Steps Deploy

Sure! Here's the complete, step-by-step guide on how to set up your Spring Boot applications with Nginx as a reverse proxy to route requests based on different domains. This setup will allow you to run your applications on separate ports, while accessing them through different domain names.

Complete Setup:

Step 1: Install Required Software

1. **Install Git**:
2. sudo apt update
3. sudo apt install git -y
4. **Install MySQL 8.2**:
5. sudo apt install mysql-server -y
6. sudo mysql_secure_installation
7. **Install Java 17**:
8. sudo apt update
9. sudo apt install openjdk-17-jdk -y
10. **Install Nginx** (for reverse proxy):
11. sudo apt update
12. sudo apt install nginx -y

Step 2: Set Up Directories and Create Databases

1. **Create folders** under /home as specified:
2. mkdir -p /home/freelance/barbershop/hussein
3. mkdir -p /home/freelance/barbershop/hassan
4. mkdir -p /home/freelance/supermarket/fadel
5. **Create MySQL schemas (databases) for each folder**: Open MySQL:
6. sudo mysql -u root -p

Then create the databases for each folder:

CREATE DATABASE barbershop_hussein;

```
CREATE DATABASE barbershop_hassan;

CREATE DATABASE supermarket_fadel;
```

Step 3: Set Up Spring Boot Applications

1. **Set Spring Boot Application Ports**: In each of your Spring Boot projects (located in the respective folders), configure the application to run on a different port.

For **Hussein** (in /home/freelance/barbershop/hussein), edit the application.properties:

```
server.port=8081

spring.datasource.url=jdbc:mysql://localhost:3306/barbershop_hussein
```

For **Hassan** (in /home/freelance/barbershop/hassan), edit the application.properties:

```
server.port=8082

spring.datasource.url=jdbc:mysql://localhost:3306/barbershop_hassan
```

For **Fadel** (in /home/freelance/supermarket/fadel), edit the application.properties:

```
server.port=8083

spring.datasource.url=jdbc:mysql://localhost:3306/supermarket_fadel
```

Step 4: Configure Nginx as Reverse Proxy

1. **Edit /etc/hosts to map domains locally**: To simulate the domains locally, add the following to /etc/hosts:
2. sudo nano /etc/hosts

Add the following lines:

```
127.0.0.1 barbershop-hussein.local

127.0.0.1 barbershop-hassan.local

127.0.0.1 supermarket-fadel.local
```

3. **Configure Nginx** to route requests based on the domain: Open Nginx's default configuration file:
4. sudo nano /etc/nginx/sites-available/default

Add the following server block configuration:

```
server {
```

```
listen 80;

# Barbershop Hussein - Domain: barbershop-hussein.local
server_name barbershop-hussein.local;
location / {
   proxy_pass http://localhost:8081/;
   proxy_set_header Host $host;
   proxy_set_header X-Real-IP $remote_addr;
   proxy_set_header X-Forwarded-For $proxy_add_x_forwarded_for;
}

# Barbershop Hassan - Domain: barbershop-hassan.local
server_name barbershop-hassan.local;
location / {
   proxy_pass http://localhost:8082/;
   proxy_set_header Host $host;
   proxy_set_header X-Real-IP $remote_addr;
   proxy_set_header X-Forwarded-For $proxy_add_x_forwarded_for;
}

# Supermarket Fadel - Domain: supermarket-fadel.local
server_name supermarket-fadel.local;
location / {
   proxy_pass http://localhost:8083/;
   proxy_set_header Host $host;
   proxy_set_header X-Real-IP $remote_addr;
```

```
      proxy_set_header X-Forwarded-For $proxy_add_x_forwarded_for;
  }
}
```

5. **Restart Nginx** to apply the changes:
6. sudo systemctl restart nginx

Step 5: Set Up and Run the Applications

1. **Navigate to the Spring Boot applications and run each one**:

For **Hussein**:

```
cd /home/freelance/barbershop/hussein
./mvnw spring-boot:run
```

For **Hassan**:

```
cd /home/freelance/barbershop/hassan
./mvnw spring-boot:run
```

For **Fadel**:

```
cd /home/freelance/supermarket/fadel
./mvnw spring-boot:run
```

Alternatively, if you have .jar files, you can run each .jar with the following command:

```
java -jar target/your-application.jar
```

Make sure that each application runs on the designated port (8081, 8082, 8083).

Step 6: Test the Setup

Now, test your applications by visiting the following domains in your browser:

- http://barbershop-hussein.local → This will forward to localhost:8081 (Barbershop Hussein).
- http://barbershop-hassan.local → This will forward to localhost:8082 (Barbershop Hassan).
- http://supermarket-fadel.local → This will forward to localhost:8083 (Supermarket Fadel).

Step 7: Additional Configuration (Optional)

- **Firewalls**: If you're running this on a VM with a firewall enabled, ensure that port 80 (HTTP) is open:
- sudo ufw allow 80/tcp
- **Production Setup**: For production, ensure the domains are properly configured in DNS or with a reverse proxy for public access.

Conclusion

With the steps above, you should now be able to run your three Spring Boot applications (barbershop-hussein, barbershop-hassan, and supermarket-fadel) on separate ports while accessing them through their own domain names (barbershop-hussein.local, barbershop-hassan.local, supermarket-fadel.local) via Nginx as a reverse proxy.

Let me know if you need further clarification or adjustments!