

PERSONAL INFORMATION SYSTEM

A MINI PROJECT REPORT

Submitted by

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*in partial fulfilment for the award of the degree
of*

**BACHELOR OF ENGINEERING
IN
COMPUTER SCIENCE AND ENGINEERING**



PANIMALAR ENGINEERING COLLEGE
(An Autonomous Institution, Affiliated to Anna University, Chennai)

**23CS1312-DATABASE MANAGEMENT SYSTEM LAB
OCTOBER 2024**

PANIMALAR ENGINEERING COLLEGE
(An Autonomous Institution, Affiliated to Anna University, Chennai)

BONAFIDE CERTIFICATE

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ABSTRACT

A Personal Information System (PIS) is a structured framework designed to collect, manage, and store personal data of individuals, primarily used within organizations to handle employee information. It automates various administrative tasks, such as payroll management, attendance tracking, and performance evaluation, ensuring data accuracy and accessibility. PIS enhances decision-making by providing real-time access to personal data while ensuring compliance with privacy regulations like GDPR and the DPDP Act.

The system has evolved from manual paper-based methods to advanced cloud-based and AI-powered solutions, improving efficiency, scalability, and security. Despite its advantages, such as time savings, data accuracy, and better decision-making, PIS comes with challenges, including high setup costs, security risks, and dependency on technology. As organizations continue to adopt digital solutions, the future of PIS lies in AI and predictive analytics, enabling proactive personnel management and seamless data-driven operations.

INTRODUCTION

A Personal Information System (PIS) is a computerized framework used to collect, manage, and maintain personal data, primarily related to employees, customers, or stakeholders. In organizations, PIS plays a critical role in handling human resources information such as employee records, payroll, attendance, performance evaluations, and benefits administration. It ensures that personal data is accessible, accurate, and securely stored, while also helping organizations comply with legal frameworks like the General Data Protection Regulation (GDPR) or the Digital Personal Data Protection (DPDP) Act.

With advancements in technology, PIS has evolved from manual record-keeping systems to sophisticated cloud-based platforms integrated with artificial intelligence (AI) tools. These systems not only automate routine tasks, such as leave approvals and payroll processing, but also support strategic decision-making by providing real-time insights through data analytics.

The importance of PIS lies in its ability to streamline processes, reduce administrative overhead, and improve the accuracy of data. At the same time, it ensures the privacy and security of personal information, a crucial aspect in today's data-driven world. However, challenges such as data breaches, high implementation costs, and system complexity require organizations to carefully manage and monitor these systems.

OBJECTIVE

The objective of a personal information system (PIS) is to efficiently manage and organize personal data to support individual decision-making, improve productivity, and ensure better control over personal or professional tasks. It helps users store, retrieve, and analyze information related to personal schedules, contacts, finances, or health records. Additionally, a PIS aims to maintain privacy and security of sensitive information while offering accessibility for quick decision-making and planning.

A PIS also aims to enhance personal productivity by offering tools for planning, reminders, and tracking tasks or goals. With features like notifications and automated scheduling, it ensures that users stay on top of their commitments, improving both time management and decision-making. Additionally, these systems often incorporate data analysis tools that provide insights into patterns or trends, empowering individuals to make proactive and informed choices in their personal or professional lives.

Security and privacy are other key objectives of personal information systems. With the growing reliance on digital tools, safeguarding sensitive data is crucial. A well-designed PIS provides encryption, password protection, and other privacy controls to ensure that personal information remains safe from unauthorized access. Overall, the primary goal is to offer a reliable, secure, and user-friendly solution for personal data management, enhancing the efficiency and quality of an individual's daily life.

SYSTEM REQUIREMENTS

1. Hardware Requirements

Server Hardware:

Multi-core processors (e.g., Intel Xeon or AMD EPYC)

Minimum 16-64 GB RAM (depending on data load)

Storage: SSDs or RAID arrays for fast data access

Backup devices (e.g., external drives or cloud storage integration)

Uninterruptible Power Supply (UPS) for reliability

Client Devices:

Desktop PCs, laptops, tablets, or smartphones for employees and managers

Minimum: Dual-core CPU, 4 GB RAM, and reliable internet access

Printers and Scanners (optional):

For generating reports or handling physical documents

2. Software Requirements

Operating Systems:

Server: Windows Server, Linux (Ubuntu, Red Hat, etc.)

