Assignment -3

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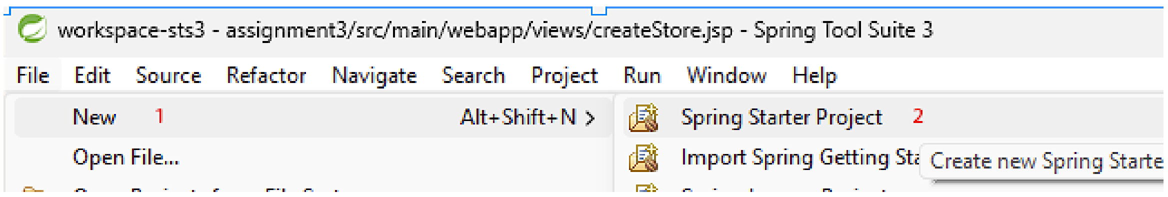
Academic Year:	2022-2023
Unit Assessor:	Archana Sakpal
Project Title:	Assignment 3 -
Issue Date:	4/13/2023
Submission Date:	4/13/2023
Internal Verifier Name:	Archana Sakpal
Date:	4/13/2023

Learner declaration
I certify that the work submitted for this assignment is my own and research sources are fully acknowledged.
Student signature: [illegible] Date: 4/13/2023

Let’s build on the previous assignment. (Develop “Know-Your-Neighbourhood”) application.
The goal of this application is to provide details on all stores in the user’s neighbourhood.

1. Create a Spring Boot application for “Know-Your-Neighbourhood”.

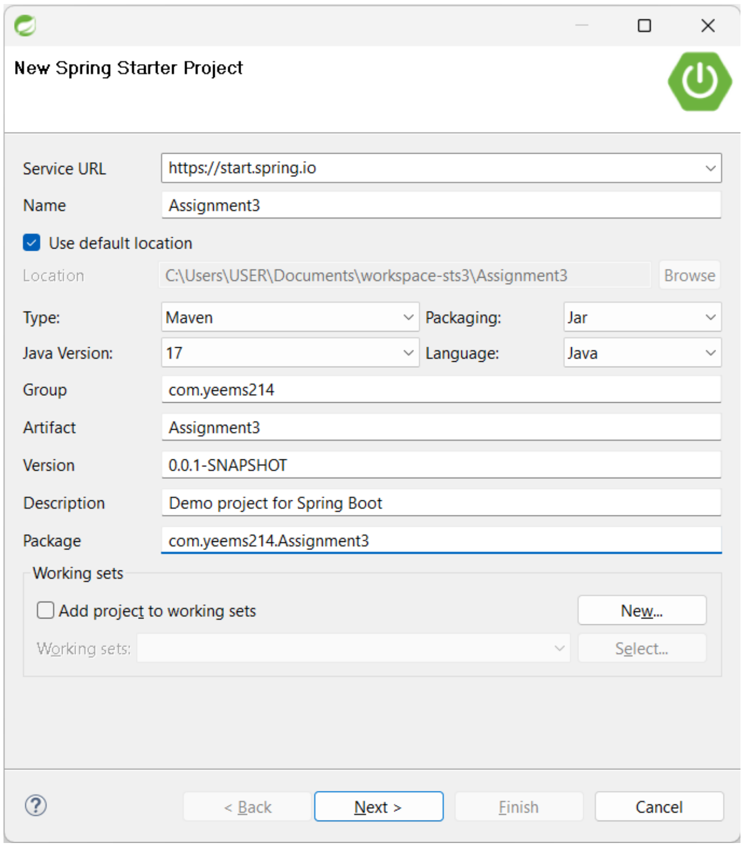
Inside Spring Tool Suite 3, click on File then New then Spring Starter Project.


workspace-sts3 - assignment3/src/main/webapp/views/createStore.jsp - Spring Tool Suite 3
File Edit Source Refactor Navigate Search Project Run Window Help
New 1 Alt+Shift+N >
Open File...
Spring Starter Project 2
Import Spring Getting Sta
Create new Spring Starte

Inside the Spring Starter Project form, fill out necessary information but make sure you set:

- Type: Maven
- Java Version: 17

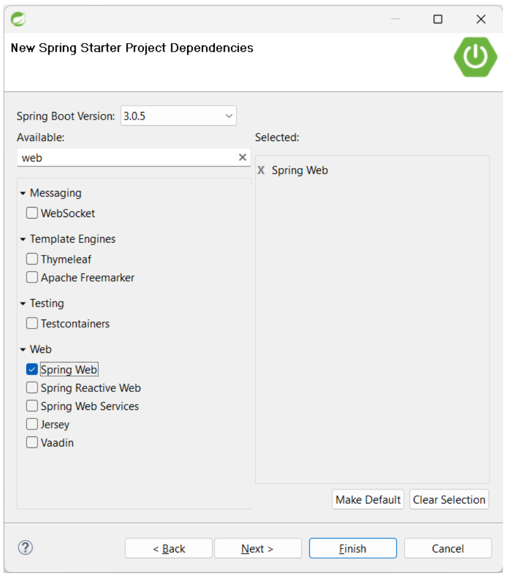
then click next.


New Spring Starter Project

Service URL	https://start.spring.io		
Name	Assignment3		
☑ Use default location			
Location	C:\Users\USER\Documents\workspace-sts3\Assignment3		
Type:	Maven	Packaging:	Jar
Java Version:	17	Language:	Java
Group	com.yeems214		
Artifact	Assignment3		
Version	0.0.1-SNAPSHOT		
Description	Demo project for Spring Boot		
Package	com.yeems214.Assignment3		

Working sets
☐ Add project to working sets

After that, look for Spring Web inside the Spring Starter Project Dependencies then click Finish.


New Spring Starter Project Dependencies

Spring Boot Version: 3.0.5

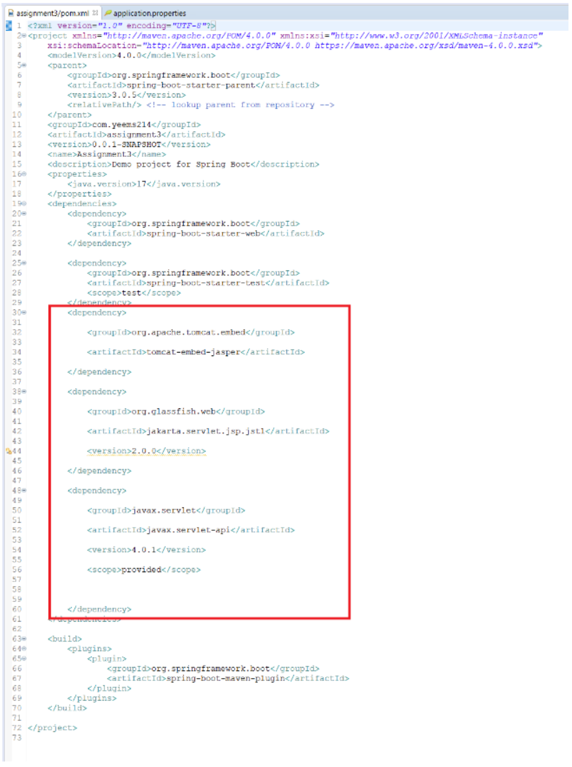
Available: web

Selected: Spring Web

After your project has been created, open pom.xml and kindly add these required dependencies.

