GOVERNMENTARTSANDSCIENCE COLLEGE,ALANGUDI-622 301

Collage code-bdu 752

Department of computer science

INTERNSHIPREPORT

StoreManager:KeepTrack of Inventory

Virtual Internship Program

Organized by

SMARTINTERNZ

Submitted by:

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➢ INSTALLATION:

- **Node.jsandnpm**:
  - Download:https://nodejs.org/en/download/
  - Installation instructions: https://nodejs.org/en/download/package-manager/

- **React.js**:

  InstallReact.js,aJavaScriptlibraryforbuildinguserinterfaces.

  - CreateanewReactapp:

    ```
    npxcreate-react-appmy-react-app
    ```

    Replacemy-react-appwithyourpreferredproject name.

  - Navigatetotheprojectdirectory:

    ```
    cdmy-react-app
    ```

  - RunningtheReactApp:
  - Startthedevelopmentserver:

    ```
    npmstart
    ```

- **HTML,CSS,andJavaScript**:BasicknowledgeofHTMLforcreating thestructureofyourapp,CSSforstyling,andJavaScriptforclient- side interactivity is essential.

- **Version Control**: Use Git for version control, enabling collaboration and tracking changes throughout the development process. Platforms like GitHub or Bitbucket can host your repository.

- Git: Download and installation instructions can be found at: https://git-scm.com/downloads

- **Development Environment**: Choose a code editor or Integrated DevelopmentEnvironment(IDE)thatsuitsyourpreferences,such as Visual Studio Code, Sublime Text, or WebStorm.

  - Visual Studio Code: Download from https://code.visualstudio.com/download
  - Sublime Text: Download from https://www.sublimetext.com/download
  - WebStorm: Download from https://www.jetbrains.com/webstorm/download

TogettheApplicationprojectfromdrive:

Followbelowsteps:

InstallDependencies:

- Navigate into the cloned repository directory and install libraries:

```
cd store
npminstall
```

- **StarttheDevelopmentServer**:
  - Tostartthedevelopmentserver,executethefollowing command:

```
npmstart
```

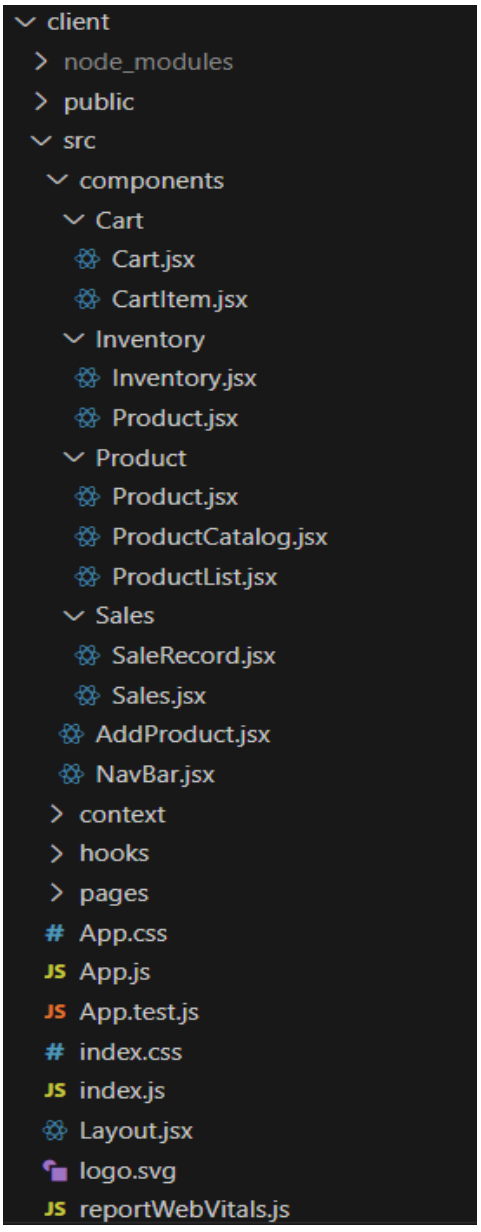
AccesstheApp:

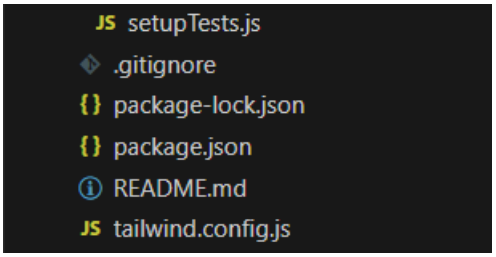
- Open your web browser and navigate to http://localhost:3000.
- Youshouldseetheapplication'shomepage,indicatingthat the installation and setup were successful.

