



COLLAGE CODE:8206

COLEGE NAME: ARASU ENGINEERING COLLEGE

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GITHUB: <https://github.com/Abinaya8125/Abinaya.m.git>

COMPLETED THE PROJECT NAMED AS PHASE 1 NODEJS TECHNOLOGY

PROJECT NAME: INVENTORY MANAGEMENT DASHBOARD

SUBMITTED BY,

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1. Project Overview & Objectives

❖ Goal:

To design and develop a web-based Inventory Management Dashboard that helps users track, update, and manage products, stock levels, and suppliers efficiently.

❖ Problem Statement:

Many small businesses manually track inventory using spreadsheets or paper, which can cause errors, delays, and confusion. This project solves that by providing a digital dashboard to manage inventory in real time.

❖ Key Features:

- Add, update, and delete products
- View product stock levels
- Low-stock alerts
- Supplier and category management
- Simple dashboard visualization (charts, tables)

Expected Outcome:

- Efficient and accurate stock tracking
- Time-saving dashboard for inventory operations
- Secure access for users (Admin/User roles)

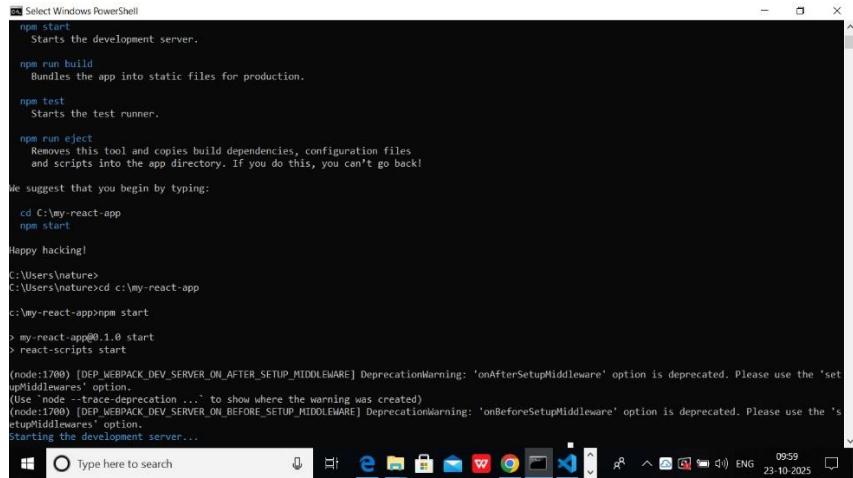
❖ EXPECTED OUTCOMES:

A working full-stack application that provides an interactive dashboard for managing inventory data dynamically using APIs and a connected database

- Efficient and accurate stock tracking.
- Time-saving dashboard for inventory operations
- Secure access for users (Admin/User roles)

2. Technology Stack & Environment Setup

- Backend: Node.js with Express



A screenshot of a Windows PowerShell window titled "Select Windows PowerShell". The window displays the output of the "npm start" command for a React application. The output includes npm documentation for various commands like "start", "build", and "test", followed by a suggestion to begin by typing "cd C:\my-react-app" and "npm start". It also shows the directory path "C:\Users\nature>" and the command "c:\my-react-app>npm start". The terminal ends with the message "Starting the development server..." and several deprecation warnings from node.js version 17.0.0 about deprecated options in Webpack Dev Server.

```
npm start
  Starts the development server.

npm run build
  Bundles the app into static files for production.

npm test
  Starts the test runner.

npm run eject
  Removes this tool and copies build dependencies, configuration files
  and scripts into the app directory. If you do this, you can't go back!

We suggest that you begin by typing:

  cd C:\my-react-app
  npm start

Happy hacking!

C:\Users\nature>
C:\Users\nature>cd c:\my-react-app

c:\my-react-app>npm start
> my-react-app@0.1.0 start
> react-scripts start

(node:1700) [DEP_webpackDevServer_onAfterSetupMiddleware] DeprecationWarning: 'onAfterSetupMiddleware' option is deprecated. Please use the 'setUpMiddlewares' option.
(node:1700) [DEP_webpackDevServer_onBeforeSetupMiddleware] DeprecationWarning: 'onBeforeSetupMiddleware' option is deprecated. Please use the 'setUpMiddlewares' option.
Starting the development server...
```