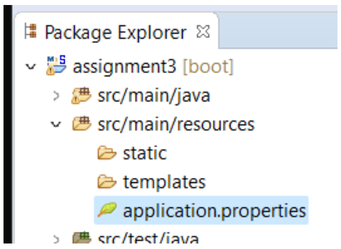
```
<dependency>
<groupId>org.apache.tomcat.embed</groupId>
<artifactId>tomcat-embed-jasper</artifactId>
</dependency>
<dependency>
<groupId>org.glassfish.web</groupId>
<artifactId>jakarta.servlet.jsp.jstl</artifactId>
<version>2.0.0</version>
</dependency>
<dependency>
<groupId>javax.servlet</groupId>
<artifactId>javax.servlet-api</artifactId>
<version>4.0.1</version>
<scope>provided</scope>
</dependency>
```

- Here’s what it should look like after:



```xml
<?xml version="1.0" encoding="UTF-8"?>
<project xmlns="http://maven.apache.org/POM/4.0.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xsi:schemaLocation="http://maven.apache.org/POM/4.0.0 https://maven.apache.org/xsd/maven-4.0.0.xsd">
    <modelVersion>4.0.0</modelVersion>
    <parent>
        <groupId>org.springframework.boot</groupId>
        <artifactId>spring-boot-starter-parent</artifactId>
        <version>3.0.5</version>
        <relativePath/> <!-- lookup parent from repository -->
    </parent>
    <groupId>com.yeems214</groupId>
    <artifactId>assignment3</artifactId>
    <version>0.0.1-SNAPSHOT</version>
    <name>Assignment3</name>
    <description>Demo project for Spring Boot</description>
    <properties>
        <java.version>17</java.version>
    </properties>
    <dependencies>
        <dependency>
            <groupId>org.springframework.boot</groupId>
            <artifactId>spring-boot-starter-web</artifactId>
        </dependency>

        <dependency>
            <groupId>org.springframework.boot</groupId>
            <artifactId>spring-boot-starter-test</artifactId>
            <scope>test</scope>
        </dependency>
        <dependency>

            <groupId>org.apache.tomcat.embed</groupId>

            <artifactId>tomcat-embed-jasper</artifactId>

        </dependency>

        <dependency>

            <groupId>org.glassfish.web</groupId>

            <artifactId>jakarta.servlet.jsp.jstl</artifactId>

            <version>2.0.0</version>

        </dependency>

        <dependency>

            <groupId>javax.servlet</groupId>

            <artifactId>javax.servlet-api</artifactId>

            <version>4.0.1</version>

            <scope>provided</scope>



        </dependency>
    </dependencies>

    <build>
        <plugins>
            <plugin>
                <groupId>org.springframework.boot</groupId>
                <artifactId>spring-boot-maven-plugin</artifactId>
            </plugin>
        </plugins>
    </build>

</project>
```

After importing those dependencies above, expand src/main/resources then open application.properties.



Lastly, inside application.properties, add these following lines of code:

```
spring.mvc.view.prefix=/views/
spring.mvc.view.suffix=.jsp
server.port=9092
```

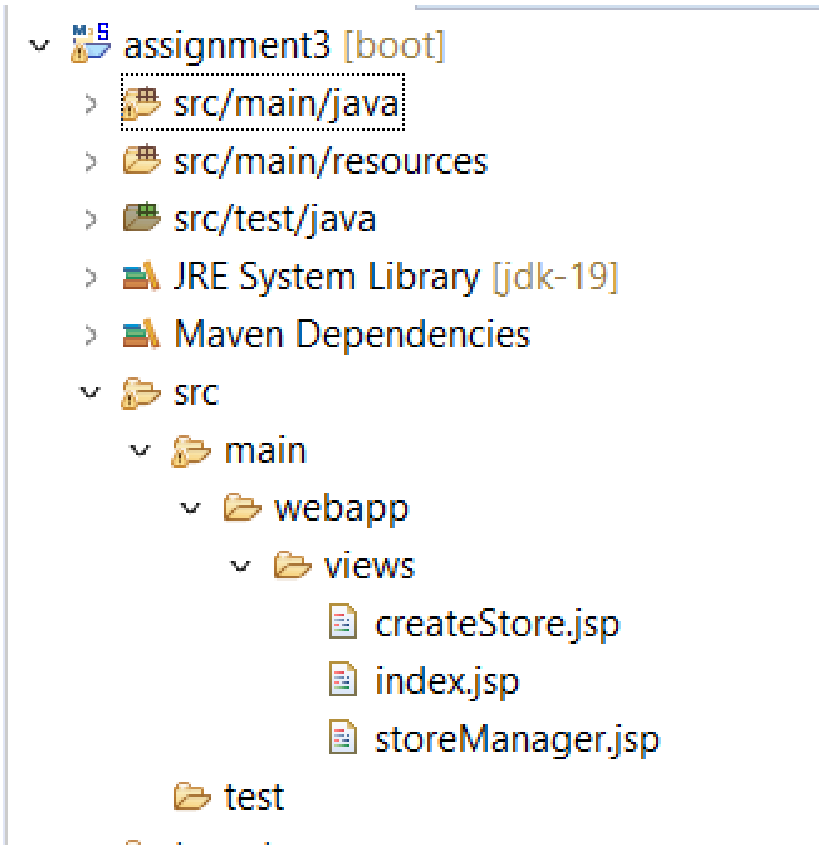
- Spring.mvc.view.prefix points to the /views/ directory inside the project which contains your .jsp files.

- Spring.mvc.view.suffix means that it should only be reading files with the .jsp as its filename.

- Server.port refers to the port that your web server is going to use to host the project.

