

# Guest Reservation Portal for Casa Tente Boutique Hotel – Technical Manual

## 1. SYSTEM OVERVIEW

The **Guest Reservation Portal** is a web-based hotel management system designed for Casa Tente Boutique Hotel in Matnog, Sorsogon. It replaces manual booking processes with an automated, secure, and user-friendly platform.

### 1.1 System Components

- **Frontend:** HTML, CSS, JavaScript
- **Backend:** Node.js
- **Database:** MySQL
- **Hosting:** Supabase
- **Development Environment:** Visual Studio Code

### 1.2 User Roles

1. **Customer:** Books rooms, views amenities, submits feedback
  2. **Administrator:** Manages rooms, reservations, amenities, feedback, and analytics
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## 2. INSTALLATION GUIDE (FOR LOCAL DEVELOPMENT)

### 2.1 Prerequisites

#### Hardware Requirements (Minimum)

- **Memory:** 8GB RAM
- **Processor:** Intel Core i3 13th Gen or equivalent
- **Storage:** 20GB available space
- **Internet:** 20 Mbps connection

#### Software Requirements

- **Operating System:** Windows 10/11 (64-bit)
- **Browser:** Google Chrome v.134 or later

- **Development Tools:**
  - Visual Studio Code v.1.106.0 or later
  - Node.js (Latest LTS version)
  - MySQL v.10.4.32-MariaDB (via XAMPP)
  - Git (for version control)

## 2.2 Step-by-Step Installation

### Step 1: Environment Setup

#### 1. Install Node.js

- Download from <https://nodejs.org>
- Run installer and follow prompts
- Verify installation:

```
bash
```

```
node --version
```

```
npm --version
```

#### 2. Install XAMPP

- Download from <https://www.apachefriends.org>
- Install with default settings
- Start Apache and MySQL from XAMPP Control Panel

#### 3. Install Visual Studio Code

- Download from <https://code.visualstudio.com>
- Install with recommended settings

### Step 2: Database Setup

#### 1. Access phpMyAdmin

- Open browser and navigate to: <http://localhost/phpmyadmin>

#### 2. Create Database

```
sql
```

```
CREATE DATABASE casatente_hotel;
```

```
USE casatente_hotel;
```

### 3. Import Database Schema

- Use the provided SQL file casatente\_database.sql
- Import through phpMyAdmin import feature

## Step 3: Project Setup

### 1. Clone/Download Project Files

```
bash
```

```
git clone [repository-url]
```

```
cd guest-reservation-portal
```

### 2. Install Dependencies

```
bash
```

```
npm install
```

### 3. Configure Environment Variables

Create .env file in root directory:

```
env
```

```
DB_HOST=localhost
```

```
DB_USER=root
```

```
DB_PASSWORD=
```

```
DB_NAME=casatente_hotel
```

```
PORT=3000
```

```
EMAIL_HOST=smtp.gmail.com
```

```
EMAIL_PORT=587
```

```
EMAIL_USER=hotelecastenteboutique@gmail.com
```

```
EMAIL_PASS=[your-email-password]
```

## Step 4: Run the Application

### 1. Start Development Server

```
bash
```

```
npm start
```

or

```
bash
```

```
node app.js
```

## 2. Access Application

- Open browser and navigate to: <http://localhost:3000>
  - For admin: <http://localhost:3000/admin>
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# 3. DEPLOYMENT TO SUPABASE

## 3.1 Supabase Setup

### 1. Create Supabase Account

- Visit <https://supabase.com>
- Sign up and create new project

### 2. Configure Database

- Navigate to SQL Editor
- Import database schema
- Set up tables: users, rooms, reservations, amenities, feedback

### 3. Environment Configuration

Update .env file:

```
env
```

```
SUPABASE_URL=[your-supabase-url]
```

```
SUPABASE_KEY=[your-supabase-anon-key]
```

```
SUPABASE_SERVICE_KEY=[your-supabase-service-key]
```

## 3.2 Deploy Application

### 1. Build for Production

```
bash
```

```
npm run build
```

## **2. Deploy to Hosting Service**

- Options: Vercel, Heroku, or DigitalOcean
- Connect GitHub repository
- Configure environment variables
- Deploy application

## **3. Verify Deployment**

- Test all functionalities
  - Check email notifications
  - Verify database connections
- 

# **4. SYSTEM NAVIGATION GUIDE**

## **4.1 Customer Interface**

### **4.1.1 Home Page**

- **URL:** <http://localhost:3000> or your deployed URL
- **Features:**
  - View hotel branding and tagline
  - Navigation menu: Home, Rooms, Amenities, About, Contact, Login
  - Hero image showcasing hotel