Youhavesuccessfullyinstalledandsetuptheapplicationonyourlocal machine. You can now proceed with further customization, development, and testing as needed.

➢ Projectstructure

Theimageisofthefolderstructurewhichshowsallthefilesandfolders that have been used in project development.





➢ ProjectFlow

DemoLink : https://drive.google.com/file/d/1i_BNxMjY5DM2irPCnzyKCRlwqlKn7d/view?usp=sharing

CodeReference : https://drive.google.com/drive/folders/1BPYYmXEAEmpDlvCQnz5HDGmhXloYzJ5c?usp=sharing

➢ Projectsetup

- **Project Setup**
  - **Step1:InitializeanewReactapplication.**
    - Usecreate-react-apporViteforprojectsetup.
  - **Step2:Install dependencies.**
    - Add tailwindcss, react, react-dom, and other necessary packages.

```
"dependencies": {
  "cra-template": "1.2.0",
  "react": "^19.0.0",
  "react-dom": "^19.0.0",
  "react-router-dom": "^7.1.1",
  "react-scripts": "5.0.1",
  "web-vitals": "^4.2.4"
},
```

```
"devDependencies": {
  "tailwindcss": "^3.4.17"
}
```

- Setupthetailwind.config.jsfile.
- Addtherequiredstylesin index.css.

- Forfurtherreference,usethefollowingresources
  - https://react.dev/learn/installation
  - https://react-bootstrap-v4.netlify.app/getting-started/introduction/
  - https://axios-http.com/docs/intro
  - https://reactrouter.com/en/main/start/tutorial
  -

➢ ProjectDevelopment

SettingUpContextand Reducers:

- **Step1:CreatecontextfilesforInventory,Cart,andSales.**
  - UsecreateContext()anddefinedefaultstates.
- **Step2:Definereducersforstate management.**
  - Inventory Reducer: Handle stock addition, updates, and sales.
  - Cart Reducer: Manage adding/removing items and quantities.
  - SalesReducer:Tracksalesrecords.
- **Step3:SetupContextProvider components.**
  - Wraptheappintheseprovidersinindex.jsorApp.js.
- **Step4:Persistdatain localStorage.**
  - Saveandloadcontextstatesto/fromlocalStorage.

Milestone3-DevelopingCoreComponents

- **Step1:BuildtheInventoryComponent.**
  - Displayalistofproductswithstock details.
  - Implementsearchandalertvalueinput.
- **Step2:BuildtheProduct Component.**

- Showproductdetails,includinganimage,price,andstock.
- Addfunctionalitytoupdatestock.

- **Step3:BuildtheCartComponent.**
  - Displayitemsaddedtothecartwithquantityandtotalvalue.
  - Add buttons for incrementing, decrementing, and removing items.
  - Includecheckoutfunctionalitytoupdateinventoryandcreate sales records.
- **Step4:BuildtheSalesComponent.**
  - Displayalistofsalesrecordswithdetailslikedate,cart items, and total sale value.
  - Sortrecordsfromthelatesttothe oldest.

Milestone4-ImplementingUtilities

- **Step1:Createreusablehelperfunctions.**
  - Formatcurrency.
  - Sortorfilterdata.
- **Step2:Addinput validation.**
  - Preventinvalidvaluesforstockorcartquantities.

- **Step3:Handleedgecases.**
  - Avoidnegativestockupdates.
  - Restrictcheckoutwhenthecartis empty.

Milestone5-Stylingwith TailwindCSS

- **Step1:Createresponsivelayouts.**
  - Useflexbox(flex,flex-wrap)andgrid utilities.
- **Step2:Styleindividual components.**

- Inventory:Addhovereffectsandresponsivesearchbar.
- Cart:Highlight selected productsanddisplay alerts on low stock.
- Sales:Useacleantableorcardlayoutforsale records.

