

Homemade Pickles & Snacks: Taste the Best

Hardware Required:

Processor: Intel i5 or equivalent (minimum). RAM: 4 GB (8 GB recommended for Full Stack MERN). Storage: 128 GB SSD or 128 GB HDD. Internet Connectivity: High-speed internet (minimum 10 Mbps per system). Additional: Audio-visual setup for interactive sessions (microphone, speakers, etc.).

Software Required:

Processor: Intel i5 or equivalent (minimum). RAM: 4 GB (8 GB recommended for Full Stack MERN). Storage: 128 GB SSD or 128 GB HDD. Internet Connectivity: High-speed internet (minimum 10 Mbps per system). Additional: Audio-visual setup for interactive sessions (microphone, speakers, etc.).

System Required:

Projector and Audio System for presentations in all labs/classrooms Classrooms/Labs are equipped with systems or provisions for students to join sessions with their own laptops.

Description:

Home Made Pickles & Snacks — Taste the Best is a cloud-based culinary platform revolutionizing access to authentic, handcrafted pickles and snacks. Addressing the growing demand for preservative-free, traditional recipes, this initiative combines artisanal craftsmanship with cutting-edge technology to deliver farm-fresh flavors directly to consumers. Built on Flask for backend efficiency and hosted on AWS EC2 for scalable performance, the platform offers seamless browsing, ordering, and subscription management. DynamoDB ensures real-time inventory tracking and personalized user experiences, while fostering sustainability through partnerships with local farmers and eco-friendly packaging. From tangy regional pickles to wholesome snacks, every product celebrates heritage recipes, nutritional integrity, and convenience—proving that tradition and innovation can coexist deliciously. "Preserving Traditions, One Jar at a Time."

Scenarios:

Scenario 1: Scalable Order Management for High Demand

A cloud-based system ensures seamless order processing during peak user activity. For instance, during a promotional event, hundreds of users simultaneously access the platform to place orders. The backend efficiently processes requests, updates

inventory in real-time and manages user sessions. The cloud infrastructure handles traffic spikes without performance degradation, ensuring smooth transactions and minimizing wait times.

Scenario 2: Real-Time Inventory Tracking and Updates

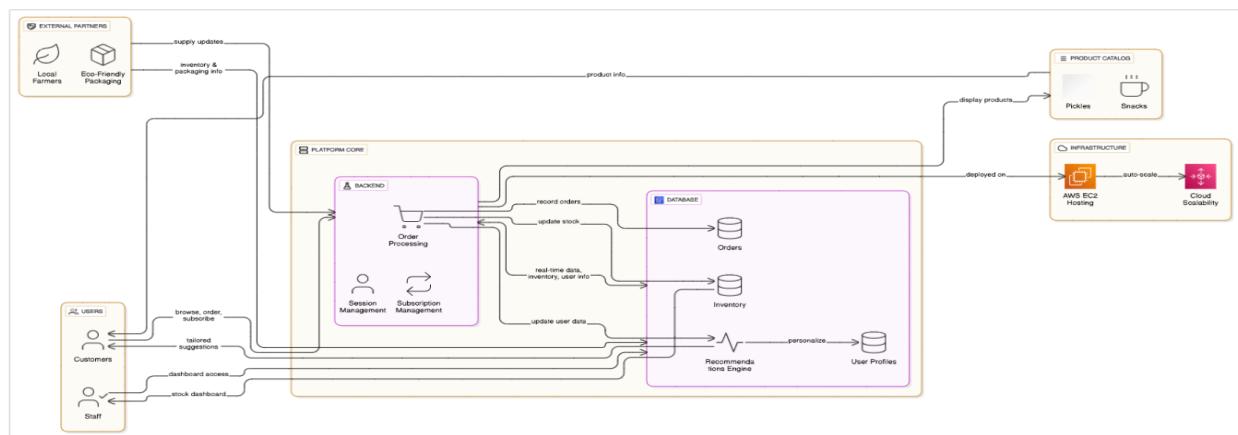
When a customer places an order for a product, the system instantly updates stock levels and records transaction details. For example, a user purchases an item, triggering automatic inventory deduction and order confirmation. Staff members receive updated dashboards to monitor stock availability and fulfillment progress, ensuring timely restocking and minimizing overselling risks.

Scenario 3: Personalized User Experience and Recommendations

The platform leverages user behavior data to enhance engagement. A returning customer, for instance, views tailored recommendations based on past purchases and browsing history. The system dynamically adjusts suggestions in real-time, while maintaining fast response rates even during high traffic, creating a frictionless and intuitive shopping experience.

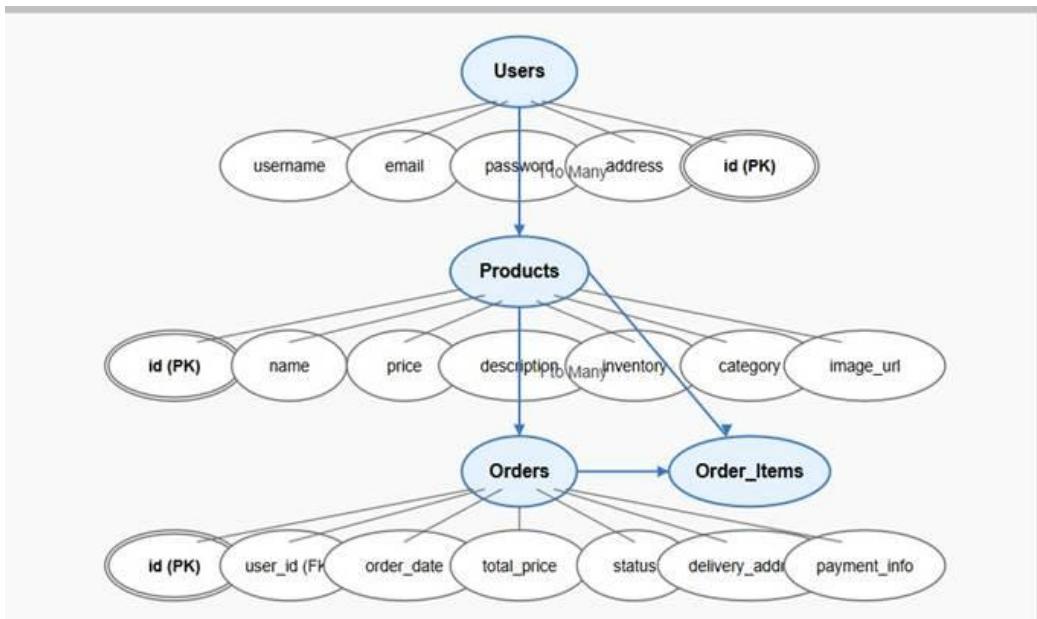
Architecture

This AWS-based architecture powers a scalable and secure web application using Amazon EC2 for hosting the backend, with a lightweight framework like Flask handling core logic. Application data is stored in Amazon DynamoDB, ensuring fast, reliable access, while user access is managed through AWS IAM for secure authentication and control. Real-time alerts and system notifications are enabled via Amazon SNS, enhancing communication and user engagement.



Entity Relationship (ER)Diagram

An ER (Entity-Relationship) diagram visually represents the logical structure of a database by defining entities, their attributes, and the relationships between them. It helps organize data efficiently by illustrating how different components of the system interact and relate. This structured approach supports effective database normalization, data integrity, and simplified query design.



Pre-requisites

- AWS Account Setup:
<https://docs.aws.amazon.com/accounts/latest/reference/getting-started.html>
- AWS IAM (Identity and Access Management):
<https://docs.aws.amazon.com/IAM/latest/UserGuide/introduction.html>
- AWS EC2 (Elastic Compute Cloud):
<https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/concepts.html>
- AWS DynamoDB:
<https://docs.aws.amazon.com/amazondynamodb/Introduction.html>
- Git Documentation:
<https://git-scm.com/doc>
- VS Code Installation: (download the VS Code using the below link or you can get that in Microsoft store)
<https://code.visualstudio.com/download>

Project Work Flow

Milestone 1. Backend Development and Application Setup

- Develop the Backend Using Flask.
- Integrate AWS Services Using boto3.

Milestone 2. AWS Account Setup and Login

- Set up an AWS account if not already done.
- Log in to the AWS Management Console

Milestone 3. DynamoDB Database Creation and Setup

- Create a DynamoDB Table.
- Configure Attributes for User Data and Book Requests.

Milestone 4. SNS Notification Setup

- Create SNS topics for book request notifications.
- Subscribe users and library staff to SNS email notifications.

Milestone 5. IAM Role Setup

- Create IAM Role
- Attach Policies

Milestone 6. EC2 Instance Setup

- Launch an EC2 instance to host the Flask application.
- Configure security groups for HTTP, and SSH access.

Milestone 7. Deployment on EC2

- Upload Flask Files
- Run the Flask App

Milestone 8. Testing and Deployment

- Conduct functional testing to verify user signup, login, buy/sell stocks and notifications.

Milestone 1: Web Application Development and Setup

Backend Development and Application Setup focuses on establishing the core structure of the application. This includes configuring the backend framework, setting up routing, and integrating database connectivity. It lays the groundwork for handling user interactions, data management, and secure access.

Important Instructions:

- Start by creating the necessary HTML pages and Flask routes (app.py) to build the core functionality of your application.
- During the initial development phase, store and retrieve data using Python dictionaries or lists locally. This will allow you to design, test, and validate your application logic without external database dependencies.
- Ensure your app runs smoothly with local data structures before integrating any cloud services.