### **4.1.2 Account Creation**

1. **Click "Sign Up"** from Login page
2. **Fill registration form:**
  - Name, Surname, Email, Password
  - Confirm password
3. **Receive OTP** via email
4. **Verify account** and login

### **4.1.3 Room Browsing**

1. **Navigate to "Rooms"**

2. **View room categories:**
  - **Standard Rooms:** ₦500/night, 2 guests max
  - **Deluxe Rooms:** ₦2,500/night, 4 guests max
3. **Click "View Details"** for room specifications

#### 4.1.4 Making Reservations

1. **Select room** and click "Book Now"
2. **Login required** if not already logged in
3. **Fill reservation form:**
  - Personal information
  - Check-in/Check-out dates (calendar picker)
  - Number of guests (max 4)
  - Special requests
4. **Submit reservation** → Receive confirmation email with PDF slip

#### 4.1.5 Feedback Submission

1. **Navigate to "Contact"** or feedback section
2. **Login required**
3. **Submit rating** (1-5 stars) and comments
4. **Receive confirmation** of submission

### 4.2 Administrator Interface

#### 4.2.1 Admin Login

- **URL:** <http://localhost:3000/admin>
- **Credentials:** Provided by system administrator
- **Dashboard:** Overview of key metrics

#### 4.2.2 Rooms Management

**Path:** Admin → Rooms

- **View all rooms** with ID, Name, Type, Price, Status
- **Actions:**

- **Edit:** Update room details, amenities, images
- **Delete:** Remove room (with confirmation)
- **Add new rooms** via "Add Room" button

#### **4.2.3 Reservations Management**

**Path:** Admin → Reservations

- **View all bookings** in table format:
  - ID, Room, Guest, Dates, Total, Status
- **Status Management:**
  - **Pending** → Click "Confirm"
  - **Confirmed** → Click "Cancel" if needed
  - **In Progress** → Currently occupied
  - **Completed** → Stay finished
  - **Cancelled** → Booking cancelled
- **Calendar View:** Visual schedule of all reservations

#### **4.2.4 Amenities Management**

**Path:** Admin → Amenities

- **Two categories:**
  1. **Indoor Amenities:** AC, Mini Refrigerator, etc.
  2. **Outdoor Amenities:** Pool, Function Hall, Parking
- **Actions:** Edit descriptions, upload images

#### **4.2.5 Feedback Management**

**Path:** Admin → Feedbacks

- **View all customer reviews**
- **Filter by rating** (1-5 stars)
- **Monitor satisfaction** trends

#### **4.2.6 Analytics Dashboard**

**Path:** Admin → Analytics

- **Key Metrics:**
    - Total Revenue
    - Revenue This Month
    - Total Reservations
    - Reservations This Month
    - Average Rating
  - **Visual Charts:**
    - Revenue Trend (Line graph)
    - Reservation Status Distribution (Pie chart)
  - **Insights:**
    - Most Reserved Room
    - Most Frequent Customer
- 

## 5. SYSTEM CONFIGURATION

### 5.1 Email Configuration

1. **SMTP Settings** for booking confirmations:

javascript

```
// In email configuration file

const transporter = nodemailer.createTransport({
  host: 'smtp.gmail.com',
  port: 587,
  secure: false,
  auth: {
    user: 'hotelecastenteboutique@gmail.com',
    pass: 'your-app-password'
  }
});
```

## 2. Email Templates:

- Registration OTP
- Reservation confirmation with PDF slip
- Status updates

## 5.2 Database Configuration

javascript

```
// Database connection setup  
const pool = mysql.createPool({  
  host: process.env.DB_HOST,  
  user: process.env.DB_USER,  
  password: process.env.DB_PASSWORD,  
  database: process.env.DB_NAME,  
  connectionLimit: 10  
});
```

## 5.3 Security Configuration

1. **Password Encryption:** bcrypt hashing
2. **Session Management:** express-session with secure settings
3. **Input Validation:** sanitize all user inputs
4. **CORS Configuration:** Restrict to trusted domains

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# 6. TROUBLESHOOTING

## 6.1 Common Issues

### Issue 1: Database Connection Failed

**Symptoms:** "Cannot connect to database" error

**Solutions:**

1. Check if MySQL service is running
2. Verify database credentials in .env

3. Ensure database casatente\_hotel exists
4. Check firewall settings

### **Issue 2: Email Not Sending**

**Symptoms:** No confirmation emails received

**Solutions:**

1. Verify SMTP settings in .env
2. Check Gmail "Less secure apps" setting
3. Verify email account has proper permissions
4. Check spam folder

### **Issue 3: Page Loading Errors**

**Symptoms:** Blank pages or 404 errors

**Solutions:**

1. Clear browser cache (Ctrl+Shift+Delete)
2. Check console for JavaScript errors
3. Verify all dependencies are installed
4. Restart Node.js server