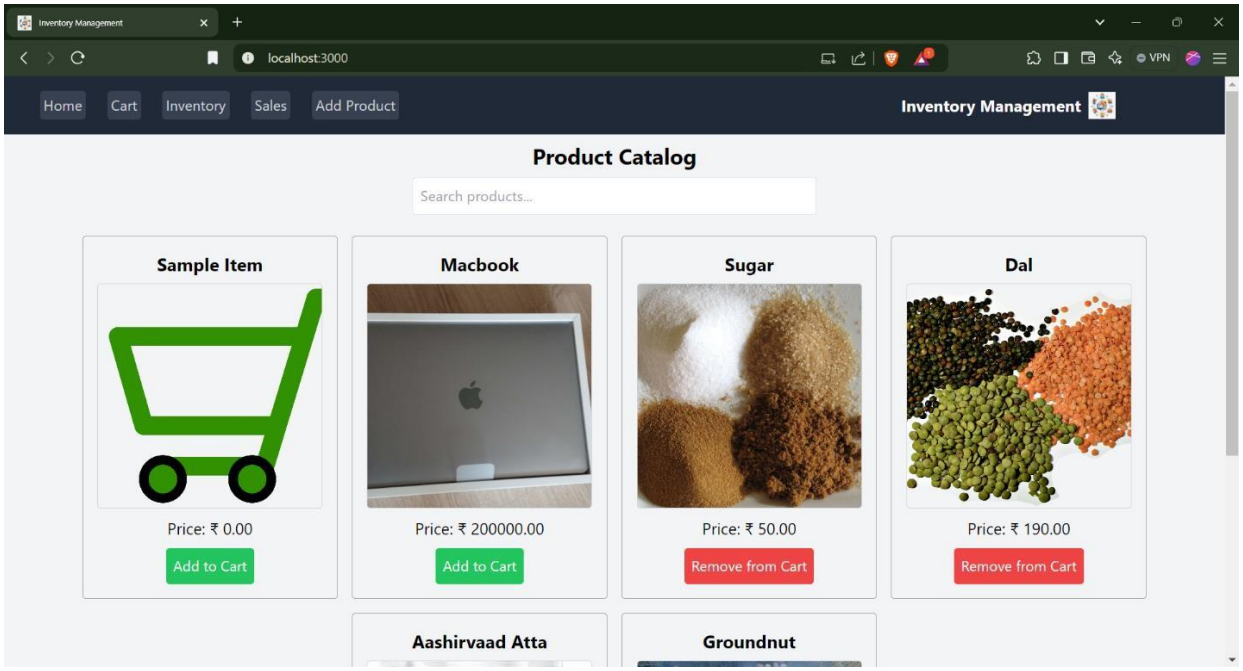
- **Step3:Ensureconsistency.**
  - Applyathemeorconsistentcolorpalette.

Milestone6-TestingandDebugging

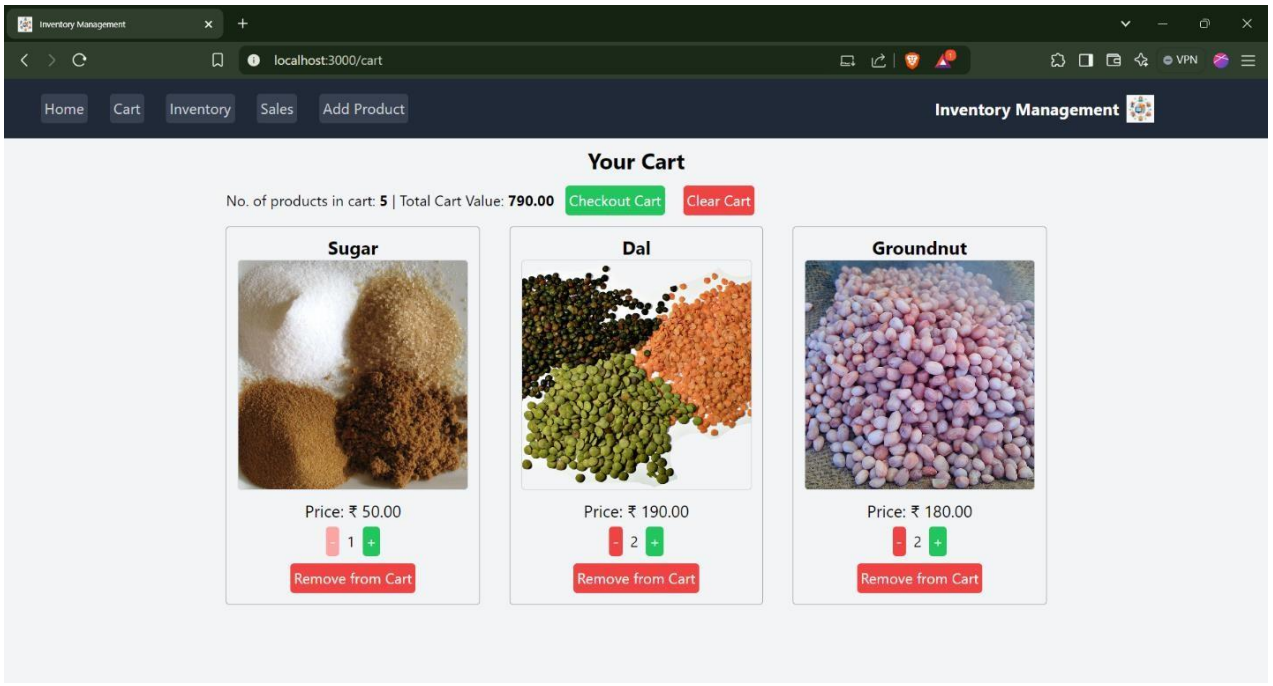
- **Step1:Testindividualcomponents.**
  - Ensurecorrectrenderingandfunctionality.
- **Step2:Testcontextand reducers.**
  - VerifystateupdatesandinteractionswithlocalStorage.
- **Step3:DebugUI/UXissues.**
  - Checkforresponsivenessandusability.
  -

