



Cruise Ship Management System

Abstract

This project is a web-based Cruise Ship Management System developed using **HTML, CSS, JavaScript, and Firebase**. It provides role-based dashboards for Admin, Supervisor, Manager, and Voyager, enabling functionalities such as managing items, registering voyagers, booking services, and viewing reports. The system focuses on security, usability, and responsive design.

Introduction

The Cruise Ship Management System ensures smooth communication between administrators, supervisors, managers, and voyagers with modern web technologies.

Objectives

- Provide separate dashboards for different roles.
- Implement secure authentication and role-based access.
- Enable item management, bookings, and registrations.
- Ensure responsive design for multiple devices.
- Maintain a user-friendly and efficient UI/UX.

Methodology

The system uses Firebase for authentication and data storage, while the frontend is implemented with HTML, CSS, and JavaScript. Each role has restricted access to functionalities:

- **Admin:** Register voyagers, manage items.
- **Supervisor:** Monitor orders.
- **Manager:** Oversee bookings and cancellations.
- **Voyager:** Register, log in, book services, and manage bookings.

Features

- Role-based login (Admin, Supervisor, Manager, Voyager).

- Item management (add/delete items).
- Voyager registration with success/error messages.
- Booking and cancellation system.
- Responsive design with media queries.
- Scrollable dashboards where needed.
- User feedback messages with styled backgrounds.

Project Structure

```
CruiseShipApp/
├── Images/          #BG image
├── Scripts/         # JS logic for all pages (includes
  └── firebase.js
├── styles/          # Styling for all pages
├── html_docs/       # Admin page
  └── Cruise_Ship_Management_Report.ipynb
  └── Cruise_Ship_Management_Report.pdf
  └── Usage Instructions.pdf
└── index.html        # Redirect to register page
└── README.md         # Documentation
```

Test Cases

Test Case ID	Feature	Steps	Expected Output
TC01	Login	Enter valid credentials	Redirects to correct dashboard
TC02	Login	Enter invalid credentials	Error message displayed
TC03	Admin - Add Item	Add a new item	Success message shown
TC04	Admin - Delete Item	Delete an item	Success message shown
TC05	Register Voyager	Fill form and submit	Voyager registered successfully
TC06	Voyager - Book Item	Select and book an item	Booking success message shown
TC07	Voyager - Cancel Booking	Cancel an existing booking	Success message shown
TC08	Supervisor - Monitor Order	Open Orders dashboard	All Orders displayed
TC09	Manager - Monitor	Open bookings	All bookings displayed

Test Case ID	Feature	Steps	Expected Output
	Bookings	dashboard	
TC10	Responsive Design	Resize window < 540px	Hamburger menu appears

Conclusion

The Cruise Ship Management System successfully demonstrates a role-based management application with authentication, data handling, and responsive UI. It reduces manual errors, improves efficiency, and enhances the voyager experience.