Client: Windows, macOS, or Android/iOS (for mobile access)

Database Management System (DBMS):

Examples: MySQL, Microsoft SQL Server, Oracle, PostgreSQL

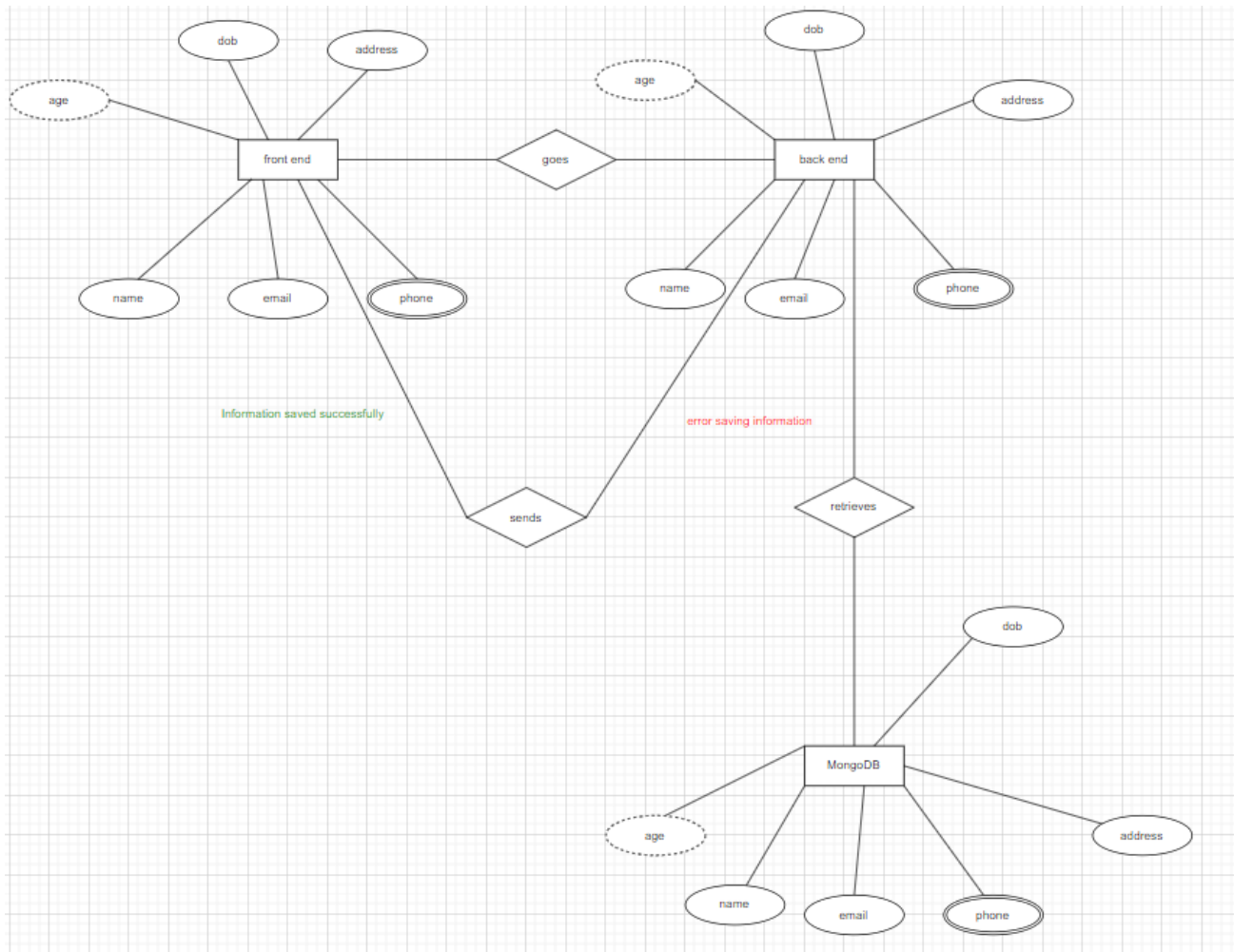
PIS/HRIS Software:

Solutions like SAP SuccessFactors, BambooHR, Workday, or custom-built systems

Web Browser Support:

For web-based or cloud-based systems (e.g., Google Chrome, Firefox)

ER-DIAGRAM



IMPLEMENTATION

1.FRONT-END(INDEX.HTML):

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="UTF-8" />
    <meta name="viewport" content="width=device-width, initial-
scale=1.0" />
    <title>Personal Information Form</title>
    <style>
      .message {
margin-top: 20px;
font-weight: bold;
      }
    </style>
  </head>
  <body>
    <h2>Personal Information Form</h2>
    <form id="infoForm">
      <label for="name">Full Name:</label><br />
      <input type="text" id="name" name="name" required /><br /><br />
      <label for="email">Email Address:</label><br />
```