2. **Add support for JSP views and create required folder structure.**

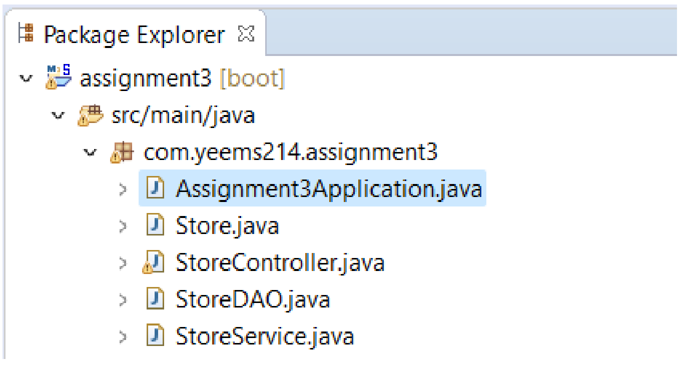
After the Spring Starter Project has created, make sure you create a folder inside src/main as webapp then create a folder named views inside webapp then lastly, import your previous KnowYourNeighborhood jsp files inside src/main/webapp/views folder.



```
assignment3 [boot]
  src/main/java
  src/main/resources
  src/test/java
  JRE System Library [jdk-19]
  Maven Dependencies
  src
    main
      webapp
        views
          createStore.jsp
          index.jsp
          storeManager.jsp
    test
```

3. **Move already developed classes into this project.**

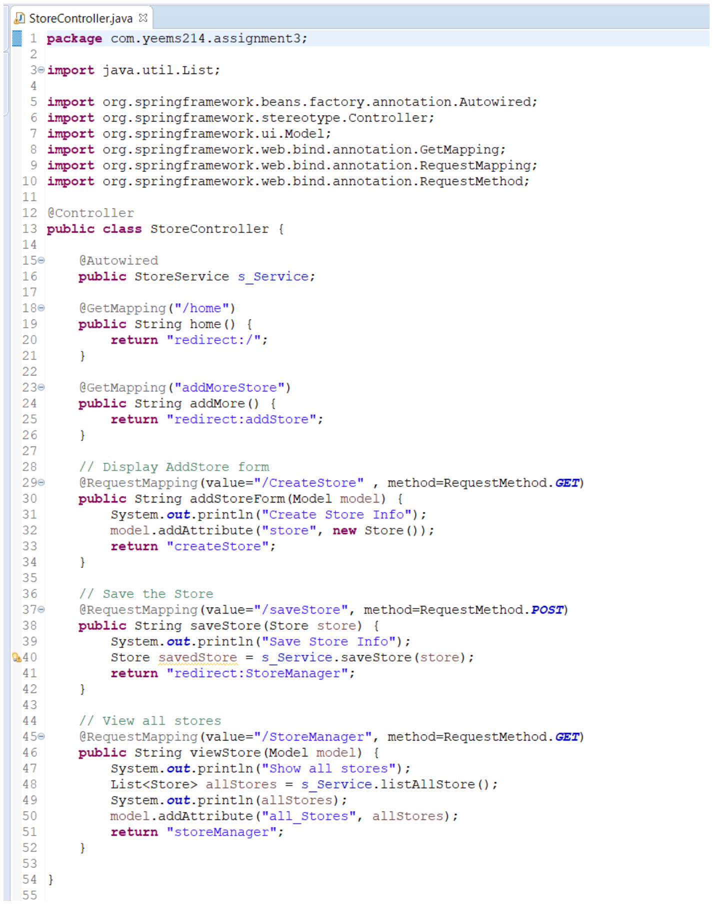
After importing those jsp files, you will need to copy the .java classes from the previous KnowYourNeighborhood project package then copy them all to the new package inside which for this project, it's enclosed in com.yeems214.assignment3



```
Package Explorer
assignment3 [boot]
  src/main/java
    com.yeems214.assignment3
      Assignment3Application.java
      Store.java
      StoreController.java
      StoreDAO.java
      StoreService.java
```

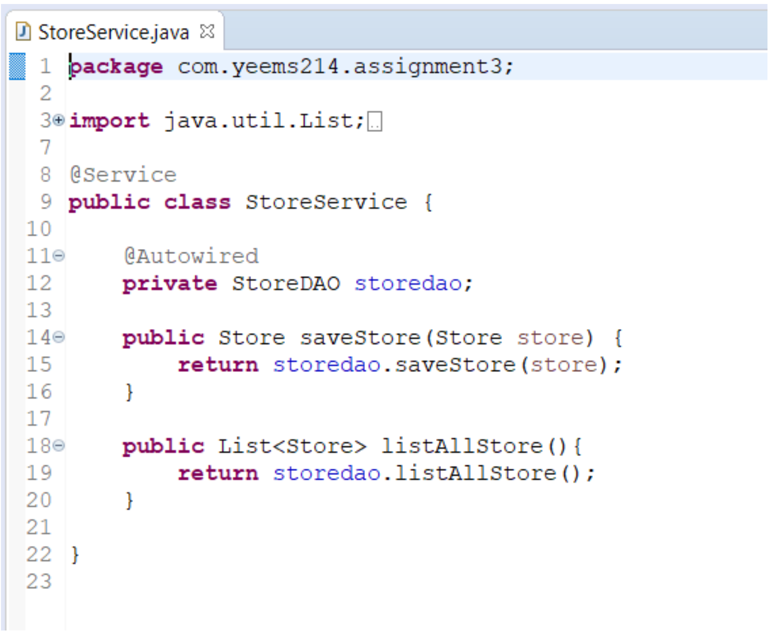
4. Develop all components required to view the stores

a. Add method to existing Controller class to receive the request to fetch stores


StoreController.java

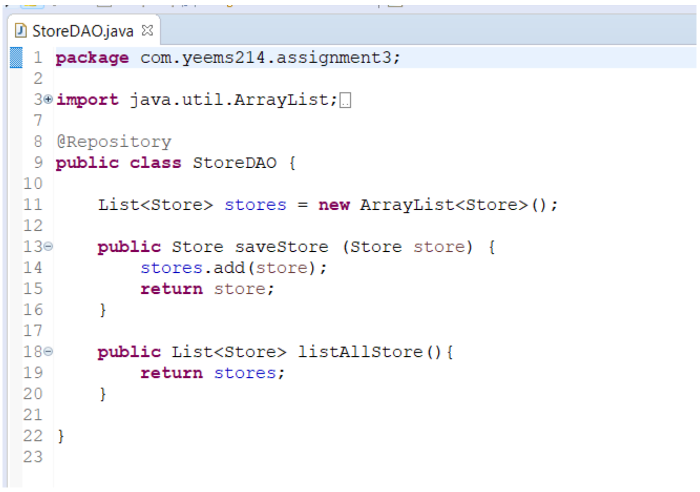
```java
package com.yeems214.assignment3;

import java.util.List;

import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.stereotype.Controller;
import org.springframework.ui.Model;
import org.springframework.web.bind.annotation.GetMapping;
import org.springframework.web.bind.annotation.RequestMapping;
import org.springframework.web.bind.annotation.RequestMethod;

@Controller
public class StoreController {

    @Autowired
    public StoreService s_Service;

    @GetMapping("/home")
    public String home() {
        return "redirect:/";
    }

    @GetMapping("addMoreStore")
    public String addMore() {
        return "redirect:addStore";
    }

    // Display AddStore form
    @RequestMapping(value="/CreateStore" , method=RequestMethod.GET)
    public String addStoreForm(Model model) {
        System.out.println("Create Store Info");
        model.addAttribute("store", new Store());
        return "createStore";
    }

    // Save the Store
    @RequestMapping(value="/saveStore", method=RequestMethod.POST)
    public String saveStore(Store store) {
        System.out.println("Save Store Info");
        Store savedStore = s_Service.saveStore(store);
        return "redirect:StoreManager";
    }

    // View all stores
    @RequestMapping(value="/StoreManager", method=RequestMethod.GET)
    public String viewStore(Model model) {
        System.out.println("Show all stores");
        List<Store> allStores = s_Service.listAllStore();
        System.out.println(allStores);
        model.addAttribute("all_Stores", allStores);
        return "storeManager";
    }

}
```

b. Add method to existing Service class to process the request (or add method to existing service class)


