



BOGAZICI UNIVERSITY

SWE_573

Software Development Process

2022719186 – Hakan Aköz

Course Name: SWE 573 Software Development Process

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Project Name : CookPad by Chef Hakan

Git Repository: https://github.com/HakanAkozBoun/SWE_573

Git Tag Version: https://github.com/HakanAkozBoun/SWE_573/releases/tag/Presentation_Release

Deployment URL: <http://157.230.125.5:3000/>

Project Repository : https://github.com/HakanAkozBoun/SWE_573

Design documents : https://github.com/HakanAkozBoun/SWE_573/wiki

User Manuals : https://github.com/HakanAkozBoun/SWE_573/wiki/7.-User-Guide

System Manuals: https://github.com/HakanAkozBoun/SWE_573/wiki/09.-System-Manuel

User test Cases and Testing results : https://github.com/HakanAkozBoun/SWE_573/wiki/10.-Testing

Declaration of authentic work : https://github.com/HakanAkozBoun/SWE_573/wiki/08.-

Video Link:

HONOR CODE

Related to the submission of all the project deliverables for the Swe573 2023 fall semester project reported in this report, I Hakan Aköz declare that: - I am a student in the Software Engineering MS program at Bogazici University and am registered for Swe573 course during the Fall 2023 semester. All the material that I am submitting related to my project (including but not limited to the project repository, the final project report, and supplementary documents) have been exclusively prepared by myself. - I have prepared this material individually without the assistance of anyone else with the exception of permitted peer assistance which I have explicitly disclosed in this report.

Hakan Aköz



Project can be visited : <http://157.230.125.5:3000/>

Admin user login : <http://157.230.125.5:3000/login> test@test - 123123

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1. Purpose & Audience & Scope

Project Details

The goal of this project is to provide a nutritional companion in which users may exchange and access recipe information. This project is a prototype for a social recipe publishing network. This initiative intends to help consumers who care about what they eat and food suppliers who care about what they offer. The goal of this social media tool is to raise awareness about healthy eating, bring together individuals who have same interests and concerns, build a searchable database of healthy foods, and serve as a promotion hub for food suppliers by offering a

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The goal of this social media tool is to raise awareness about healthy eating, bring together individuals who have same interests and concerns, build a searchable database of healthy foods, and serve as a promotion hub for food suppliers by offering a platform for menu sharing.

2. Glossary

* **User**: A user can be either a guest or a member. **Completed**

* **Guest**: An unregistered system user. **Completed**

* **Member**: A member is a registered consumer or supplier user in the system.

* **Consumer**: A presently logged-in person who has registered as a consumer with the system.

* **Supplier**: A presently logged-in person who has registered as a food supplier in the system.

* **Admin**: A privileged user who receives recipe and comment reports and has the ability to delete the reported content.

* **Recipe**: A recipe is a list of items with their proportions and a guide to preparing a meal.

Completed

* **Menu**: A menu is a list of foods. **Completed**

* **Nutritional Information**: Information that lists all of the nutrition data, such as the macronutrients and micronutrients, as well as their amounts and ratios, as well as the calories in a food item. **Completed**

* **Ingredients**: All edible ingredients utilized in the production of a culinary product.

Completed

Requirements : https://github.com/HakanAkozBoun/SWE_573/wiki/03.Software-Requirements