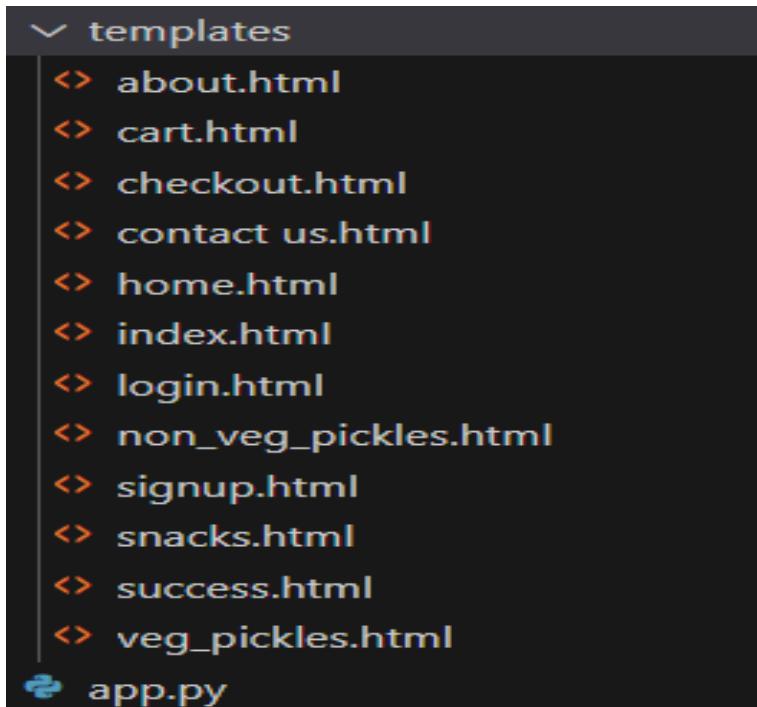
Post Troven Access Activation:

- Once troven labs access is provided (valid for 3 hours), you must immediately proceed with Milestone 1 of your Guided Project instructions.
- At this point, modify your app.py and replace local dictionary/list operations with AWS services (such as DynamoDB, RDS, or others as per project requirements).
- Using the temporary credentials provided by troven Labs, securely connect your application to AWS resources.

- Since the AWS configuration is lightweight and already instructed in the milestones, you should be able to complete the cloud integration efficiently within the allotted time.

LOCAL DEPLOYMENT

- File Explorer Structure



Description of the code:

- Flask App Initialization

```

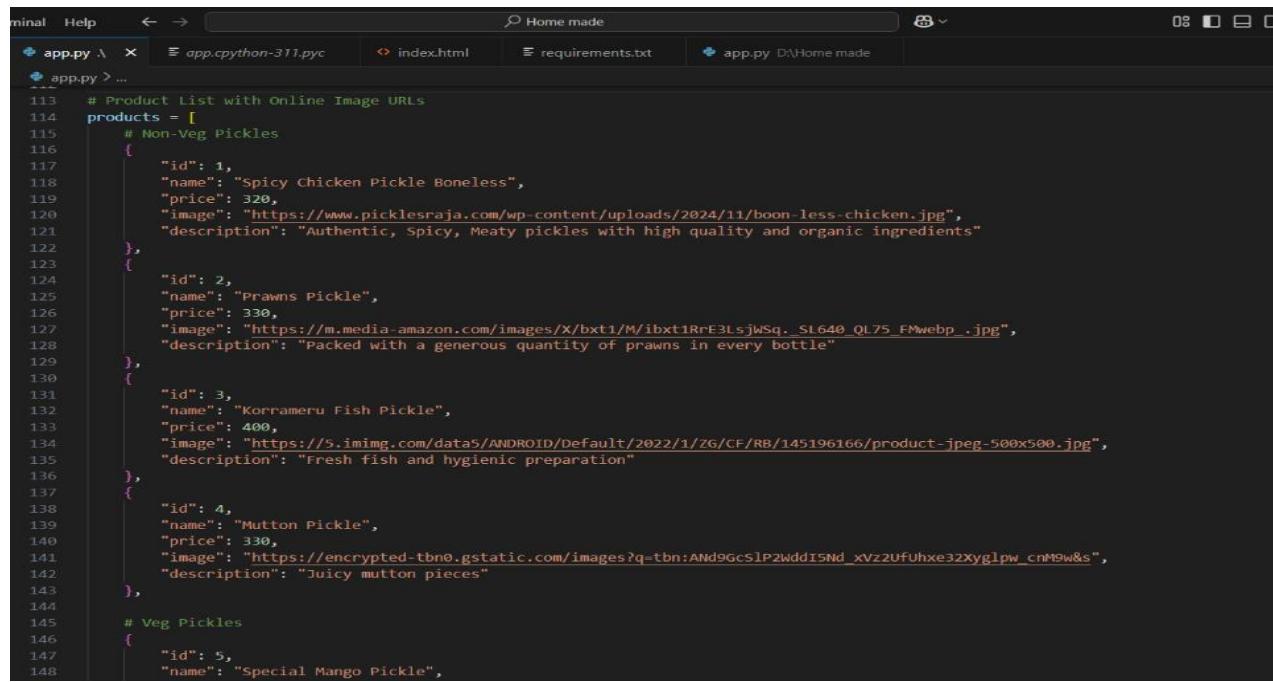
Terminal Help ⌘ → ⌂ Home made
  ↗ app.py X ↗ app.cpython-311.pyc ↗ index.html ↗ requirements.txt ↗ app.py D:\Home made

  ↗ app.py > ...
  1  from flask import Flask, render_template_string, render_template , redirect, url_for, session, request, flash, jsonify
  2  from functools import wraps
  3  import smtplib
  4  import logging
  5  from email.mime.text import MIMEText
  6  from datetime import datetime
  7  from werkzeug.exceptions import BadRequest
  8  from werkzeug.security import generate_password_hash, check_password_hash
  9  import os
 10 import boto3
 11 import uuid
 12

if __name__ == '__main__':
    app.run(debug=True, host='0.0.0.0', port=int(os.environ.get("PORT", 5000)))
  
```

- Use boto3 to connect to DynamoDB for handling user registration, Order details database operations and also mention region_name where Dynamodb tables are created.

```
# DynamODB tables
dynamodb = boto3.resource('dynamodb', region_name=region)
orders_table = dynamodb.Table('orders')
users_table = dynamodb.Table('users')
contacts_table = dynamodb.Table('contacts')
reviews_table = dynamodb.Table('reviews')
```



The screenshot shows a terminal window with several tabs open. The current tab displays Python code for a product list. The code defines a list of products, each with an ID, name, price, image URL, and a descriptive sentence. The products are categorized into Non-Veg Pickles and Veg Pickles. The code uses the requests library to fetch image URLs from various websites.

```
113 # Product List with Online Image URLs
114 products = [
115     # Non-Veg Pickles
116     {
117         "id": 1,
118         "name": "Spicy Chicken Pickle Boneless",
119         "price": 320,
120         "image": "https://www.picklesraja.com/wp-content/uploads/2024/11/boon-less-chicken.jpg",
121         "description": "Authentic, Spicy, Meaty pickles with high quality and organic ingredients"
122     },
123     {
124         "id": 2,
125         "name": "Prawns Pickle",
126         "price": 330,
127         "image": "https://m.media-amazon.com/images/X/bxt1/M/ibxt1RrE3LsjwSq.._SL640_QL75_FMwebp_.jpg",
128         "description": "Packed with a generous quantity of prawns in every bottle"
129     },
130     {
131         "id": 3,
132         "name": "Korrameru Fish Pickle",
133         "price": 400,
134         "image": "https://5.imimg.com/data5/ANDROID/Default/2022/1/2G/CF/RB/145196166/product-jpeg-500x500.jpg",
135         "description": "Fresh fish and hygienic preparation"
136     },
137     {
138         "id": 4,
139         "name": "Mutton Pickle",
140         "price": 330,
141         "image": "https://encrypted-tbn0.gstatic.com/images?q=tbn:ANd9GcS1P2WddI5Nd_xVz2UfUhxe32Xyg1pw_cnM9w&s",
142         "description": "Juicy mutton pieces"
143     },
144     # Veg Pickles
145     {
146         "id": 5,
147         "name": "Special Mango Pickle",
```

- Routes for Web Pages
- Login Route (GET/POST): Verifies user credentials, increments login count, and redirects to the dashboard on success.

```

331
332 @app.route('/login', methods=['GET', 'POST'])
333 def login():
334     if request.method == 'POST':
335         username = request.form['username'].strip()
336         password = request.form['password'].strip()
337         if users.get(username) == password:
338             session['username'] = username
339             flash("Logged in successfully!", "success")
340             return redirect(url_for('products_page'))
341         else:
342             flash("Invalid username or password.", "error")
343     return render_template_string("""
344         <body style="background-image: url('{{ url_for('static', filename='bg.jpg') }}');>
345             background-size: cover;
346             background-position: center;
347             font-family: sans-serif;
348             padding: 20px;">
349             <h2 style="color:#2c3e50;">Login</h2>
350             <form method="POST">
351                 Username: <input type="text" name="username"><br><br>
352                 Password: <input type="password" name="password"><br><br>
353                 <button type="submit">Login</button>
354             </form>
355             <a href="{{ url_for('register') }}>Don't have an account? Register</a>
356         <"/>
357     """)

```

- SignUp route: Collecting registration data, hashes the password, and stores user details in the database.

```

331
332 @app.route('/register', methods=['GET', 'POST'])
333 def register():
334     if request.method == 'POST':
335         username = request.form['username'].strip()
336         password = request.form['password'].strip()
337         if username in users:
338             flash("Username already exists.", "error")
339         elif not username or not password:
340             flash("Please enter both username and password.", "error")
341         else:
342             users[username] = password
343             flash("Registered successfully. Please login.", "success")
344             return redirect(url_for('login'))
345     return render_template_string("""
346         <body style="background-image: url('{{ url_for('static', filename='bg.jpg') }}');>
347             background-size: cover;
348             background-position: center;
349             font-family: sans-serif;
350             padding: 20px;">
351             <h2 style="color:#2c3e50;">Register</h2>
352             <form method="POST">
353                 Username: <input type="text" name="username"><br><br>
354                 Password: <input type="password" name="password"><br><br>
355                 <button type="submit">Register</button>
356             </form>
357             <a href="{{ url_for('login') }}>Already registered? Login</a>
358         <"/>
359     """)