StoreService.java

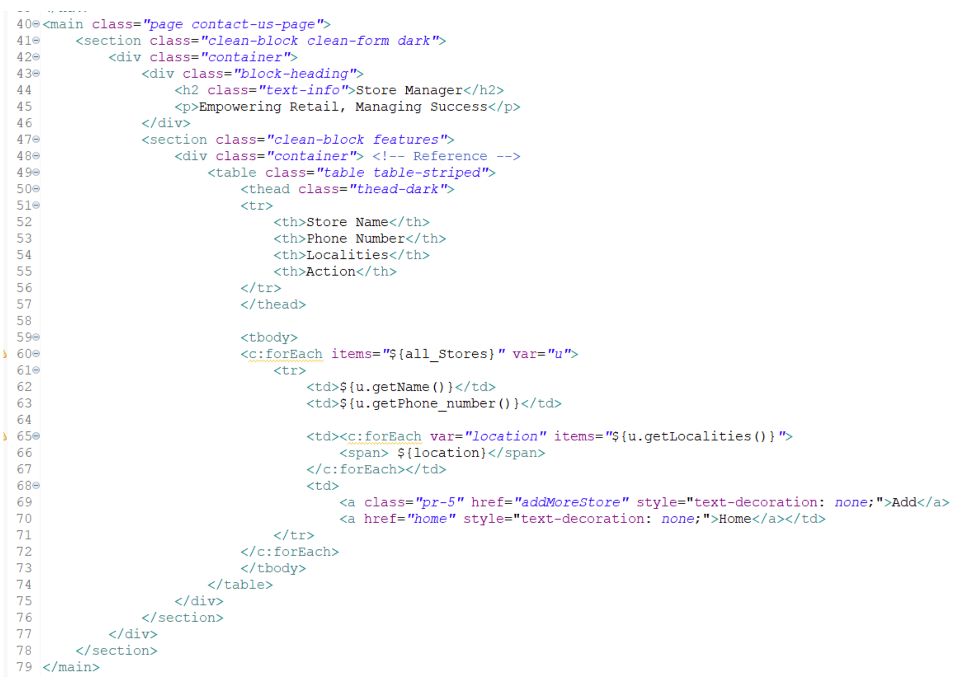
```java
package com.yeems214.assignment3;

import java.util.List;

@Service
public class StoreService {

    @Autowired
    private StoreDAO storedao;

    public Store saveStore(Store store) {
        return storedao.saveStore(store);
    }

    public List<Store> listAllStore(){
        return storedao.listAllStore();
    }

}
```

c. Add method existing repository class to return all available stores.



```java
package com.yeems214.assignment3;

import java.util.ArrayList;

@Repository
public class StoreDAO {

    List<Store> stores = new ArrayList<Store>();

    public Store saveStore (Store store) {
        stores.add(store);
        return store;
    }

    public List<Store> listAllStore(){
        return stores;
    }

}
```

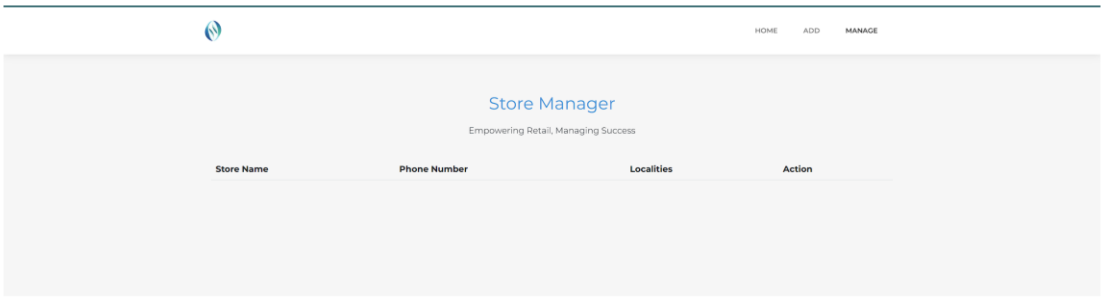
d. Create HTML to view the stores. Show name, phone number and localities it serves for each store.



```html
<main class="page contact-us-page">
    <section class="clean-block clean-form dark">
        <div class="container">
            <div class="block-heading">
                <h2 class="text-info">Store Manager</h2>
                <p>Empowering Retail, Managing Success</p>
            </div>
            <section class="clean-block features">
                <div class="container"> <!-- Reference -->
                    <table class="table table-striped">
                        <thead class="thead-dark">
                        <tr>
                            <th>Store Name</th>
                            <th>Phone Number</th>
                            <th>Localities</th>
                            <th>Action</th>
                        </tr>
                        </thead>

                        <tbody>
                        <c:forEach items="${all_Stores}" var="u">
                            <tr>
                                <td>${u.getName()}</td>
                                <td>${u.getPhone_number()}</td>

                                <td><c:forEach var="location" items="${u.getLocalities()}">
                                    <span> ${location}</span>
                                </c:forEach></td>
                                <td>
                                    <a class="pr-5" href="addMoreStore" style="text-decoration: none;">Add</a>
                                    <a href="home" style="text-decoration: none;">Home</a></td>
                            </tr>
                        </c:forEach>
                        </tbody>
                    </table>
                </div>
            </section>
        </div>
    </section>
</main>
```

e. **Ensure that view stores request works end-to-end. (i.e., should be able to submit request to view the stores in the browser and get the page back with all stores).**

