
<meta charset="utf-8" />
<meta name="viewport" content="width=device-width, initial-scale=1, maximum-scale=1" />
<meta name="description" content="" />
<meta name="author" content="" />
<title>Online Library Management System | </title>
<!-- BOOTSTRAP CORE STYLE -->
<link href="assets/css/bootstrap.css" rel="stylesheet" />
<!-- FONT AWESOME STYLE -->
<link href="assets/css/font-awesome.css" rel="stylesheet" />
<!-- CUSTOM STYLE -->
<link href="assets/css/style.css" rel="stylesheet" />
<!-- GOOGLE FONT -->
<link href='http://fonts.googleapis.com/css?family=Open+Sans' rel='stylesheet' type='text/css' />
</head>
<body>
<!-----MENU SECTION START-->
<?php include('includes/header.php');?>
<!-- MENU SECTION END-->
<div class="content-wrapper">
<div class="container">
<div class="row pad-botm">
<div class="col-md-12">
<h4 class="header-line">USER LOGIN FORM</h4>
</div>
</div>
<!--LOGIN PANEL START-->
<div class="row">
<div class="col-md-6 col-sm-6 col-xs-12 col-md-offset-3" >
<div class="panel panel-info">
<div class="panel-heading">
LOGIN FORM
```

```

</div>
<div class="panel-body">
<form role="form" method="post">
<div class="form-group">
<label>Enter Email id</label>
<input class="form-control" type="text" name="emailid" required
autocomplete="off" />
</div>
<!--LOGIN PABEL END-->
</div>
</div>
<!-- CONTENT-WRAPPER SECTION END-->
<script src="assets/js/jquery-1.10.2.js"></script>
<!-- BOOTSTRAP SCRIPTS -->
<script src="assets/js/bootstrap.js"></script>
<!-- CUSTOM SCRIPTS -->
<script src="assets/js/custom.js"></script>
</body>
</html>

```

## 5.CONCLUSION

The Library Management System offers a comprehensive solution to streamline library operations, enhance user experience, and improve overall efficiency. By automating tasks, providing real-time information, and facilitating data-driven decision-making, the system enables libraries to better serve their communities and support research and learning. With its potential to transform library management, the system is poised to play a vital role in the success of libraries, enabling them to stay organized, efficient, and responsive to user needs. Effective implementation will be key to unlocking its full potential and achieving long-term success.

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## RESULT:

Thus the simple and efficient Library management system was developed successfully.