```

- Logout route:The user can Logout so that the user can get back to the Login Page

```

@app.route('/logout')
def logout():
    session.clear()
    flash("Logged out successfully.", "success")
    return redirect(url_for('login'))

```

- Home Route: Home page contains the routing for different categories which are Veg_pickles , Non_Veg_pickles, Snacks.

```

@app.route('/home')
def home():
    if not session.get('logged_in'):
        return redirect(url_for('login'))
    return render_template('home.html')

@app.route('/non_veg_pickles')
def non_veg_pickles():
    if not session.get('logged_in'):
        return redirect(url_for('login'))

    return render_template('non_veg_pickles.html', products=products['non_veg_pickles'])

@app.route('/veg_pickles')
def veg_pickles():
    if not session.get('logged_in'):
        return redirect(url_for('login'))

    # Simply pass all products without filtering
    return render_template('veg_pickles.html', products=products['veg_pickles'])

@app.route('/snacks')
def snacks():
    if not session.get('logged_in'):
        return redirect(url_for('login'))

    return render_template('snacks.html', products=products['snacks'])

```

Restart Visual Studio

- Check out Route:

```

@app.route('/checkout')
@login_required
def checkout():
    cart_items = []
    total = 0

    for product_id, quantity in session.get('cart', {}).items():
        product = next((p for p in products if p['id'] == int(product_id)), None)
        if product:
            cart_items.append({
                'name': product['name'],
                'quantity': quantity,
                'items': cart,
                'price': product['price']
            })
            total += product['price'] * quantity

    return render_template_string("""
<body style="background-image: url('{{ url_for('static', filename='bg.jpg') }}');
    background-size: cover;
    background-position: center;
    font-family: sans-serif;
    padding: 20px;">
<h1 style="color:#c3e3f0;">Checkout</h1>
{%
    if cart_items %}
        <ul style="list-style:none;">
            {%
                for item in cart_items %}
                    <li>{{ item.name }} - {{ item.quantity }} - {{ item.quantity * item.price }}</li>
            {%
                endfor %}
        </ul>
        <p><strong>Total: {{ total }}</strong></p>
<form method="POST" action="{{ url_for('place_order') }}">
    Name:<input name="name"><br>
    Address:<input name="address"><br>
    email:<input name="email"><br>

```

```
app.py 3...
def checkout():
    if len(cart) == 0:
        flash("Your cart is empty.", "error")
    else:
        save_order_to_dynamodb(order_data)
        send_order_email(email, summary)

        # (Optional) SNS call is defined but not triggered here
        # send sns notification("New order received.")

    return render_template('checkout.html', cart_items=cart_items, total=total)

@app.route('/place_order', methods=['POST'])
@login_required
def place_order():
    session['cart'] = []
    flash("Your order has been placed successfully!", "success")
    session['cart'].clear()
    logger.info("order placed and cart cleared.")
    return redirect(url_for('order_success'))

@app.route('/order-success')
@login_required
def order_success():
    return render_template_string("""
        <body style="background-image: url('{{ url_for('static', filename='bg.jpg') }}');>
            <div style="background-size: cover; background-position: center; font-family: sans-serif; padding: 20px;>
                <h2>Order Successful!</h2>
                <p>Thank you for your order, {{ session['username'] }}!</p>
                <a href="{{ url_for('products_page') }}> Back to Products</a><br>
                <a href="{{ url_for('logout') }}> Logout</a>
            </div>
        </body>
    """)
```

Milestone 2: AWS Account Setup

Important Notice: Use troven Labs for AWS Access

Students are strictly advised not to create their own AWS accounts, as doing so may incur charges. Instead, we have set up a dedicated section called “Labs” on the troven platform, which provides temporary and cost-free access to AWS services.

Once your website is locally deployed and fully functional, you must proceed with integrating AWS services only through the troven labs environment. This ensures secure, controlled access to AWS resources without any risk of personal billing.

All steps involving AWS (such as deploying to EC2, connecting to DynamoDB, or using SNS) must be carried out within the troven labs platform, as we've configured temporary credentials for each student.

Reminder: You must complete the Web Development task before gaining access to troven. Once accessed, the AWS Console via troven is available for only 3 hours—please plan your work accordingly.

Please follow the provided guidelines and access AWS exclusively through troven to avoid unnecessary issues.

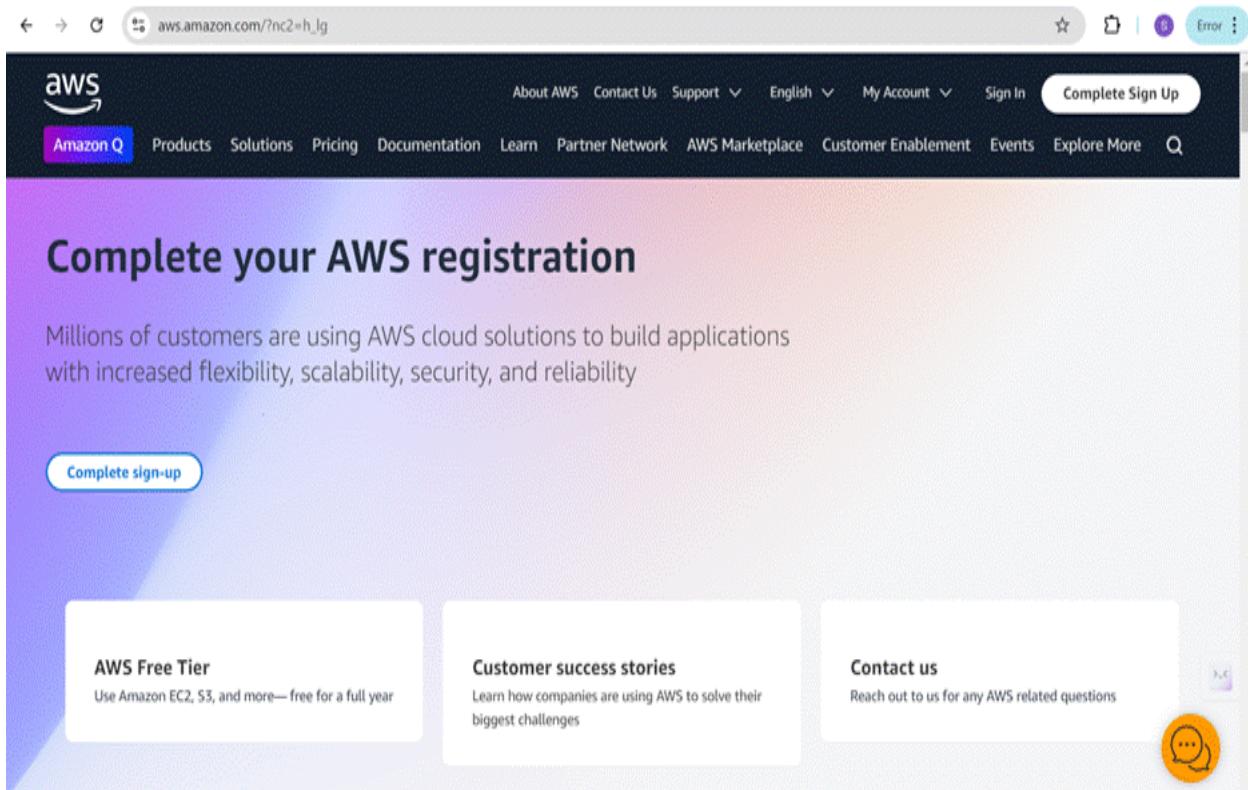
Please refer the below link -

<https://drive.google.com/file/d/1HzWc7AMJ2BrxhV-uaw5s0vWtcd-28qgl/view?usp=sharing>

AWS Account Setup and Login

This is for your understanding only, please refrain from creating an AWS account. A temporary account will be provided via troven.

- Go to the AWS website (<https://aws.amazon.com/>).
- Click on the "Create an AWS Account" button.
- Follow the prompts to enter your email address and choose a password.
- Provide the required account information, including your name, address, and phone number.
- Enter your payment information. (Note: While AWS offers a free tier, a credit card or debit card is required for verification.)
- Complete the identity verification process.
- Choose a support plan (the basic plan is free and sufficient for starting).
- Once verified, you can sign in to your new AWS accounts.





Explore Free Tier products with a new AWS account.

To learn more, visit aws.amazon.com/free.

Sign up for AWS

Root user email address
Used for account recovery and as described in the [AWS Privacy Notice](#)

AWS account name
Choose a name for your account. You can change this name in your account settings after you sign up.

Verify email address

OR

Sign in to an existing AWS account

- Log in to the AWS Management Console
- After setting up your account, log in to the [AWS Management Console](#).

Sign in

Root user
Account owner that performs tasks requiring unrestricted access. [Learn more](#)

IAM user
User within an account that performs daily tasks. [Learn more](#)

Root user email address

Next

By continuing, you agree to the [AWS Customer Agreement](#) or other agreement for AWS services, and the [Privacy Notice](#). This site uses essential cookies. See our [Cookie Notice](#) for more information.