- **No Data**

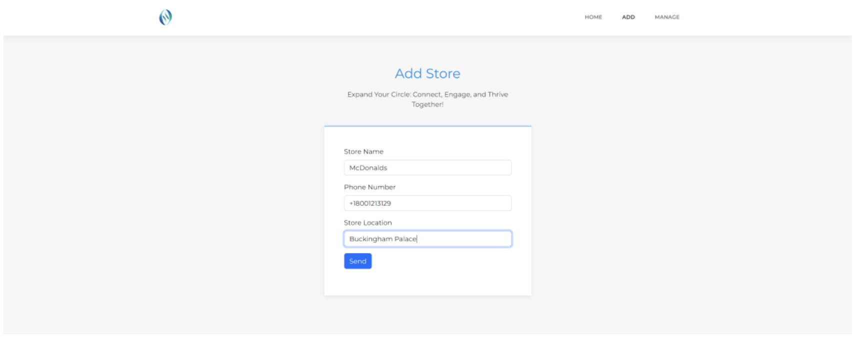


Store Manager

Empowering Retail, Managing Success

Store Name	Phone Number	Localities	Action

- **Adding Data**

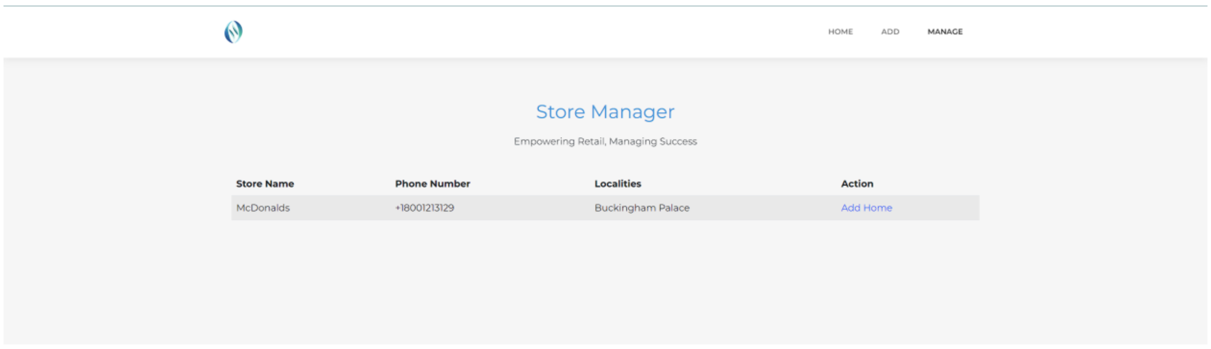


Add Store

Expand Your Circle: Connect, Engage, and Thrive Together!

Store Name	McDonalds
Phone Number	+18001213129
Store Location	Buckingham Palace

- **Store Manager with Data**

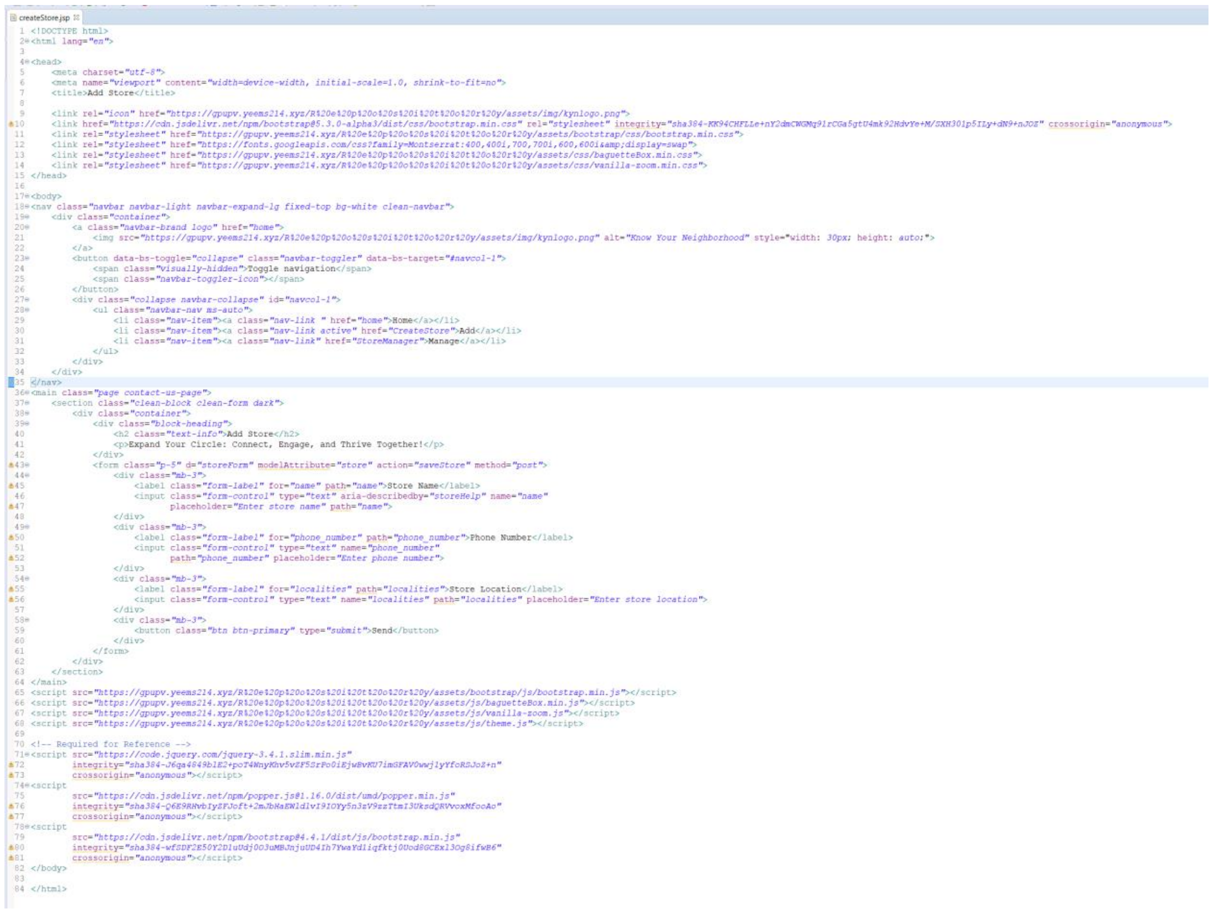


Store Manager

Empowering Retail, Managing Success

Store Name	Phone Number	Localities	Action
McDonalds	+18001213129	Buckingham Palace	Add Home