3. Functional Requirements

Membership

- * 3.1 A user shall be able to sign up with email address, password. ****Completed****
- * 3.2 When registering, email addresses must be unique; only one membership per email address is permitted. ****Completed****
- * 3.3 A minimum of 8-character password should be required for registration. One uppercase one character shall be included.
- * 3.4 The system shall be able to generate a unique username based on the user's email address.
- * 3.5 A member user shall be able to login using a confirmed email address and password. ****Completed****
- * 3.6 The system shall be able to send new users a verification email in order to activate their accounts.
- * 3.7 The system shall allow for resetting lost passwords.
- * 3.8 Users shall be able to modify their name, email address, password and also username. ****Completed****
- * 3.8 System shall let users to delete their membership permanently.
- * 3.9 Users shall be able to share their own recipes. ****Completed****
- * 3.10 Users shall be allowed to make changes to their recipes. While publishing, users will be able to add tags to their recipes. ****Completed****
- * 3.11 Users shall have the ability to establish new food supplier pages.
- * 3.12 Users shall be able to follow other users as well as food provider pages.
- * 3.13 Users shall be able to rate food supplier pages with a rating of 0/5 stars.
- * 3.14 Recipes and menus shall be able to be liked by users.
- * 3.15 Users shall be able to leave comments on recipes and menus. ****Completed****
- * 3.16 Food preferences, such as allergies and dietary restrictions, must be defined by users.
- * 3.17 User shall be able to follow another consumer or a provider.
- * 3.18 User shall be able to like or unlike food items, recipes or menus.
- * 3.19 A member shall be able to edit the information in their profile
- * 3.20 System shall be able to let for members to report comments and recipes.
- * 3.21 Reported recipes and comments shall be able to removed by an admin.

Search

- * 3.22 Search results should be recipe titles, food provider names, user names. ****Completed****
- * 3.23 The system must be capable of providing a thorough search page for locating recipes, menus, food providers, and users.

Posts, Feed, Recepie, Menu

- * 3.24 A member must be able to leave a remark beneath a recipe.
- * 3.25 A member shall be tag their own recipe by adding a user-defined label and a unique ID for the linked Wikidata item.
- * 3.26 A Member shall may explore recipe details, comments on those recipes, and nutritional information for each recipe. ****Completed****
- * 3.27 Any menu's meal details and nutritional information shall be viewable by members.

****Completed****

- * 3.28 A member shall be able to build meals that include a variety of culinary products.
- * 3.29 When generating a recipe, users shall be able to pick a supplier if they have one.
- * 3.30 Recipes shall be tagged by users.
- * 3.31 The system shall propose tags using wikidata.
- * 3.32 Every tag shall be associated with wikidata through a wikidata ID.
- * 3.34 If the user has a provider page, the recipes shall be connected to a menu.
- * 3.35 At least one item is required in all recipes.
- * 3.36 USDA API should automatically offer nutritional data for ingredients.
- * 3.37 Recipes shall include a description or cooking instructions. ****Completed****

System Requirements

- * 3.38 System shall add a warning to the search results, if the user has any dietary restrictions or allergies. ****Completed****
- * 3.39 System shall determine the nutritional information of a menu, using the nutritional data of each food item specified in the menu. ****Completed****
- * 3.40 System shall calculate the nutritional information of a recipe based on the type and ratio of the ingredients. ****Completed****
- * 3.41 Based on their interests, following members, dietary restrictions, and allergies, the algorithm shall suggest recipes tailored to each user.
- * 3.42 Based on the popularity of the recipes in the system—that is, the quantity of likes—the system shall suggest general recipes to visitors.
- * 3.43 If the user has any dietary restrictions or allergies, the system shall add a warning to the search results.
- * 3.44 The system shall notify the administrator of the recipes and member comments.

4. Non-Functional Requirements

Performance

- * 4.1 The response time for the application page should be less than 3 seconds. ****Completed****

Language

- * 4.2 The language of the system web interface and user content language must be English.

****Completed****

- * 4.3 For the services supplied by this application, the system must provide an API.