AI Use Case Explorer

Discover AI use cases, customer success stories, and expert-curated implementation plans

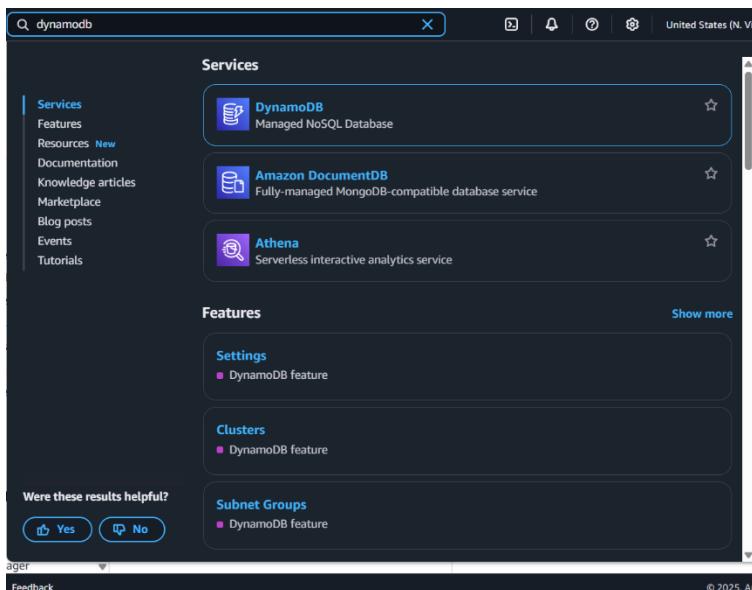
Explore now >

Milestone 3: DynamoDB Database Creation and Setup

Database Creation and Setup involves initializing a cloud-based NoSQL database to store and manage application data efficiently. This step includes defining tables, setting primary keys, and configuring read/write capacities. It ensures scalable, high-performance data storage for seamless backend operations.

Navigate to the DynamoDB

- In the AWS Console, navigate to DynamoDB and click on create tables.



DynamoDB > Dashboard

Dashboard

Alarms (0) Info

DAX clusters (0) Info

Create resources

What's new

Create a DynamoDB table for storing data

- Create Users table with partition key “Username” with type String and click on create tables.

Table details Info

DynamoDB is a schemaless database that requires only a table name and a primary key when you create the table.

Table name

This will be used to identify your table.

Users

Between 3 and 255 characters, containing only letters, numbers, underscores (_), hyphens (-), and periods (.).

Partition key

The partition key is part of the table's primary key. It is a hash value that is used to retrieve items from your table and allocate data across hosts for scalability and consistency.

Username Type String

1 to 255 characters and case sensitive.

Sort key - optional

You can use a sort key as the second part of a table's primary key. The sort key allows you to sort or search among all items sharing the same partition key.

Enter the sort key name Type String

1 to 255 characters and case sensitive.

| | | |
|----------------------------|--------------------------|-----|
| Table class | DynamoDB Standard | Yes |
| Capacity mode | Provisioned | Yes |
| Provisioned read capacity | 5 RCU | Yes |
| Provisioned write capacity | 5 WCU | Yes |
| Auto scaling | On | Yes |
| Local secondary indexes | - | No |
| Global secondary indexes | - | Yes |
| Encryption key management | Owned by Amazon DynamoDB | Yes |
| Deletion protection | Off | Yes |
| Resource-based policy | Not active | Yes |

Tags

Tags are pairs of keys and optional values, that you can assign to AWS resources. You can use tags to control access to your resources or track your AWS spending.

No tags are associated with the resource.

[Add new tag](#)

You can add 50 more tags.

[Cancel](#)

[Create table](#)

The Users table was created successfully.

DynamoDB > Tables

Tables (1) Info

| Name | Status | Partition key | Sort key | Indexes | Deletion protection | Read capacity mode | Write capacity mode | Total size |
|-------|--------|---------------|----------|---------|---------------------|--------------------|---------------------|------------|
| Users | Active | email (\$) | | 0 | Off | Provisioned (\$) | Provisioned (\$) | 0 bytes |

- Follow the same steps to create an Orders table with Order_id as the primary key to store Order details.



☰ [DynamoDB](#) > [Tables](#) > Create table

Create table

Table details Info

DynamoDB is a schemaless database that requires only a table name and a primary key when you create the table.

Table name

This will be used to identify your table.

Orders

Between 3 and 255 characters, containing only letters, numbers, underscores (_), hyphens (-), and periods (.).

Partition key

The partition key is part of the table's primary key. It is a hash value that is used to retrieve items from your table and allocate data across hosts for scalability and performance.

Order_id

String



1 to 255 characters and case sensitive.

Sort key - optional

You can use a sort key as the second part of a table's primary key. The sort key allows you to sort or search among all items sharing the same partition key.

Enter the sort key name

String



1 to 255 characters and case sensitive.



| | | |
|----------------------------|--------------------------|-----|
| Table class | DynamoDB Standard | Yes |
| Capacity mode | Provisioned | Yes |
| Provisioned read capacity | 5 RCU | Yes |
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Tags

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No tags are associated with the resource.

Add new tag

You can add 50 more tags.

Cancel

Create table

Tables (2) [Info](#)

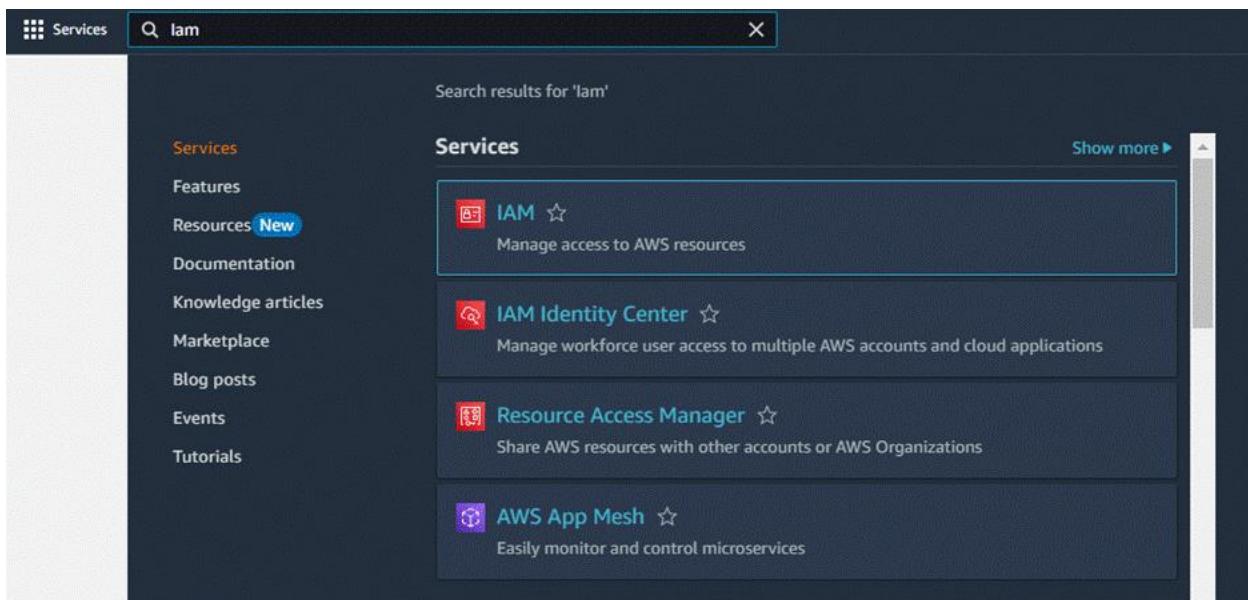
| <input type="checkbox"/> | Name | Status | Partition key | Sort key | Indexes | Replication Regions | Deletion protecti |
|--------------------------|------------------------|---------------------|---------------|----------|---------|---------------------|-------------------|
| <input type="checkbox"/> | Orders | Active | order_id (S) | - | 0 | 0 | Off |
| <input type="checkbox"/> | Users | Active | username (S) | - | 0 | 0 | Off |

Milestone 4: IAM Role Setup

IAM (Identity and Access Management) role setup involves creating roles that define specific permissions for AWS services. To set it up, you create a role with the required policies, assign it to users or services, and ensure the role has appropriate access to resources like EC2, S3, or RDS. This allows controlled access and ensures security best practices in managing AWS resources.

Create IAM Role.

- In the AWS Console, go to IAM and create a new IAM Role for EC2 to interact with DynamoDB.



Identity and Access Management (IAM)

IAM > Roles

Roles (6) Info

An IAM role is an identity you can create that has specific permissions with credentials that are valid for short durations. Roles can be assumed by entities that you trust.

| Role name | Trusted entities | Last activity |
|---------------------------------------|--------------------------------------------------|---------------|
| EC2_DynamoDB_Role | AWS Service: dynamodb | 139 days ago |
| AWSServiceRoleForAmazonEKS | AWS Service: eks (Service-Linked Role) | 139 days ago |
| AWSServiceRoleForAmazonEKSNodegroup | AWS Service: eks-nodegroup (Service-Linked Role) | 153 days ago |
| AWSServiceRoleForAmazonS3 | AWS Service: s3 | 153 days ago |
| AWSServiceRoleForAmazonVPC | AWS Service: vpc | 153 days ago |
| AWSServiceRoleForAmazonCloudWatchLogs | AWS Service: logs | 153 days ago |

[Create role](#)

IAM > Roles > Create role

Select trusted entity

Trusted entity type

- AWS service: Allow AWS service like S3, Lambda, or others to perform actions in this account.
- AWS account: Allow entities in other AWS accounts belonging to you or a third party to perform actions in this account.
- AWS Lambda: Allow AWS Lambda function to assume this role to perform actions in this account.
- IAM role: Allow users federated with IAM to assume this role to perform actions in this account.
- Custom trust policy: Create a custom trust policy to enable others to perform actions in this account.

Use case

Allow an AWS service like EC2 Lambda, or others to perform actions in this account.

Service or use case

EC2

Choose a use case for the specified service.