5. **Create an HTML page to add a store and link it to the view stores page.**

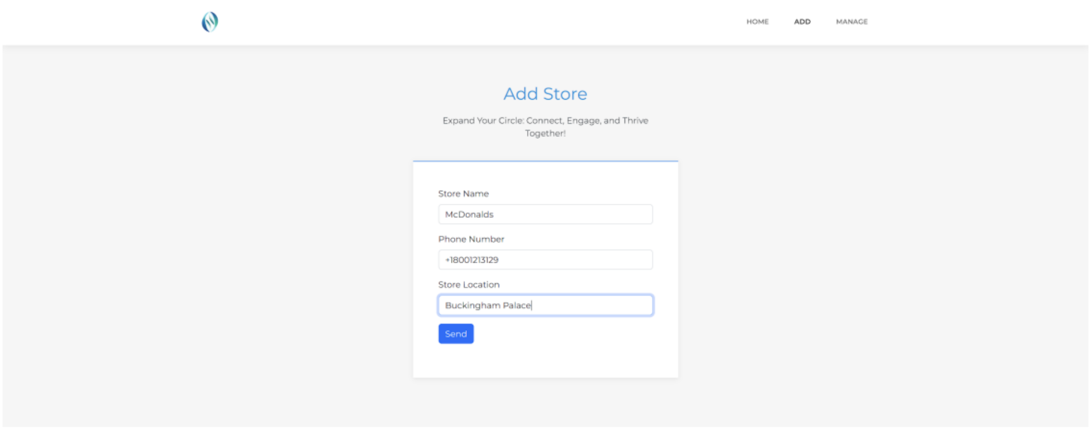


createStore.jsp

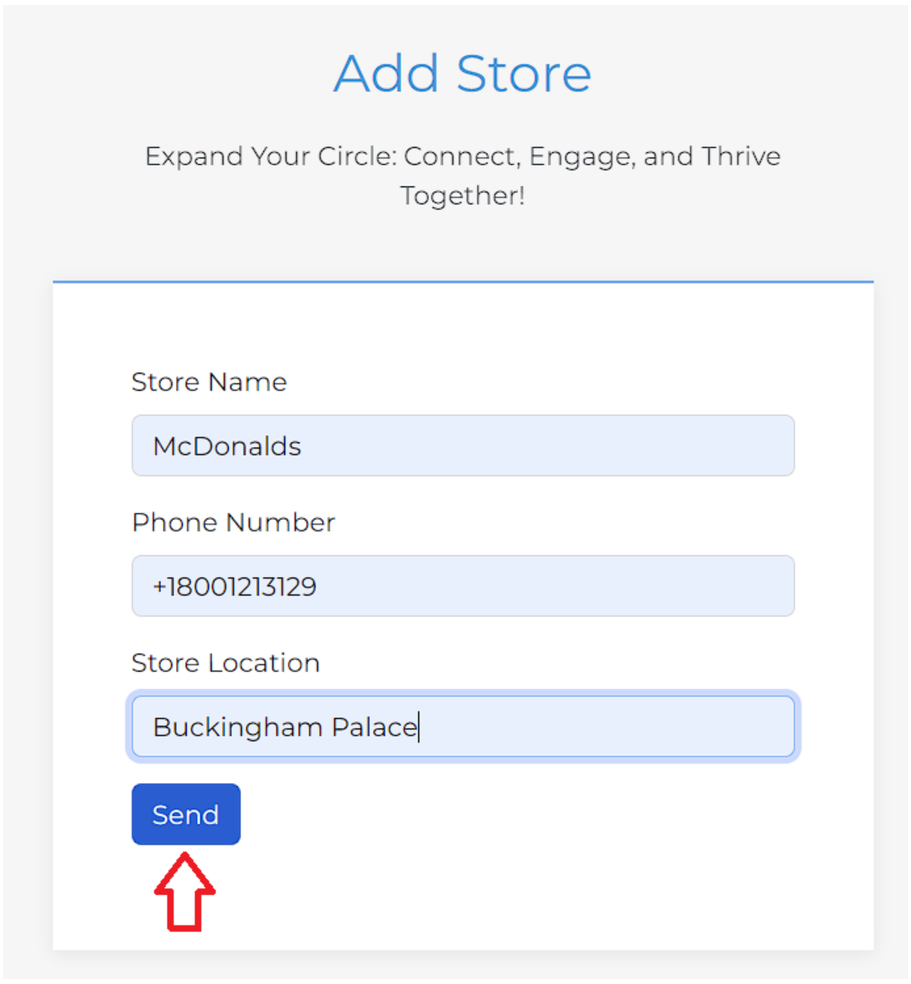
```html
<!DOCTYPE html>
<html lang="en">

<head>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0, shrink-to-fit=no">
    <title>Add Store</title>

    <link rel="icon" href="https://gpupv.yeems214.xyz/R%20e%20p%20o%20s%20i%20t%20o%20r%20y/assets/img/kynlogo.png">
    <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0-alpha3/dist/css/bootstrap.min.css" rel="stylesheet" integrity="sha384-KK94CHFLLe+nY2dmCWGMq91rCGa5gtU4mk92HdvYe+M/SXH301p5ILy+dN9+nJOZ" crossorigin="anonymous">
    <link rel="stylesheet" href="https://gpupv.yeems214.xyz/R%20e%20p%20o%20s%20i%20t%20o%20r%20y/assets/bootstrap/css/bootstrap.min.css">
    <link rel="stylesheet" href="https://fonts.googleapis.com/css?family=Montserrat:400,400i,700,700i,600,600i&amp;display=swap">
    <link rel="stylesheet" href="https://gpupv.yeems214.xyz/R%20e%20p%20o%20s%20i%20t%20o%20r%20y/assets/css/baguetteBox.min.css">
    <link rel="stylesheet" href="https://gpupv.yeems214.xyz/R%20e%20p%20o%20s%20i%20t%20o%20r%20y/assets/css/vanilla-zoom.min.css">
</head>

<body>
<nav class="navbar navbar-light navbar-expand-lg fixed-top bg-white clean-navbar">
    <div class="container">
        <a class="navbar-brand logo" href="home">
            <img src="https://gpupv.yeems214.xyz/R%20e%20p%20o%20s%20i%20t%20o%20r%20y/assets/img/kynlogo.png" alt="Know Your Neighborhood" style="width: 30px; height: auto;">
        </a>
        <button data-bs-toggle="collapse" class="navbar-toggler" data-bs-target="#navcol-1">
            <span class="visually-hidden">Toggle navigation</span>
            <span class="navbar-toggler-icon"></span>
        </button>
        <div class="collapse navbar-collapse" id="navcol-1">
            <ul class="navbar-nav ms-auto">
                <li class="nav-item"><a class="nav-link " href="home">Home</a></li>
                <li class="nav-item"><a class="nav-link active" href="CreateStore">Add</a></li>
                <li class="nav-item"><a class="nav-link" href="StoreManager">Manage</a></li>
            </ul>
        </div>
    </div>
</nav>
<main class="page contact-us-page">
    <section class="clean-block clean-form dark">
        <div class="container">
            <div class="block-heading">
                <h2 class="text-info">Add Store</h2>
                <p>Expand Your Circle: Connect, Engage, and Thrive Together!</p>
            </div>
            <form class="p-5" d="storeForm" modelAttribute="store" action="saveStore" method="post">
                <div class="mb-3">
                    <label class="form-label" for="name" path="name">Store Name</label>
                    <input class="form-control" type="text" aria-describedby="storeHelp" name="name"
                           placeholder="Enter store name" path="name">
                </div>
                <div class="mb-3">
                    <label class="form-label" for="phone_number" path="phone_number">Phone Number</label>
                    <input class="form-control" type="text" name="phone_number"
                           path="phone_number" placeholder="Enter phone number">
                </div>
                <div class="mb-3">
                    <label class="form-label" for="localities" path="localities">Store Location</label>
                    <input class="form-control" type="text" name="localities" path="localities" placeholder="Enter store location">
                </div>
                <div class="mb-3">
                    <button class="btn btn-primary" type="submit">Send</button>
                </div>
            </form>
        </div>
    </section>
</main>
<script src="https://gpupv.yeems214.xyz/R%20e%20p%20o%20s%20i%20t%20o%20r%20y/assets/bootstrap/js/bootstrap.min.js"></script>
<script src="https://gpupv.yeems214.xyz/R%20e%20p%20o%20s%20i%20t%20o%20r%20y/assets/js/baguetteBox.min.js"></script>
<script src="https://gpupv.yeems214.xyz/R%20e%20p%20o%20s%20i%20t%20o%20r%20y/assets/js/vanilla-zoom.js"></script>
<script src="https://gpupv.yeems214.xyz/R%20e%20p%20o%20s%20i%20t%20o%20r%20y/assets/js/theme.js"></script>

<!-- Required for Reference -->
<script src="https://code.jquery.com/jquery-3.4.1.slim.min.js"
        integrity="sha384-J6qa4849blE2+poT4WnyKhv5vZF5SrPo0iEjwBvKU7imGFAV0wwj1yYfoRSJoZ+n"
        crossorigin="anonymous"></script>
<script
        src="https://cdn.jsdelivr.net/npm/popper.js@1.16.0/dist/umd/popper.min.js"
        integrity="sha384-Q6E9RHvbIyZFJoft+2mJbHaEWldlvI9IOYy5n3zV9zzTtmI3UksdQRVvoxMfooAo"
        crossorigin="anonymous"></script>
<script
        src="https://cdn.jsdelivr.net/npm/bootstrap@4.4.1/dist/js/bootstrap.min.js"
        integrity="sha384-wfSDF2E50Y2D1uUdj0O3uMBJnjuUD4Ih7YwaYd1iqfktj0Uod8GCExl3Og8ifwB6"
        crossorigin="anonymous"></script>
</body>

</html>
```