```
<input type="email" id="email" name="email" required /><br /><br />
```

```
<label for="phone">Phone Number:</label><br />
```

```
<input type="tel" id="phone" name="phone" required /><br /><br />
```

```
<label for="address">Address:</label><br />
```

```
<textarea id="address" name="address" required></textarea><br /><br />
```

```
<button type="submit">Submit</button>
```

```
</form>
```

```
<div class="message" id="message"></div>
```

```
<script>
```

```
document
```

```
.getElementById("infoForm")
```

```
.addEventListener("submit", async function (event) {
```

```
event.preventDefault();
```

```
const formData = new FormData(this);
```

```
const data = Object.fromEntries(formData.entries()); try {
```

```
const response = await fetch("/submit-info", { method:
```

```
"POST",
```

```
headers: {
```

```
"Content-Type": "application/json",
```

```
    },  
    body: JSON.stringify(data),  
  });  
  const result = await response.json();  
  const messageDiv = document.getElementById("message"); if  
(response.ok) {  
    messageDiv.textContent = result.message;  
    messageDiv.style.color = "green";  
  } else {  
    messageDiv.textContent = result.message;  
    messageDiv.style.color = "red";  
  }  
  } catch (error) {  
    console.error("Error:", error);  
    document.getElementById("message").textContent = "error  
submitting the form";  
  }  
});  
</script>  
</body>  
</html>
```

2.BACK-END (SERVER.JS):

```
const express = require("express");
const mongoose = require("mongoose");
const bodyParser = require("body-parser");
const path = require("path");
const app = express();
const port = 3000;

// Middleware for parsing form data
app.use(bodyParser.urlencoded({ extended: true }));
app.use(bodyParser.json());

// Serve static files (if you have CSS/JS)
app.use(express.static(path.join(__dirname, "public")));

// MongoDB connection (Replace with your MongoDB connection
string)
const mongoURI = "mongodb://localhost:27017/personalInfoDB"; //
Use your MongoDB connection string
mongoose
.connect(mongoURI, { useNewUrlParser: true, useUnifiedTopology: true
})
.then(() => console.log("MongoDB connected!"))
```

```

    .catch((err) => console.error("MongoDB connection error:", err));

// Define Mongoose schema and model
const infoSchema = new mongoose.Schema({
  name: { type: String, required: true },
  email: { type: String, required: true },
  phone: { type: String, required: true },
  address: { type: String, required: true },
});

const Info = mongoose.model("Info", infoSchema);

// Routess
app.get("/", (req, res) => {
  res.sendFile(__dirname + "/index.html"); // Serve the HTML form
});

// Route to handle form submission
app.post("/submit-info", async (req, res) => {
  try {
    const { name, email, phone, address } = req.body;

    // Basic validation (can be improved)
    if (!name || !email || !phone || !address) {
      return res.status(400).send("All fields are required.");
    }
  }

```

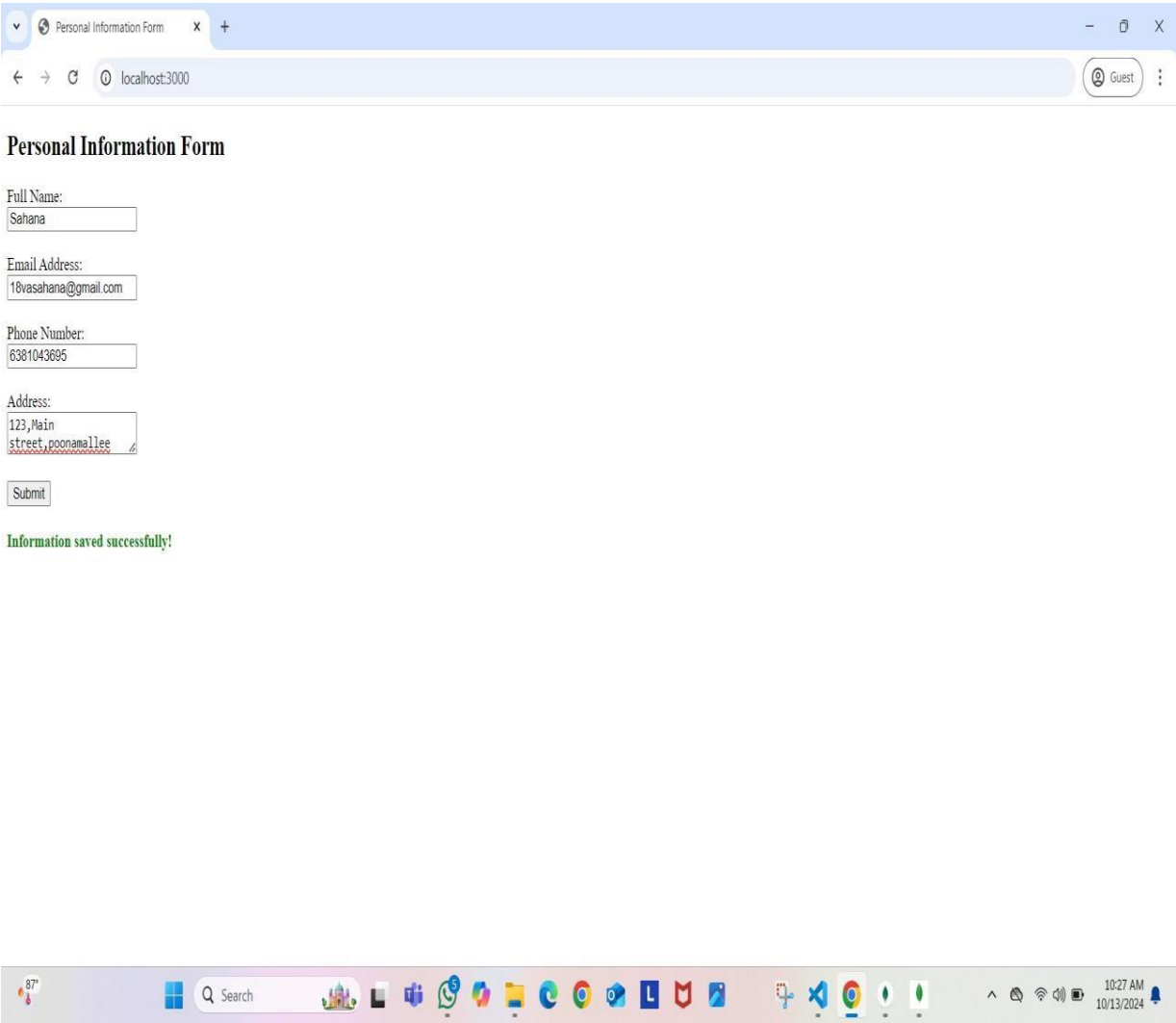
```

// Save new information to MongoDB
const newInfo = new Info({ name, email, phone, address });
await newInfo.save();