EC2: Allow EC2 instances to call AWS services on your behalf.

EC2 - Auto Scaling: Allow EC2 Auto Scaling to call AWS services on your behalf.

EC2 - Batch: Allow EC2 Batch to launch and terminate spot instances on your behalf.

EC2 - Spot Fleet: Allow EC2 Spot Fleet to launch and terminate spot instances on your behalf.

EC2 - Spot Fleet Auto Scaling: Allow EC2 Auto Scaling to invoke auto-scaling EC2 spot Requests on your behalf.

EC2 - Spot Fleet Tagging: Allow EC2 Spot Fleet to manage spot instance tags on your behalf.

EC2 - Spot Instances: Allow EC2 Spot Instances to search and manage spot instances on your behalf.

EC2 - Spot Fleet: Allow EC2 Spot Fleet to search and manage spot fleet instances on your behalf.

EC2 - Scheduled Instances: Allow EC2 Scheduled Instances to manage instances on your behalf.

[Cancel](#) [Next](#)

IAM > Roles > Create role

Step 1: Select trusted entity

Step 2: Add permissions

Step 3: Name, review, and create

Add permissions

Permissions policies (1/955) Info

Choose one or more policies to attach to your new role.

Filter by Type: All types | 2 matches

| Policy name | Type |
|------------------------------|-------------|
| AmazonDynamoDB | AWS-managed |
| AmazonDynamoDBFullAccess | AWS-managed |
| AmazonDynamoDBReadOnlyAccess | AWS-managed |

[Set permissions boundary - optional](#)

[Cancel](#) [Previous](#) [Next](#)

Identity and Access Management (IAM)

IAM > Roles

Roles (13) Info

Role EC2_DynamoDB_Role created.

An IAM role is an identity you can create that has specific permissions with credentials that are valid for short durations. Roles can be assumed by entities that you trust.

| Role name | Trusted entities | Last activity |
|-------------------------------------|--------------------------------------------------|---------------|
| AWSServiceRoleForAmazonEKS | AWS Service: eks (Service-Linked Role) | 139 days ago |
| AWSServiceRoleForAmazonEKSNodegroup | AWS Service: eks-nodegroup (Service-Linked Role) | 153 days ago |

[View role](#) [Delete](#) [Create role](#)

Attach Policies

Attach the following policies to the role:

- AmazonDynamoDBFullAccess: Allows EC2 to perform read/write operations on DynamoDB.

The screenshot shows the 'Create New Role' wizard in the AWS IAM console. It consists of three main steps:

- Step 1: Select trusted entities**: Shows a JSON-based trust policy allowing the role to be assumed by EC2 instances. The policy includes conditions for the service principal (sns.amazonaws.com) and the AWS account number (557690616836).
- Step 2: Add permissions**: Displays a 'Permissions policy summary' table with two entries:

| Policy name | Type | Attached as |
|--------------------------|-------------|--------------------|
| AmazonDynamoDBFullAccess | AWS managed | Permissions policy |
| AmazonSNSFullAccess | AWS managed | Permissions policy |
- Step 3: Add tags**: A section for optional tags, currently empty.

At the bottom right of the wizard are 'Cancel', 'Previous', and 'Create role' buttons.

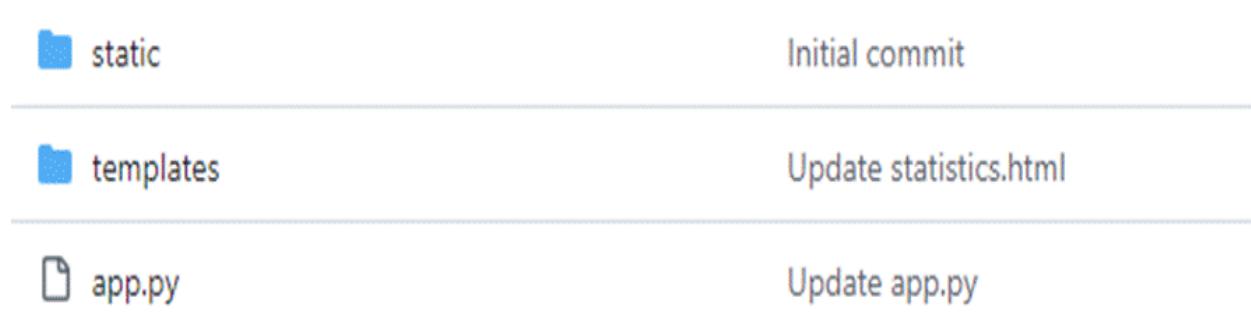
The screenshot shows the 'sns_Dynamodb_role' details page in the AWS IAM console. It includes the following sections:

- Summary**: Shows creation date (October 13, 2024), ARN (arn:aws:iam:557690616836:role/sns_Dynamodb_role), and instance profile ARN (arn:aws:iam:557690616836:instance-profile/sns_Dynamodb_role). Last activity is shown as 6 days ago.
- Permissions**: Shows two attached policies: AmazonDynamoDBFullAccess and AmazonSNSFullAccess, both of which are AWS managed.

Milestone 5: EC2 Instance Setup

To set up a public EC2 instance, choose an appropriate Amazon Machine Image (AMI) and instance type. Ensure the security group allows inbound traffic on necessary ports (e.g., HTTP/HTTPS for web applications). After launching the instance, associate it with an Elastic IP for consistent public access, and configure your application or services to be publicly accessible.

- Note: Load your Flask app and Html files into GitHub repository.



The image shows a GitHub repository page for `Homedae-pickles-and-snacks-app`. The repository is public and has one branch named `main`. The code tab is selected, displaying a list of files:

- `swetha-01-max` Add files via upload
- `New folder` Add files via upload
- `__pycache__` Add files via upload
- `static` Add files via upload
- `templates` Add files via upload
- `Profile` Add files via upload
- `about.html` Add files via upload
- `app.py` Add files via upload
- `bg.jpg` Add files via upload
- `cart.html` Add files via upload
- `checkout.html` Add files via upload
- `contact.us.html` Add files via upload

Each file entry includes a timestamp: `4 days ago`, `last week`, or `last week`.

The right sidebar provides repository statistics:

- About**: No description, website, or topics provided.
- Activity**: 0 stars, 0 watching, 0 forks.
- Releases**: No releases published. [Create a new release](#).
- Packages**: No packages published. [Publish your first package](#).
- Languages**: HTML 89.6% (red bar), Python 10.4% (blue bar).

Launch an EC2 instance to host the Flask

- Launch EC2 Instance
- In the AWS Console, navigate to EC2 and launch a new instance.

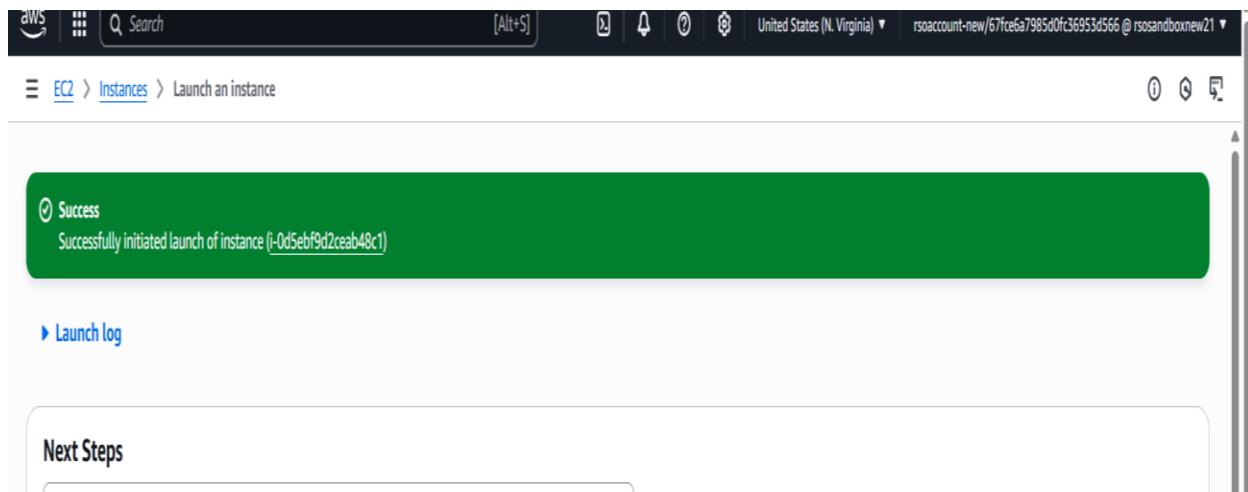
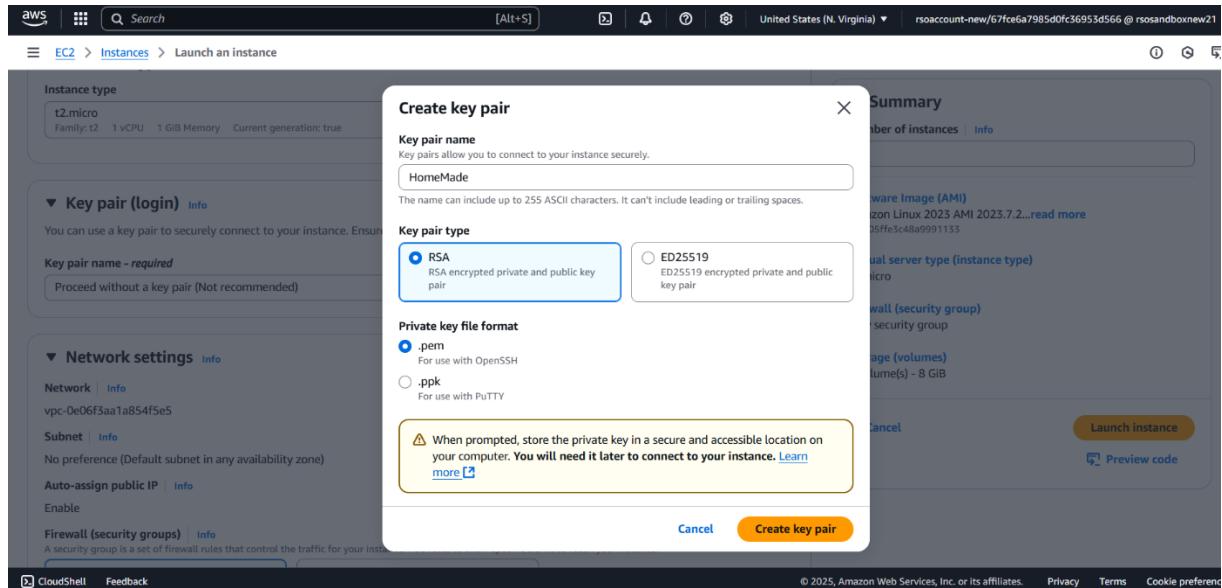
The screenshot shows the AWS search interface with the query 'ec2' entered in the search bar. The results are categorized under 'Services' and 'Features'. The 'EC2' service card is highlighted, showing its icon (a server), name, and description: 'Virtual Servers in the Cloud'. Other cards include 'EC2 Image Builder' (a managed service for OS images) and 'EC2 Global View' (a global dashboard and search functionality). On the left sidebar, there are links for Services, Features, Resources, Documentation, Knowledge articles, Marketplace, Blog posts, Events, and Tutorials. At the bottom, there's a section asking 'Were these results helpful?' with 'Yes' and 'No' buttons.

- Click on Launch instance to launch EC2 instance

The screenshot shows the AWS EC2 Instances page. The left sidebar is collapsed, showing the 'EC2' navigation item. The main content area is titled 'Instances' and includes a search bar, filters for 'Name', 'Instance ID', 'Instance state', 'Instance type', 'Status check', 'Alarm status', and 'Availability Zone'. A large message states 'No instances' and 'You do not have any instances in this region'. Below this is a prominent blue 'Launch instances' button. The bottom of the page has a 'Select an instance' section and some footer links.

- Choose Amazon Linux 2 or Ubuntu as the AMI and t2.micro as the instance type (free-tier eligible).

- Create and download the key pair for Server access.



Configure security groups for HTTP, and SSH access.

▼ Network settings [Info](#)

VPC - required [Info](#)
 vpc-03cdc7b6f19dd7211 (default) ▾ [Edit](#)

Subnet [Info](#)
 No preference ▾ [Edit](#) [Create new subnet](#) [Edit](#)

Auto-assign public IP [Info](#)
 Enable ▾ [Edit](#)

Additional charges apply when outside of free tier allowance

Firewall (security groups) [Info](#)
 A security group is a set of firewall rules that control the traffic for your instance. Add rules to allow specific traffic to reach your instance.

Create security group [Edit](#) Select existing security group [Edit](#)

Security group name - required
 launch-wizard [Edit](#)

This security group will be added to all network interfaces. The name can't be edited after the security group is created. Max length is 255 characters. Valid characters: a-z, A-Z, 0-9, spaces, and _-:/()#,@[]+=&;{}!\$*

Description - required [Info](#)
 launch-wizard created 2024-10-13T17:49:56.622Z [Edit](#)

Inbound Security Group Rules

▼ Security group rule 1 (TCP, 22, 0.0.0.0/0) [Remove](#)

| | | |
|---------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| Type Info ssh ▾ Edit | Protocol Info TCP Edit | Port range Info 22 Edit |
| Source type Info Anywhere ▾ Edit | Source Info Add CIDR, prefix list or security Edit | Description - optional Info e.g. SSH for admin desktop Edit |
| 0.0.0.0/0 Edit | | |

▼ Security group rule 2 (TCP, 80, 0.0.0.0/0) [Remove](#)

| | | |
|-------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| Type Info HTTP ▾ Edit | Protocol Info TCP Edit | Port range Info 80 Edit |
| Source type Info Custom ▾ Edit | Source Info Add CIDR, prefix list or security Edit | Description - optional Info e.g. SSH for admin desktop Edit |
| 0.0.0.0/0 Edit | | |

▼ Security group rule 3 (TCP, 5000, 0.0.0.0/0) [Remove](#)

| | | |
|-------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| Type Info Custom TCP ▾ Edit | Protocol Info TCP Edit | Port range Info 5000 Edit |
| Source type Info Custom ▾ Edit | Source Info Add CIDR, prefix list or security Edit | Description - optional Info e.g. SSH for admin desktop Edit |
| 0.0.0.0/0 Edit | | |

[Add security group rule](#)

The screenshot shows the AWS EC2 'Launch an Instance' success page. At the top, a green banner indicates a successful launch of instance i-00186102fbac29c. Below the banner, there's a 'Launch log' link and a 'Next Steps' section. The 'Next Steps' section contains ten cards, each with a title, a brief description, and a call-to-action button. The cards are arranged in two rows of five. The first row includes: 'Create billing and free tier usage alerts', 'Connect to your instance', 'Connect an RDS database', 'Create EBS snapshot policy', 'Manage detailed monitoring', and 'Create Load Balancer'. The second row includes: 'Create AWS budget', 'Manage CloudWatch alarms', 'Disaster recovery for your instances', 'Monitor for suspicious runtime activities', 'Get instance screenshot', and 'Get system log'. At the bottom right of the 'Next Steps' section is a 'View all Instances' button.

- To connect to EC2 using EC2 Instance Connect, start by ensuring that an IAM role is attached to your EC2 instance. You can do this by selecting your instance, clicking on Actions, then navigating to Security and selecting Modify IAM Role to attach the appropriate role. After the IAM role is connected, navigate to the EC2 section in the AWS Management Console. Select the EC2 instance you wish to connect to. At the top of the EC2 Dashboard, click the Connect button. From the connection methods presented, choose EC2 Instance Connect. Finally, click Connect again, and a new browser-based terminal will open, allowing you to access your EC2 instance directly from your browser.

The screenshot shows the AWS EC2 Instances dashboard. At the top, a green banner displays the message 'Successfully attached EC2_DynamoDB_Role to instance i-0d5ebf9d2ceab48c1'. Below the banner, the dashboard header includes a search bar, filter dropdowns for 'All states', and buttons for 'Connect', 'Instance state', 'Actions', and 'Launch instances'. The main table lists one instance: 'HomeMadePic...' with Instance ID 'i-0d5ebf9d2ceab48c1', which is 'Running'. The table also shows columns for 'Status check', 'Alarm status', 'Availability Zone', and 'Public IP'. The instance details show '2/2 checks passed' and 'us-east-1c' for Availability Zone.

[EC2](#) > [Instances](#) > i-001861022fbcac290 [Info](#)

Updated less than a minute ago

| | | |
|---------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|
| Instance ID i-001861022fbcac290 | Public IPv4 address - | Private IPv4 addresses 172.31.3.5 |
| IPv6 address - | Instance state <input checked="" type="radio"/> Stopped | Public IPv4 DNS - |
| Hostname type IP name: ip-172-31-3-5.ap-south-1.compute.internal | Private IP DNS name (IPv4 only) ip-172-31-3-5.ap-south-1.compute.internal | Elastic IP addresses - |
| Answer private resource DNS name IPv4 (A) | Instance type t2.micro | AWS Compute Optimizer finding Opt-in to AWS Compute Optimizer for recommendations. Learn more |
| Auto-assigned IP address - | VPC ID vpc-05cdcb6f19dd7211 | Auto Scaling Group name - |
| IAM Role sns_Dynamodb_role | Subnet ID subnet-0d9fa3144480cc9a9 | |
| IMDSv2 Required | Instance ARN arn:aws:ec2:ap-south-1:557690616836:instance/i-001861022fbcac290 | |

[Details](#) [Status and alarms](#) [Monitoring](#) [Security](#) [Networking](#) [Storage](#) [Tags](#)

[EC2](#) > [Instances](#) > i-001861022fbcac290 [Info](#)

Updated less than a minute ago

| | | |
|---------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|
| Instance ID i-001861022fbcac290 | Public IPv4 address - | Private IPv4 addresses 172.31.3.5 |
| IPv6 address - | Instance state <input checked="" type="radio"/> Stopped | Public IPv4 DNS - |
| Hostname type IP name: ip-172-31-3-5.ap-south-1.compute.internal | Private IP DNS name (IPv4 only) ip-172-31-3-5.ap-south-1.compute.internal | Elastic IP addresses - |
| Answer private resource DNS name IPv4 (A) | Instance type t2.micro | AWS Compute Optimizer finding Opt-in to AWS Compute Optimizer for recommendations. Learn more |
| Auto-assigned IP address - | VPC ID vpc-05cdcb6f19dd7211 | Auto Scaling Group name - |
| IAM Role sns_Dynamodb_role | Subnet ID subnet-0d9fa3144480cc9a9 | |
| IMDSv2 Required | Instance ARN arn:aws:ec2:ap-south-1:557690616836:instance/i-001861022fbcac290 | |

[C](#) [Connect](#) [Instance state](#) [Actions](#)

- [Connect](#)
- [Manage instance state](#)
- [Instance settings](#)
- [Networking](#)
- [Security](#)
- [Image and templates](#)
- [Modify IAM role](#)
- [Monitor and troubleshoot](#)

[EC2](#) > [Instances](#) > i-001861022fbcac290 > [Modify IAM role](#)

Modify IAM role [Info](#)

Attach an IAM role to your instance.

Instance ID
[i-001861022fbcac290 \(InstantLibraryApp\)](#)

IAM role
Select an IAM role to attach to your instance or create a new role if you haven't created any. The role you select replaces any roles that are currently attached to your instance.

[▼](#)
[C](#)
[Create new IAM role](#)

Update IAM role
[Cancel](#)

Connect to instance Info

Connect to your instance i-001861022fbcac290 (InstantLibraryApp) using any of these options

EC2 Instance Connect | Session Manager | SSH client | EC2 serial console

⚠ Port 22 (SSH) is open to all IPv4 addresses

Port 22 (SSH) is currently open to all IPv4 addresses, indicated by **0.0.0.0/0** in the inbound rule in [your security group](#). For increased security, consider restricting access to only the EC2 Instance Connect service IP addresses for your Region: **13.233.177.0/29**. [Learn more](#).

Instance ID
 i-001861022fbcac290 (InstantLibraryApp)

Connection Type

Connect using EC2 Instance Connect
 Connect using the EC2 Instance Connect browser-based client, with a public IPv4 or IPv6 address.

Public IPv4 address
 13.200.229.59

IPv6 address

Username

Enter the username defined in the AMI used to launch the instance. If you didn't define a custom username, use the default username, ec2-user.

X

Connect using EC2 Instance Connect Endpoint
 Connect using the EC2 Instance Connect browser-based client, with a private IPv4 address and a VPC endpoint.

Note: In most cases, the default username, ec2-user, is correct. However, read your AMI usage instructions to check if the AMI owner has changed the default AMI username.

Cancel **Connect**

```
A newer release of "Amazon Linux" is available.
Version 2023.6.20241010:
Run "/usr/bin/dnf check-release-update" for full release and version update info
      #
      #     Amazon Linux 2023
      #     https://aws.amazon.com/linux/amazon-linux-2023
      V   _-->
      /m\ /
Last login: Tue Oct 15 04:17:59 2024 from 13.233.177.3
fec2-user@ip-172-31-3-5 ~%
```

Milestone 6: Deployment on EC2

Deployment on an EC2 instance involves launching a server, configuring security groups for public access, and uploading your application files. After setting up necessary dependencies and environment variables, start your application and ensure it's running on the correct port. Finally, bind your domain or use the public IP to make the application accessible online.

Install Software on the EC2 Instance

Install Python3, Flask, and Git:

On Amazon Linux 2:

- sudo yum update -y
- sudo yum install python3 git
- sudo pip3 install flask boto3

Verify Installations:

- flask --version
- git --version

Clone Your Flask Project from GitHub

Clone your project repository from GitHub into the EC2 instance using Git.

- Run: '[git clone:https://github.com/kilarukusuma-12/Homemadepicklesandsnacks.git](https://github.com/kilarukusuma-12/Homemadepicklesandsnacks.git)'
- Note: change your-github-username and your-repository-name with your credentials
- here:[here:https://github.com/kilarukusuma-12/Homemadepicklesandsnacks.git](https://github.com/kilarukusuma-12/Homemadepicklesandsnacks.git)
- This will download your project to the EC2 instance.

To navigate to the project directory, run the following command:

- cd Homemadepickles and snacks
- cd "Home Made Pickles1"

Create a Virtual Environment:

- python3 -m venv venv
- source venv/bin/activate
- sudo yum install python3 git
- sudo pip3 install flask boto3

Once inside the project directory, configure and run the Flask application by executing the following command with elevated privileges:

- Run the Flask Application
- sudo flask run --host=0.0.0.0 --port=5000

```
A newer release of "Amazon Linux" is available.
Version 2023.6.20241010:
Run "/usr/bin/dnf check-release-update" for full release and version update info
'   _#_
#_ \###_      Amazon Linux 2023
~~ \###\|
~~ \###|
~~ \|/      https://aws.amazon.com/linux/amazon-linux-2023
~~ V..-->
~~ /_
~~ /_/
~~ /_/
Last login: Tue Oct 15 04:17:59 2024 from 13.233.177.3
[ec2-user@ip-172-31-3-5 ~]$ git clone https://github.com/AlekhyaPenubakula/InstantLibrary.git
fatal: destination path 'InstantLibrary' already exists and is not an empty directory.
[ec2-user@ip-172-31-3-5 ~]$ cd InstantLibrary
[ec2-user@ip-172-31-3-5 InstantLibrary]$ cd InstantLibrary
[ec2-user@ip-172-31-3-5 InstantLibrary]$ flask run --host=0.0.0.0 --port=80
 * Debug mode: off
Permission denied
[ec2-user@ip-172-31-3-5 InstantLibrary]$ ^C
[ec2-user@ip-172-31-3-5 InstantLibrary]$ ^C
[ec2-user@ip-172-31-3-5 InstantLibrary]$ sudo flask run --host=0.0.0.0 --port=80
 * Debug mode: off
WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.
 * Running on all addresses (0.0.0.0)
 * Running on http://127.0.0.1:80
 * Running on http://172.31.3.5:80
Press CTRL+C to quit
^C[ec2-user@ip-172-31-3-5 InstantLibrary]$ 
[ec2-user@ip-172-31-3-5 InstantLibrary]$ sudo flask run --host=0.0.0.0 --port=80
 * Debug mode: off
WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.
 * Running on all addresses (0.0.0.0)
 * Running on http://127.0.0.1:80
 * Running on http://172.31.3.5:80
Press CTRL+C to quit
183.82.125.56 - [22/Oct/2024 07:42:00] "GET / HTTP/1.1" 302 -
183.82.125.56 - [22/Oct/2024 07:42:01] "GET /register HTTP/1.1" 200 -
183.82.125.56 - [22/Oct/2024 07:42:01] "GET /static/images/library3.jpg HTTP/1.1" 200 -
183.82.125.56 - [22/Oct/2024 07:42:01] "GET /favicon.ico HTTP/1.1" 404 -
183.82.125.56 - [22/Oct/2024 07:42:16] "GET /login HTTP/1.1" 200 -
183.82.125.56 - [22/Oct/2024 07:42:16] "GET /static/images/library3.jpg HTTP/1.1" 304 -
183.82.125.56 - [22/Oct/2024 07:42:21] "POST /login HTTP/1.1" 200 -
183.82.125.56 - [22/Oct/2024 07:42:24] "GET /login HTTP/1.1" 200 -
183.82.125.56 - [22/Oct/2024 07:42:27] "POST /login HTTP/1.1" 302 -
183.82.125.56 - [22/Oct/2024 07:42:28] "GET /home-page HTTP/1.1" 200 -
```

Verify the Flask app is running:

<http://your-ec2-public-ip>

- Run the Flask app on the EC2 instance

```
ModuleNotFoundError: No module named 'boto3'

[ec2-user@ip-172-31-15-149 Home made pickles1]$ sudo pip3 install boto3
Collecting boto3
  Downloading boto3-1.37.23-py3-none-any.whl (139 kB)
    ██████████ | 139 kB 8.1 MB/s
Collecting s3transfer<0.12.0,>=0.11.0
  Downloading s3transfer-0.11.4-py3-none-any.whl (84 kB)
    ██████████ | 84 kB 6.7 MB/s
Requirement already satisfied: jmespath<2.0.0,>=0.7.1 in /usr/lib/python3.9/site-packages (from boto3) (0.10.0)
Collecting botocore<1.38.0,>=1.37.23
  Downloading botocore-1.37.23-py3-none-any.whl (13.4 MB)
    ██████████ | 13.4 MB 38.3 MB/s
Requirement already satisfied: urllib3<1.27,>=1.25.4 in /usr/lib/python3.9/site-packages (from botocore<1.38.0,>=1.37.23->boto3) (1.25.10)
Requirement already satisfied: python-dateutil<3.0.0,>=2.1 in /usr/lib/python3.9/site-packages (from botocore<1.38.0,>=1.37.23->boto3) (2.8.1)
Requirement already satisfied: six>=1.5 in /usr/lib/python3.9/site-packages (from python-dateutil<3.0.0,>=2.1->botocore<1.38.0,>=1.37.23->boto3) (1.15.0)
Installing collected packages: botocore, s3transfer, boto3
Successfully installed boto3-1.37.23 botocore-1.37.23 s3transfer-0.11.4
WARNING: Running pip as the 'root' user can result in broken permissions and conflicting behaviour with the system package manager. It is recommended to use a virtual environment instead: https://pip.pypa.io/warnings/venv
[ec2-user@ip-172-31-15-149 Home made pickles1]$ sudo flask run --host=0.0.0.0 --port=5000
 * Debug mode: off
WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.
 * Running on all addresses (0.0.0.0)
 * Running on http://127.0.0.1:5000
 * Running on http://172.31.15.149:5000
Press CTRL+C to quit
```

Access the website through:

Private IPs: <http://3.90.12.91>

Milestone 7: Testing and Deployment

Testing and deployment involve verifying that your application works as expected before making it publicly accessible. Start by testing locally or on a staging environment to catch bugs and ensure functionality. Once tested, deploy the application to an EC2 instance, configure necessary services, and perform a final round of live testing to confirm everything runs smoothly in the production environment.

Functional testing to verify the Project

Signup page:

The screenshot shows the 'Create Your Account' form. At the top, there's a logo for 'Homemade Delights'. Below it, the form fields are labeled: 'Username', 'Email Address', 'Password', and 'Confirm Password'. Each field has a corresponding input box. Below the input boxes is a checkbox followed by the text 'I agree to the [Terms of Service](#) and [Privacy Policy](#)'. A large red button at the bottom right is labeled 'Create Account'. At the very bottom of the form, there's a link 'Already have an account? [Login here](#)'.