### **Issue 4: File Upload Issues**

**Symptoms:** Room/Amenity images not uploading

**Solutions:**

1. Check file size limits (max 2MB)
2. Verify file types allowed (jpg, png, webp)
3. Check upload directory permissions
4. Ensure sufficient disk space

## **6.2 Maintenance Procedures**

**Daily Tasks:**

1. **Backup Database:**

bash

```
mysqldump -u root -p casatente_hotel > backup_$(date +%Y%m%d).sql
```

2. **Check Server Logs** for errors
3. **Monitor Performance** metrics
4. **Verify Email Queue** processing

#### **Weekly Tasks:**

1. **Update Dependencies:**

bash

npm update

2. **Clean Temporary Files**
3. **Review Error Logs**
4. **Test Backup Restoration**

#### **Monthly Tasks:**

1. **Security Audit**
  2. **Performance Optimization**
  3. **Database Optimization**
  4. **Review User Feedback**
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## **7. USER MANAGEMENT**

### **7.1 Creating Admin Accounts**

1. **Access Database Directly:**

sql

```
INSERT INTO users (name, email, password, role)
```

```
VALUES ('Admin Name', 'admin@email.com', '[hashed-password]', 'admin');
```

2. **Or use registration form** with admin privileges

### **7.2 Password Reset**

1. **Customers:** Use "Forgot Password" feature
2. **Admins:** Database reset required

sql

```
UPDATE users SET password = '[new-hashed-password]' WHERE email = 'admin@email.com';
```

### 7.3 Role Management

- **Customer:** Can book, view, submit feedback
  - **Admin:** Full system access
  - **Future roles:** Manager, Staff (with limited access)
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## 8. DATA MANAGEMENT

### 8.1 Exporting Reports

#### 1. From Analytics Dashboard:

- Click "Export" button
- Choose format: CSV, Excel, PDF
- Select date range

#### 2. Database Export:

bash

```
# Export reservations
```

```
SELECT * FROM reservations WHERE check_in BETWEEN '2025-01-01' AND '2025-12-31';
```

```
# Export to CSV
```

```
mysql -u root -p -e "SELECT * FROM reservations" casatente_hotel > reservations.csv
```

### 8.2 Data Backup Strategy

#### 1. Automated Daily Backup (cron job):

bash

```
# Add to crontab
```

```
0 2 * * * /path/to/backup-script.sh
```

#### 2. Backup Script (backup-script.sh):

bash

```
#!/bin/bash

DATE=$(date +%Y%m%d_%H%M%S)

mysqldump -u root -p[password] casatente_hotel > /backups/casatente_{$DATE}.sql
gzip /backups/casatente_{$DATE}.sql

# Keep only last 30 days

find /backups -name "*.gz" -mtime +30 -delete
```

### 8.3 Data Privacy Compliance

#### 1. Personal Data Protection:

- Encrypt sensitive information
- Regular data purging (after 2 years)
- Access logs for audit trail

#### 2. GDPR Compliance:

- Right to access data
- Right to deletion
- Data portability option

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## 9. SYSTEM MONITORING

### 9.1 Performance Monitoring

#### 1. Response Time Tracking:

- Page load < 3 seconds
- Database queries < 100ms
- API response < 500ms

#### 2. Uptime Monitoring:

- Target: 99.9% uptime
- Monitor: <https://uptimerobot.com> or similar

### 9.2 Error Monitoring

#### 1. Application Logs:

```
javascript
// Log configuration

const winston = require('winston');

const logger = winston.createLogger({
  level: 'info',
  format: winston.format.json(),
  transports: [
    new winston.transports.File({ filename: 'error.log', level: 'error' }),
    new winston.transports.File({ filename: 'combined.log' })
  ]
});

});
```

## 2. Error Alerting:

- Email notifications for critical errors
  - SMS alerts for system downtime
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# 10. SUPPORT AND CONTACT

## 10.1 Technical Support

- **Email:** npcolumna@sorsu.edu.ph
- **Development Team:**
  - Neil Patrick L. Columna (Programmer)
  - Rhenalie G. Villanueva (System Analyst/Technical Writer)
  - Sonlife M. Guray (Contributor)

## 10.2 Hotel Contact

- **Phone:** (052) 123-4567 | +63 912 345 6789
- **Email:** hotelecastenteboutique@gmail.com
- **Facebook:** <https://www.facebook.com/casatente>

## 10.3 Emergency Procedures

1. **System Down:** Contact development team immediately
  2. **Data Breach:** Isolate system, contact team, notify users
  3. **Hardware Failure:** Restore from latest backup
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