➢ ProjectImplementation&Execution

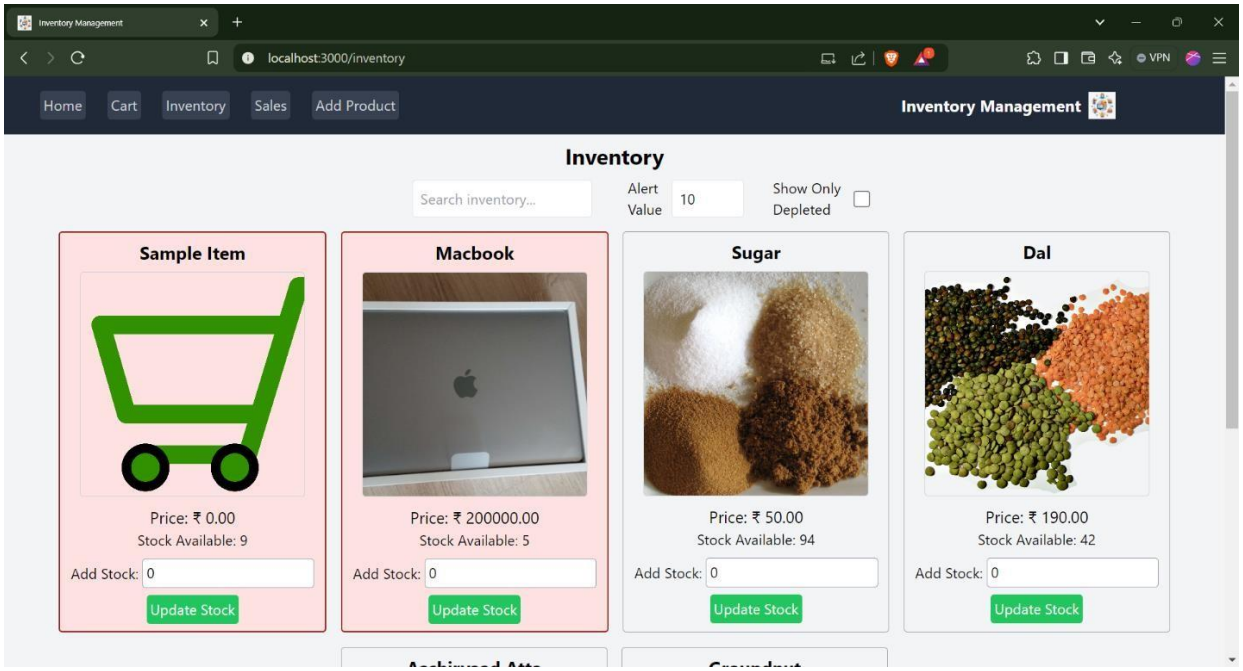
ProductCatalog:



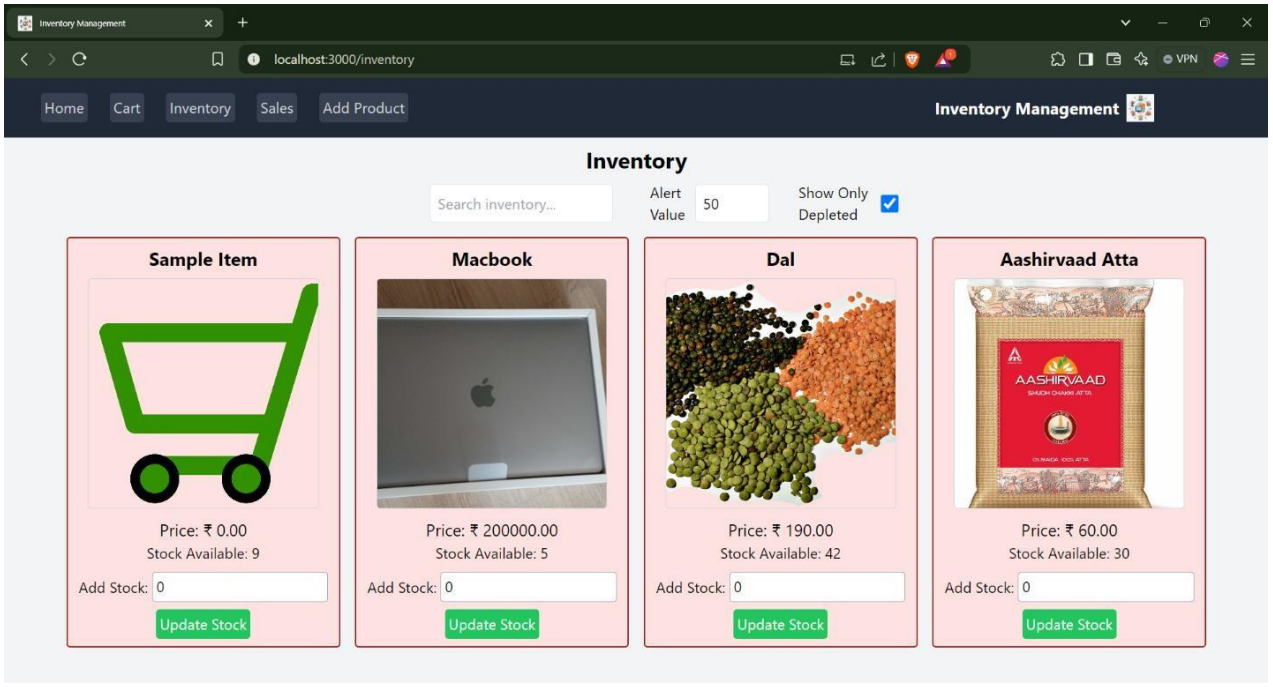
Cart:



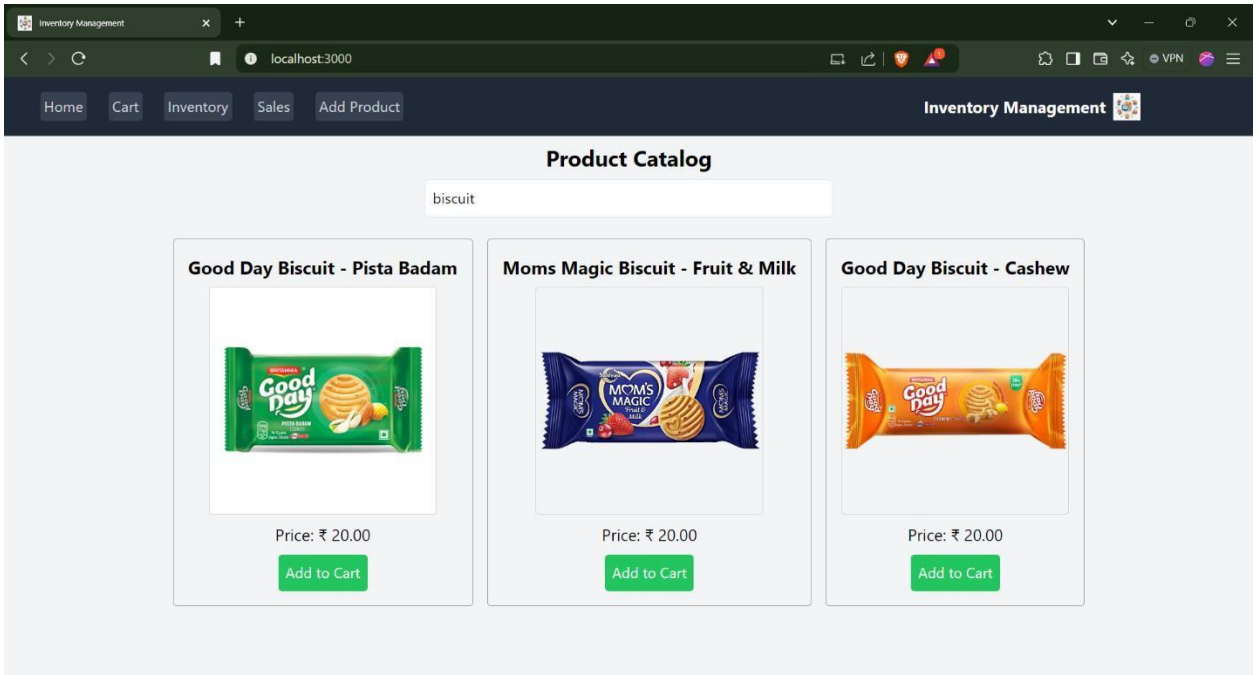
Inventory:



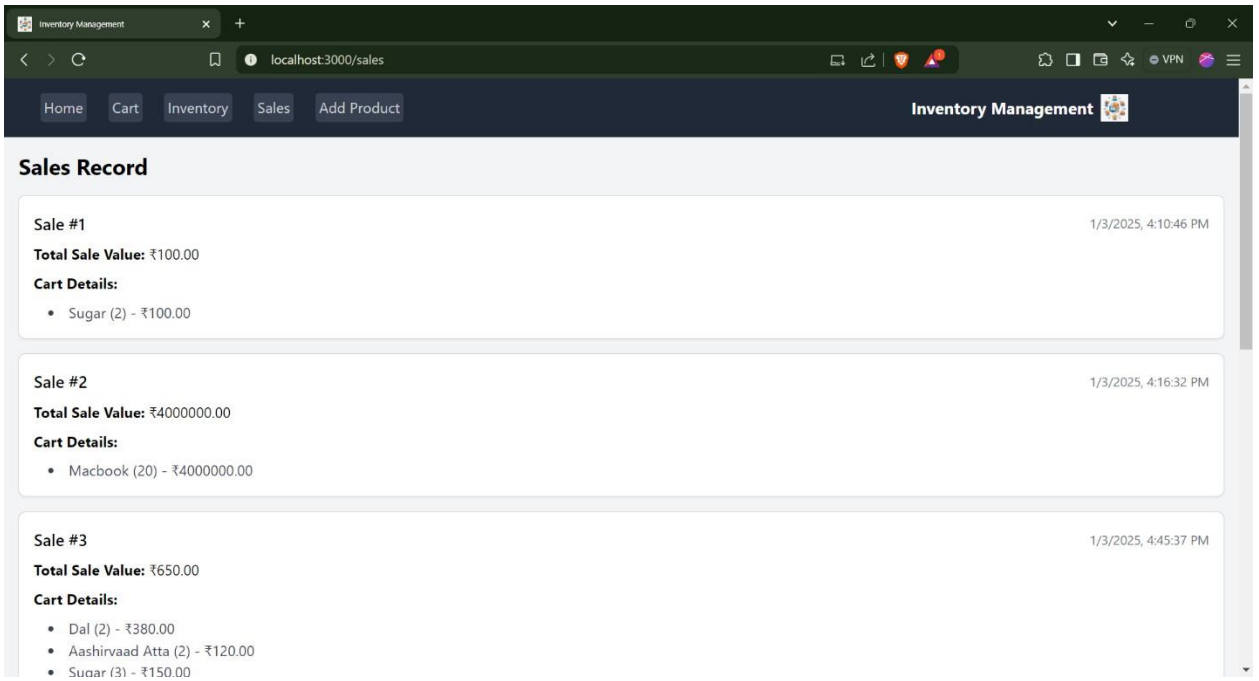
Depleted Stock:



SearchFunctionality:



Sales:



AddProduct: