Capstone Project: Food Delivery System App  
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**Goal**: To Host the Application on AWS EC2 Instance, Automate the build and deployment using Jenkins on AWS EC2 and Containerize the application using Docker on AWS EC2

**Objective**: To build a dynamic and responsive food delivery app to display food items, filter based on user preferences, manage orders, user details.

**Tech Stack**: Angular, Java, SpringBoot, MySQL, Jenkins, Docker, AWS, Git and GitHub

1. Task 1. Angular Compoments, Routing, Services and AuthGuard, Forms

1.1 Components: Cart, Administrator, Cuisines, Customers, Home, Login, Navbar, Orders, Password, Payment, Register  
Graphical user interface, application

Description automatically generated

* 1. Routing  
     Graphical user interface, text

     Description automatically generated
  2. Services  
     1.3.1 dbService  
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     Description automatically generated with medium confidence
     1. Cart Service

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Description automatically generated with medium confidence

1.3.3 Auth Service

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* 1. AuthGuard  
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     Description automatically generated with medium confidence
  2. Forms  
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     Description automatically generated with medium confidence

1. Task 2 Angular Components, Routing, Services, and Auth Guard, Forms  
   2.1 App Routing Module  
   . Text

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2.2. Home Component  
Graphical user interface, website

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2.3 Order Component Graphical user interface, website

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2.4. Cart Component

Graphical user interface, application

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2.5 Payment Component  
Graphical user interface, website

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2.6. Login Component

Graphical user interface, text, application

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2.7. Register CustomerGraphical user interface, application, website

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2.8 Register Admin

Graphical user interface, application

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2.9. Admin Cuisine Maintenance

Calendar

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2.10 Admin Update Cuisine

Graphical user interface, text, application

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2.11. Admin Update Account Customer/Admin

Graphical user interface, application

Description automatically generated

* 1. AuthGuard  
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1. Task 3: SQL CRUD Commands, Primary and Foreign Key Relationship  
   Table

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Graphical user interface, text, application, Word

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1. Task 4: SpringBoot Web Dependency, RestController, RequestMapping, Post and Get request
   1. SpringBoot Web Dependency  
      Graphical user interface

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   2. Rest Controller

Graphical user interface, text, application

Description automatically generated with medium confidence

* 1. Request Mapping

Graphical user interface, text, application

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4.4. Post and Get RequestGraphical user interface, text, application

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4.5 Response model

Graphical user interface, text, application

Description automatically generated

1. Task 5: Angular HTTP Client Library, HTTP Request Response, JSON  
     
   5.1. Base URL Cross Origin  
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   5.1 HTTP Request Response  
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   Description automatically generated with medium confidence

5.2. JSON  
Text

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1. Task 6: Jenkinsfile stages and step declarations  
   1. Jenkins Stages

Text, application

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6.2. Pipeline Build Test Deploy  
Graphical user interface, application

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6.2 Build Success  
Text

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1. Task 7: Dockerfile and commands to assemble an image

Graphical user interface, application

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Graphical user interface, application

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Text

Description automatically generated

Table

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Text

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Administrator

* 1. Configure the project with Docker File  
     FROM openjdk:11  
     RUN mkdir /app

COPY target/ /app  
WORKDIR /app

CMD java -jar petclinic-0.0.1-SNAPSHOT.jar --spring.config.name=application.properties

* 1. Configure the project with JenkinsFile   
      pipeline {

agent any

stages {

stage('Build') {  
 steps {  
 //Get code from GitHub repository  
 git 'https://github.com/lothoroger/petclinic.git

//Run maven wrapper  
bat "mvn compile"

echo 'Building the Project with Maven compiler' }  
 }

stage('Test') {  
 steps {  
 bat 'mvn test'

echo 'Testing the PetClinic project with Maven test' }  
 }

stage('Deploy') {  
 steps {  
 bat 'mvn package'

echo 'Deploy the project with Maven package' }

}

} }

1. Build the project using the maven package  
   2.a mvn clean/package

Text

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Text

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2.b. run java -jar petclinic-0.0.1-SNAPSHOT.jar  
Text

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Graphical user interface, text, application, email

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1. Create and Launch AWS EC2 Instance  
   3.1 Create Key Pair   
   Graphical user interface, text, application, email

   Description automatically generated

3.b Security Group  
Graphical user interface, text, application

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3.c EC2 Instance – PetClinic\_Instance  
Graphical user interface, text, application, email

Description automatically generated

1. Configure EC2 Instance with JDK 11  
   Install jdk 8 and Install jdk11  
   a. Create an Identity andAccessManagement (IAM)
2. Configure EC2 Instance with Docker  
   5.1 Install the docker on EC2
3. Configure EC2 Instance with Jenkins  
   6.1 Install the Jenkins on EC2  
   6.2 Create the Admin User
4. Upload the given code to git repo
5. Create Jenkins Pipeline on EC2 with SCM as git
6. Build the Pipeline to dockerize the application