Login page:

The screenshot shows the 'Welcome Back' login form. At the top, there's a logo for 'Homemade Delights'. Below it, the form fields are labeled: 'Username or Email' and 'Password'. Each field has a corresponding input box. To the left of the password input is a checkbox labeled 'Remember me'. To the right is a link 'Forgot password?'. A large red button at the bottom right is labeled 'Login'. At the very bottom of the form, there's a link 'Don't have an account? [Sign up here](#)'.

Below the login form, there's a blue banner with the text 'Welcome Back!'. Underneath the banner, there's a message: 'Login to access your account and explore our delicious homemade products. After login, you'll be taken to our home page.' and a link 'New here? [Create an account first](#)'.

Home page:

The screenshot shows the homepage of a website called "Homemade Delights". The header features a logo of a green pepper and the text "Homemade Delights". The navigation bar includes links for Home, Veg Pickles, Non-Veg Pickles, Snacks, Cart, Contact, and Login. The main section has a pink background with a house icon and the text "Welcome Home". Below it is the tagline "Where every bite feels like home". There are two buttons: "Explore Pickles" (red) and "Browse Snacks" (blue). On the left, there's a "Featured Pickles" section with a "Mango Pickle Special" card. The card includes a description ("Our signature mango pickle made with handpicked raw mangoes"), a price of ₹150, and a "Order Now" button. On the right, there's a "Snack of the Day" section with a "Spicy Mixture Combo" card. The card includes a description ("Perfect blend of sev, peanuts, and aromatic spices"), a price of ₹100, and a "Try Today" button.

Veg-pickles:

The screenshot shows the "Vegetarian Pickles" section of the website. The header is identical to the home page. The main content area has a white background with a title "Vegetarian Pickles" and a subtitle "Traditional recipes with authentic flavors, made with fresh vegetables and aromatic spices". Below this are three product cards: "Mango Pickle" (sweet and tangy raw mango pickle with traditional spices, ₹150), "Lemon Pickle" (zesty lemon pickle that adds flavor to any meal, ₹120), and "Mixed Vegetable Pickle" (a delightful mix of seasonal vegetables in aromatic oil, ₹180). Each card includes an image of the pickle, its name, a brief description, a price, and an "Add to Cart" button.

Non-Veg pickles:

 **Homemade Delights**

Home Veg Pickles Non-Veg Pickles Snacks Cart Contact Login

Non-Vegetarian Pickles

Rich and flavorful meat pickles prepared with premium ingredients and traditional spices



Chicken Pickle
Tender chicken pieces marinated in aromatic spices and oil
₹250
[Add to Cart](#)



Mutton Pickle
Premium mutton pickle with rich flavors and traditional taste
₹300
[Add to Cart](#)



Fish Pickle
Fresh fish pickle with coastal spices and
₹280
[Add to Cart](#)

Snacks:

 **Homemade Delights**

Home Veg Pickles Non-Veg Pickles Snacks Cart Contact Login



Spicy Mixture
Crunchy mix of sev, peanuts, and spices - perfect tea-time snack.
₹100
[Add to Cart](#)



Banana Chips
Crispy banana chips made from fresh Kerala bananas
₹80
[Add to Cart](#)



Masala Peanuts
Roasted peanuts with aromatic spices and herbs
₹90
[Add to Cart](#)

Cart page:

The screenshot shows the shopping cart interface for "Homemade Delights". At the top, there's a navigation bar with links for Home, Veg Pickles, Non-Veg Pickles, Snacks, Cart, Contact, and Login. The main area is titled "Your Shopping Cart" and contains three items:

- Mixed Vegetable Pickle**: ₹180.0 each. Quantity: 1. Buttons for minus, plus, and remove.
- Mutton Pickle**: ₹300.0 each. Quantity: 1. Buttons for minus, plus, and remove.
- Spicy Mixture**: ₹100.0 each. Quantity: 1. Buttons for minus, plus, and remove.

To the right, there's an "Order Summary" section with the following details:

- Subtotal: ₹580.00
- Delivery: FREE
- Total: ₹580.00

A red "Proceed to Checkout" button is located below the summary. A yellow "Pro Tip" box at the bottom right says "Free delivery on orders above ₹500!"

Checkout page:

The screenshot shows the checkout process for "Homemade Delights". The top navigation bar is identical to the cart page. The main form is titled "Checkout" and is divided into sections:

- Billing Information**: Fields for Full Name (Naveen Daggubati), Email Address (228x1a1205@khitguntur.ac.in), and Phone Number (07382988945).
- Delivery Address**: Field containing "The Kamma Hostel, 4/4 Arundelpet".
- City**: Guntur
- PIN Code**: 522002
- Payment Method**: Radio buttons for "Cash on Delivery" (selected) and "Online Payment".

A red "Place Order" button is at the bottom right of the form.

Order success page:

The screenshot shows the order confirmation page for 'Homemade Delights'. At the top, there's a navigation bar with links for Home, Veg Pickles, Non-Veg Pickles, Snacks, Cart, Contact, and Login. A green banner at the top says 'Order confirmed! You will receive an email shortly.' Below it is a large central box with a gradient background from light blue to pink. It features a small icon of a gift box with a bow and the word 'Success!' in green. Below that, a message says 'Your request has been processed successfully.' Underneath, a section titled 'What's Next?' lists three options: 'Check Your Email' (with a mail icon), 'Stay Updated' (with a bell icon), and 'Track Delivery' (with a delivery truck icon). Each option has a brief description: 'You'll receive a confirmation email shortly.', 'We'll send you updates via SMS and email.', and 'Your order will be delivered within 24-48 hours.' At the bottom of this box are two buttons: 'Back to Home' (red) and 'Place Another Order' (blue).

Contact page:

The screenshot shows the contact page for 'Homemade Delights'. At the top, there's a navigation bar with links for Home, Veg Pickles, Non-Veg Pickles, Snacks, Cart, Contact, and Login. A white contact form box is centered on the page. It has a title 'Get In Touch' in red. On the left side of the form, there are fields for 'Your Name' (containing 'Naveen Daggubati'), 'Email Address' (containing 'abc@gmail.com'), and a 'Message' area (containing 'I want delicious snacks...']). On the right side, under 'Contact Information', there are fields for 'Address' (containing '123 Homemade Street, Flavor Town, FT 12345'), 'Phone' (+91 98765 43210), 'Email' (hello@homemadedelights.com), and 'Business Hours' (Monday - Saturday: 9:00 AM - 7:00 PM, Sunday: 10:00 AM - 5:00 PM). Below the form is a button labeled 'Send Message' in red. At the bottom of the page is a light orange footer box with the text 'We'd Love to Hear From You!' and a note: 'Have questions about our products? Want to place a custom order? Or just want to say hello? Drop us a message and we'll get back to you as soon as possible.'

Database updates:

1. Users table:

✓ Completed. Read capacity units consumed: 2 X

Items returned (3)

Actions ▾ Create item

1

| <input type="checkbox"/> | username (String) | ▼ | email | ▼ | password | ▼ |
|--------------------------|-------------------------|---|---------------|---|-------------------------------------------------------------------|---|
| <input type="checkbox"/> | Shiva | | kilarukusu... | | scrypt:32768:8:1\$W5tA59Z7nQjLxbt\$6bfef2b3e14bbe9d3d3e3f1c... | |
| <input type="checkbox"/> | kusuma | | <empty> | | <empty> | |
| <input type="checkbox"/> | Alekhya | | alekhya@g... | | scrypt:32768:8:1\$EwCDTl0iaGcKutw3\$cd5dbf5c12ec17cb518f7c15cd... | |

2. Orders table:

✓ Completed. Read capacity units consumed: 2 X

Items returned (4)

Actions ▾ Create item

1

| <input type="checkbox"/> | order_id (String) | ▼ | address | ▼ | items | ▼ | name | ▼ | payment_met... | ▼ | phone |
|--------------------------|----------------------------------------|---|-------------|---|------------------|---|--------------|---|----------------|---|---------|
| <input type="checkbox"/> | 7c6bd84e-f2c7-4fe0-... | | Kothur | | [{"M": {"n..."}] | | Siri | | cod | | 8187810 |
| <input type="checkbox"/> | 3de0fe0c-9539-4fb6-... | | chatanpally | | [{"M": {"n..."}] | | KILARU KU... | | cod | | 9849889 |
| <input type="checkbox"/> | fbc41d6d-d6f2-4158-... | | chatanpally | | [{"M": {"n..."}] | | KILARU KU... | | cod | | 9849889 |
| <input type="checkbox"/> | 1g | | <empty> | | [] | | <empty> | | <empty> | | 0 |

Conclusion

The Homemade Pickles and Snacks platform has been meticulously crafted to deliver a seamless and delightful experience for food enthusiasts seeking authentic, handcrafted flavors. By leveraging modern web technologies such as Flask for backend logic, secure user authentication, and dynamic cart management, the platform ensures a user-friendly interface for browsing, customizing, and ordering artisanal pickles and snacks.

The integration of cloud-ready architecture (e.g., AWS for future scalability) and robust session management allows the platform to handle high traffic efficiently while maintaining real-time updates for orders and inventory. Features like weight-based pricing, category-specific searches, and instant checkout streamline the shopping process, empowering customers to explore a diverse range of traditional and innovative recipes with ease.

This project addresses the growing demand for homemade, preservative-free food products by bridging the gap between small-scale producers and discerning customers. The platform's intuitive design and secure payment workflows enhance trust and convenience, while backend tools enable effortless inventory tracking and order fulfillment for administrators.

By combining time-honored recipes with modern e-commerce capabilities, this website not only preserves culinary heritage but also adapts to the digital age, ensuring that every jar of pickle or snack reaches customers with the same care and quality as a homemade meal. As the platform evolves, it stands ready to scale, introduce new product lines, and foster a community of food lovers united by a passion for authentic flavors.

In essence, this project redefines the way homemade delicacies are shared and enjoyed, offering a flavorful bridge between tradition and technology.