6. **Let the response of add request submission be the view page that shows all stores including recently added store.**

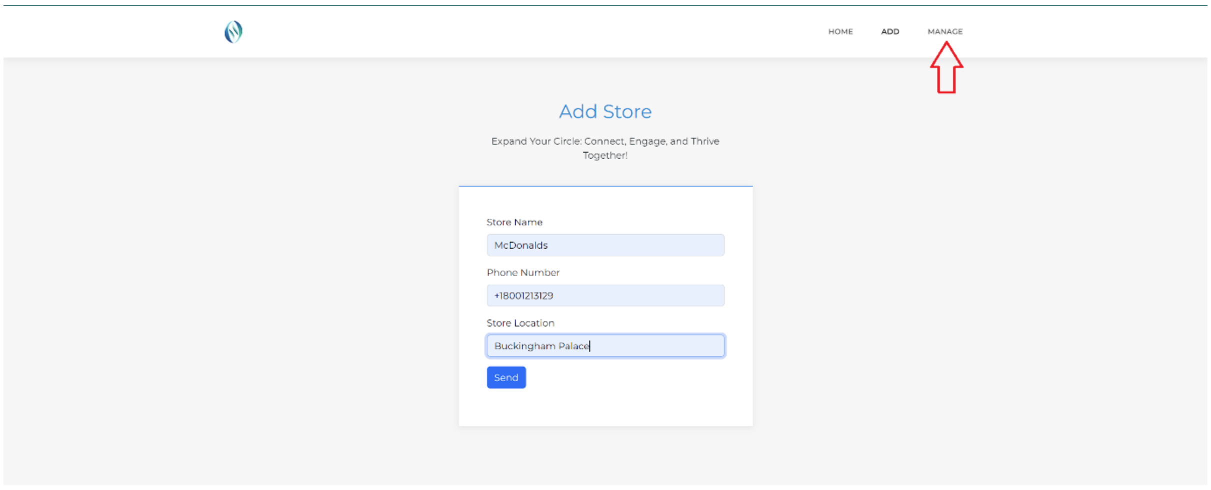
After loading into the page, go to Add then enter your new store data (Name, Phone Number, Localities)



Submit the store form after completing.



After that, you will need to go to the Store Manager page.



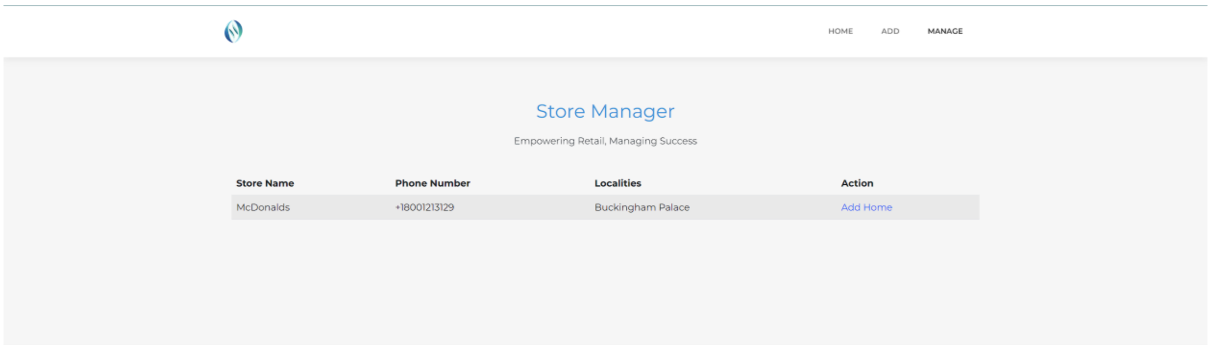
Add Store

Expand Your Circle: Connect, Engage, and Thrive Together!