- Frontend: React.js or Vue.js
- Database: MongoDB or MySQL
- Tools: Git, VS Code, Postman, Docker (optional)

3. API Design & Data Model

App.js

```
import React from "react";

import { BrowserRouter, Routes, Route } from "react-router-dom";

import Home from "./Home";

import Dashboard from "./Dashboard";



export default function App() {

  return (

    <BrowserRouter>

      <Routes>

        <Route path="/" element={<Home />} />

        <Route path="/dashboard" element={<Dashboard />} />

      </Routes>

    </BrowserRouter>

  );
}
```

```
</BrowserRouter>  
);  
}
```

Home.js

```
import React from "react";  
import { Link, useNavigate } from "react-router-dom";  
  
export default function Home() {  
  const navigate = useNavigate();  
  
  const goToDashboard = () => {  
    // programmatic navigation on button or logo click  
    navigate("/dashboard");  
  };  
  
  return (  
    <div style={{ padding: 20 }}>  
      {/* Option A: use Link (simple, SEO-friendly) */}  
      <Link to="/dashboard" style={{ textDecoration: "none" }}>  
          
      </Link>  
  
      <h2>Home Page</h2>  
  
      {/* Option B: programmatic navigation with onClick */}  
      <div style={{ marginTop: 20 }}>  
        <button onClick={goToDashboard}>Go to Dashboard</button>  
      </div>  
    </div>  
  );  
}
```

```

</div>

/* Another clickable element using onClick on the image */

<div style={{ marginTop: 20 }}>
  
  <p>Click the logo above to open Dashboard</p>
</div>
</div>
);
}

```

✓ DATA MODEL

Endpoint	Method	Description
Inv-ment-dr/api/items	GET	Fetch all items
Inv-ment-dr /api/items/:id	GET	Get a specific item
Inv-ment-dr /api/items	POST	Add a new item
Inv-ment-dr /api/items/:id	PUT	Update item details
Inv-ment-dr /api/items/:id	DELETE	Delete item

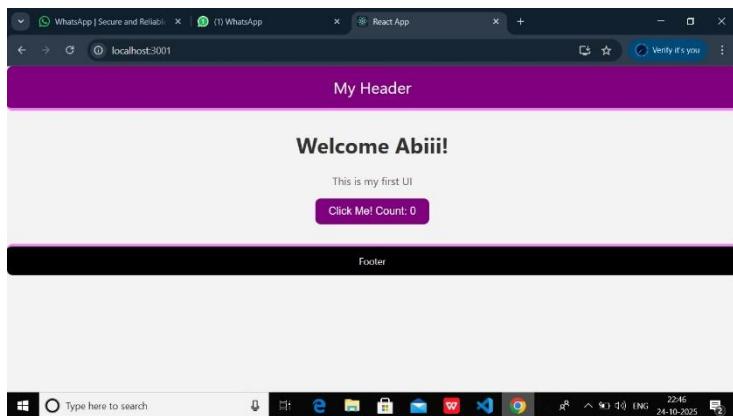
4. Front-End UI/UX Plan

Flow:

- Login Page → Dashboard → Inventory Table → Add/Edit Form

- Sidebar navigation for sections: *Dashboard, Products, orders, Settings*.

Login page:



DashBoard:



Inventory Table:

Inventory Management Dashboard				
	Total Products		Low Stock	
	560	560	23	
Product List				
Product Name	SKU	Stock	Status	
Product A	SKU001	150	In Stock	
Product B	SKU002	80	Low Stock	
Product C	SKU003	170	In Stock	
Product D	SKU004	60	Out of Stock	

5. Development & Deployment Plan

✓ Team Roles:

- Backend Developer: API development, database design
- Frontend Developer: UI creation, integration with backend
- Tester: Manual & automated testing
- DevOps/Deployment Lead: CI/CD setup, hosting

✓ Git WorkFlow:

```
git init
```

```
git add .
```

```
git commit -m "Initial commit"
```

```
git branch -M main
```

```
git remote add origin <https://github.com/Abinaya8125/Abinaya.m.git>
```

```
git push origin master
```

✓ Testing Approach:

- Unit testing with Jest
- API testing via Postman or Supertest

Hosting & Deployment:

- Backend: Render, Railway, or AWS
- Frontend: Netlify or Vercel
- Database: MongoDB Atlas or AWS RDS