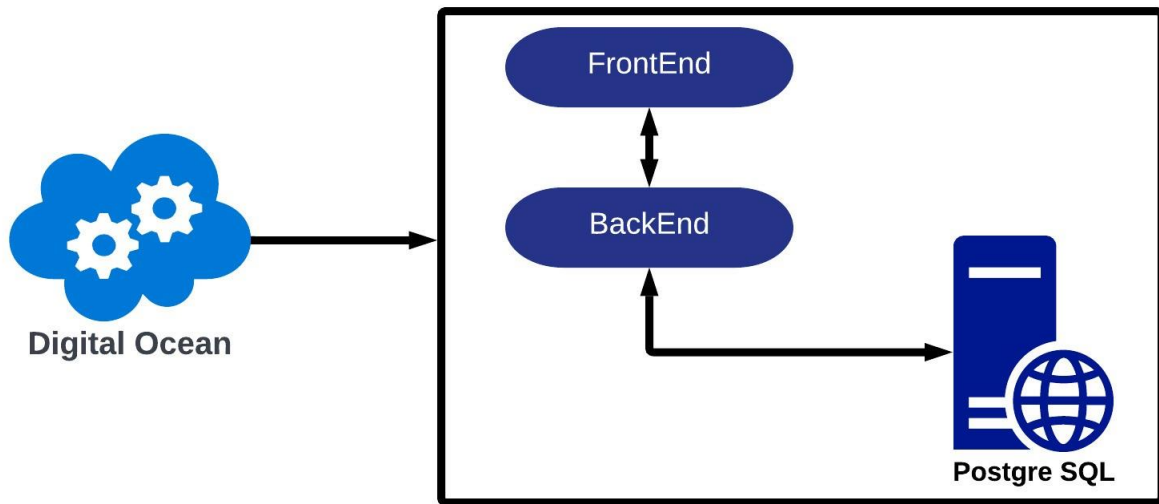
****Completed****

- * 4.4 Google Chrome must support the system web interface. ****Completed****

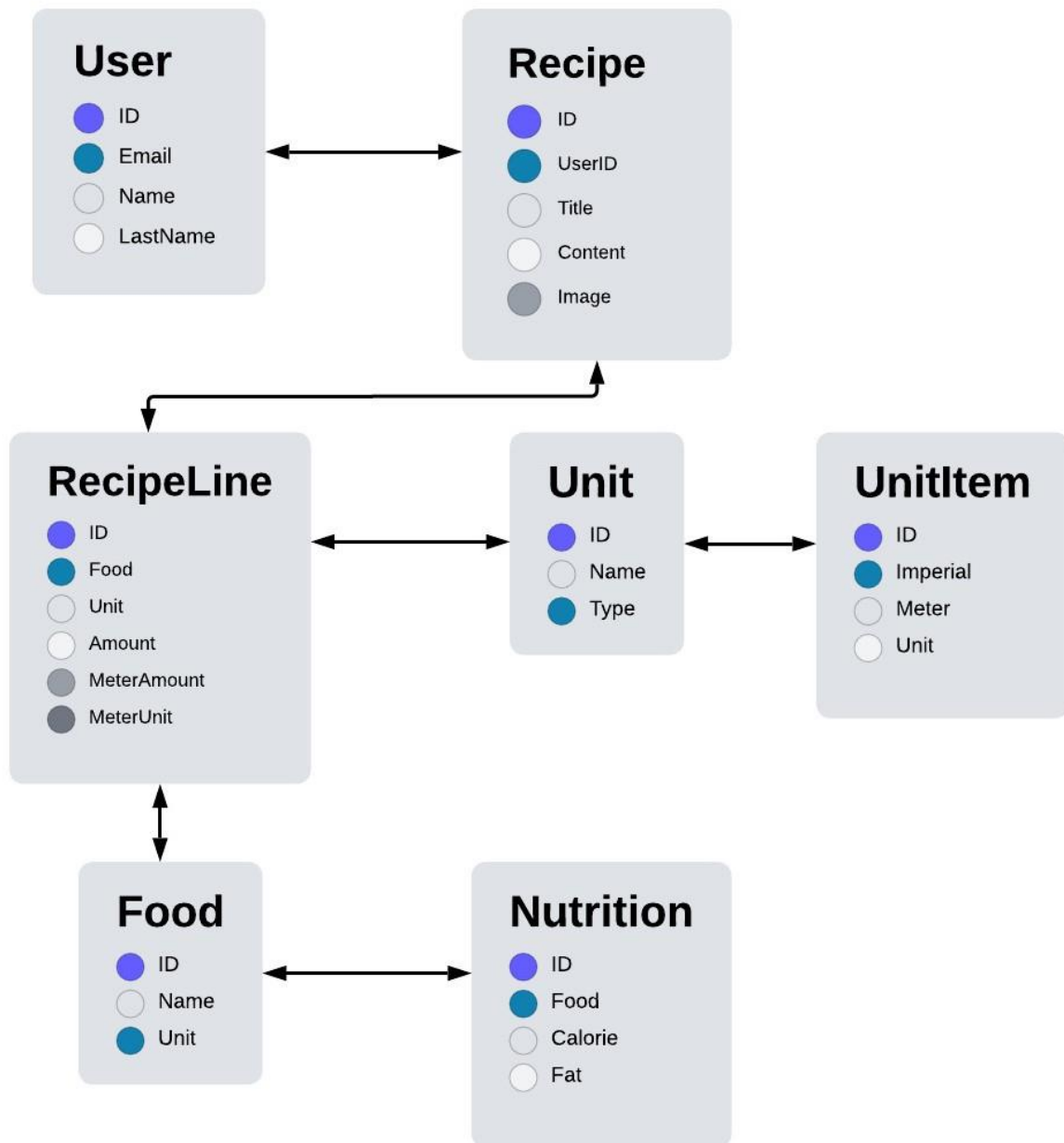
Security

- * 4.5 The system must include a backup system for the data acquired.
- * 4.6 The system must be safe in terms of user information data. ****Completed****

System Design



UML Diagram



Status of Deployment : It is containerized and It in can be tested on 153.230.125.5

Sytem Manual

To Run Project :

- 1- cd backend--> python manage.py runserver
- 2- cd ui --> npm install, npm start

Tech Requirements

numpy==1.24.2
bcrypt==3.1.6
beautifulsoup4==4.7.1
bs4==0.0.1
Django==4.2.7
django-background-tasks==1.2.5
django-cors-headers==3.13.0
django-debug-toolbar==3.7.0
django-admin-rangefilter==0.9.0
django-render-block==0.9.2
djangorestframework==3.14.0
djangorestframework-simplejwt==5.2.2
drf-nested-routers==0.93.4
gunicorn==20.1.0
lxml
pandas
psycpg2==2.9.5
python-dateutil==2.8.2
pytz==2022.6
requests==2.28.1
urllib3==1.26.12
XlsxWriter==3.0.3
django-import-export==3.0.1
requests_oauthlib==1.3.1
python-gettext==4.0
django-envirom==0.9.0
psycpg2-binary==2.9.9
pillow

CookPad by Chef Hakan User Manual

2024

<http://157.230.125.5:3000/>