Store Name: McDonalds

Phone Number: +18001213129

Store Location: Buckingham Palace

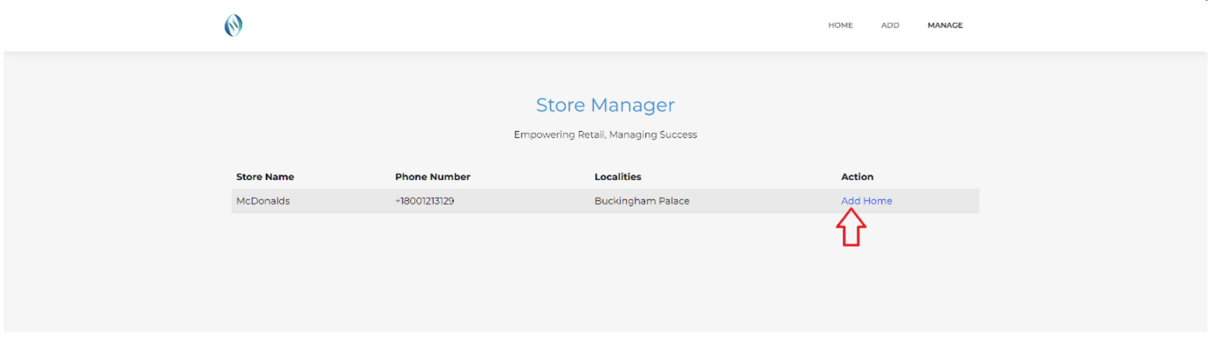


Store Manager

Empowering Retail, Managing Success

Store Name	Phone Number	Localities	Action
McDonalds	+18001213129	Buckingham Palace	Add Home

Click the “Add” button inside Store Manager to add a new store.

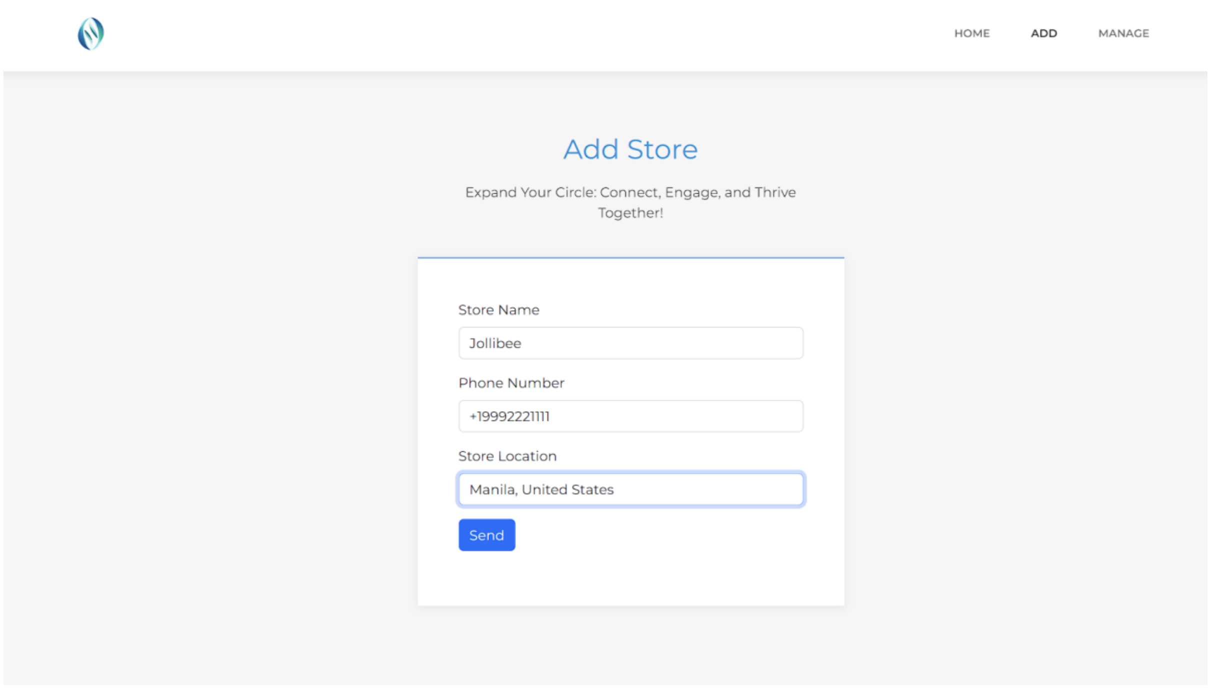


Store Manager

Empowering Retail, Managing Success

Store Name	Phone Number	Localities	Action
McDonalds	+18001213129	Buckingham Palace	Add Home

After adding another store, go back to the Store Manager page which then shows the newly added store.



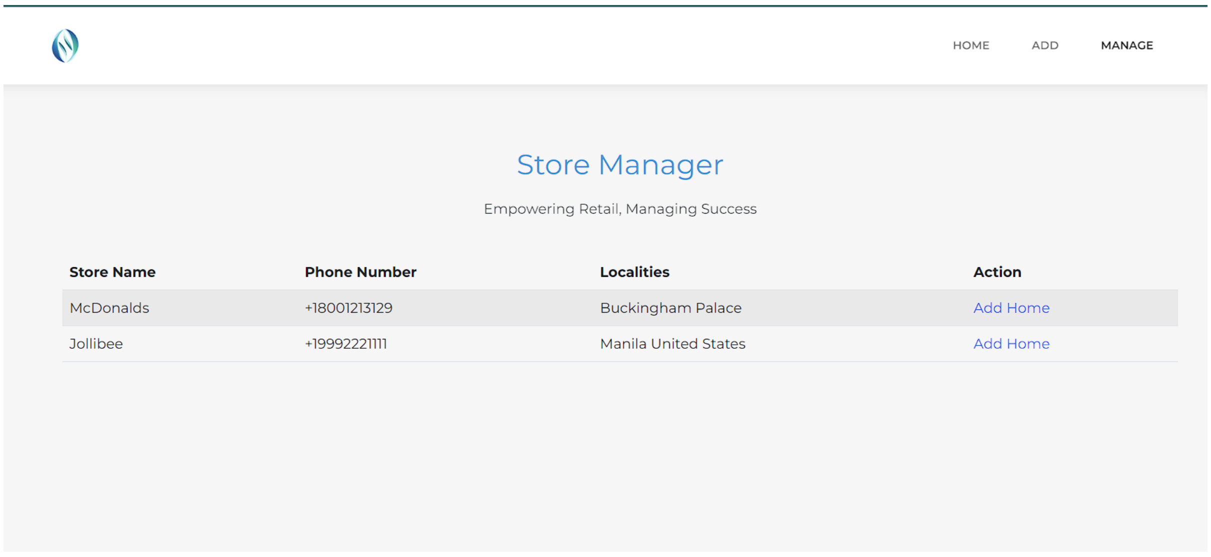
Add Store

Expand Your Circle: Connect, Engage, and Thrive Together!

Store Name: Jollibee

Phone Number: +19992221111

Store Location: Manila, United States



Store Manager

Empowering Retail, Managing Success

Store Name	Phone Number	Localities	Action
McDonalds	+18001213129	Buckingham Palace	Add Home
Jollibee	+19992221111	Manila United States	Add Home