res.status(200).json({ message: "Information saved successfully!" });
} catch (error) {
  console.error("Error saving information:", error);
  res.status(500).json({ message: "Error saving Information." });
}
});
app.get("/success", (req, res) => {
  res.send(
    '<h2> Information saved successfully!</h2> a<href="/">Back to
form</a>'
  );
});
// Start server
app.listen(port, () => {
  console.log("Server is running on http://localhost:${port}");
});

```

SCREENSHOTS

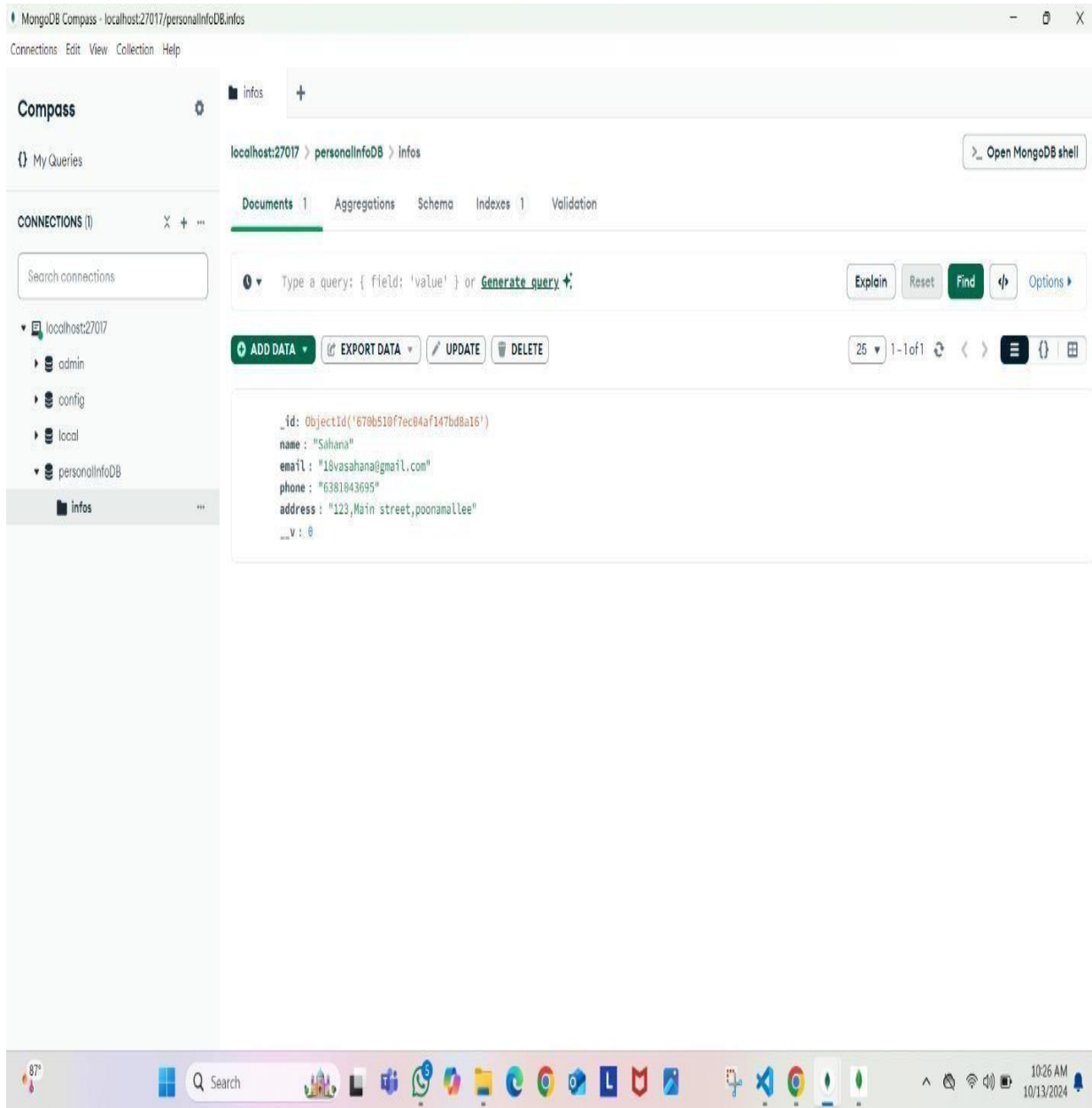



```
Select mongosh mongodb://127.0.0.1:27017/mongosh?directConnection=true&serverSelectionTimeoutMS=2000
Using Mongosh: 2.3.2

For mongosh info see: https://www.mongodb.com/docs/mongodb-shell/

-----
The server generated these startup warnings when booting
2024-10-12T09:44:32.643+05:30: Access control is not enabled for the database. Read and write access to data and configuration is unrestricted
-----

mongosh> show dbs
admin          40.00 KiB
config         72.00 KiB
local          72.00 KiB
personalInfo08 40.00 KiB
mongosh> use personalInfo08
switched to db personalInfo08
personalInfo08> db.infos.find()
TypeError: db.infos.find is not a function
personalInfo08> db.infos.find();
[
  {
    _id: ObjectId('6706510f7ec04af147bd8a16'),
    name: 'Sahana',
    email: '18vasahana@gmail.com',
    phone: '6381843695',
    address: '123,Main street,poonamallee',
    _v: 0
  }
]
personalInfo08>
fwd-i-search: _
```



CONCLUSION

In conclusion, a personal information system (PIS) plays a crucial role in helping individuals manage their data efficiently, leading to better organization, productivity, and decision-making. By providing structured storage and quick access to information, it simplifies the handling of schedules, finances, health records, and other personal data. This reduces the time and effort spent on manual tracking, allowing users to focus more on important tasks and goals.

Moreover, a PIS supports personal growth by offering tools for task management, reminders, and data insights, helping users stay organized and make well-informed decisions. With advanced privacy and security measures, it ensures sensitive information is protected from unauthorized access, addressing growing concerns about data security in the digital age.

Ultimately, the effectiveness of a PIS lies in its ability to balance ease of use with robust functionality. It empowers users to stay in control of their personal and professional lives, enhancing efficiency and enabling proactive planning. As technology continues to evolve, personal information systems will remain essential for individuals seeking to manage their lives more effectively in a fast-paced world.