This web page aims to provide a social recipe page for people who cares the nutrition of what they eat. Also it gives direction to users a detail nutrition brief for the recipes. Any user can create a recipe and web page creates automatically the nutrition about the recipe.

Register Page	2
Login Page	3
Home Page	3
NavBar – SearchBar	4
Create Blog	5
Create Recipe	6
Detail of Recipe – Nutrition - Comment	7

Register Page

To register user should have a valid e-mail address. After fill the necessary parts it's membership accepted automatically. Password must be at least 6 character long for the secure login.

Recipe App

Güvenli değil 157.230.125.5:3000/signup

PCMS - Palmet UNSOLVED Atlassian BOUN Gmail REC Office365 ServiceDesk Google Çeviri Outlook HAKAN PALTECH PALMET

CookPad by Chef Hakan

Home Add Recipes

Delicious recipes from worldwide

Sign up

First Name *

Last Name *

Email Address *

Password *

☐ I want to receive inspiration, marketing promotions and updates via email.

SIGN UP

[Already have an account? Sign in](#)


Copyright © Your Website 2024.

Login Page

After registration user can login with his/her credentials.

CookPad by Chef Hakan Home Add Recipes LOGIN Search Here!

Delicious recipes from worldwide


Sign in

Email Address *

Password *

☐ Remember me

SIGN IN

[Forgot password?](#) [Don't have an account? Sign Up](#)

Copyright © [Your Website](#) 2024.

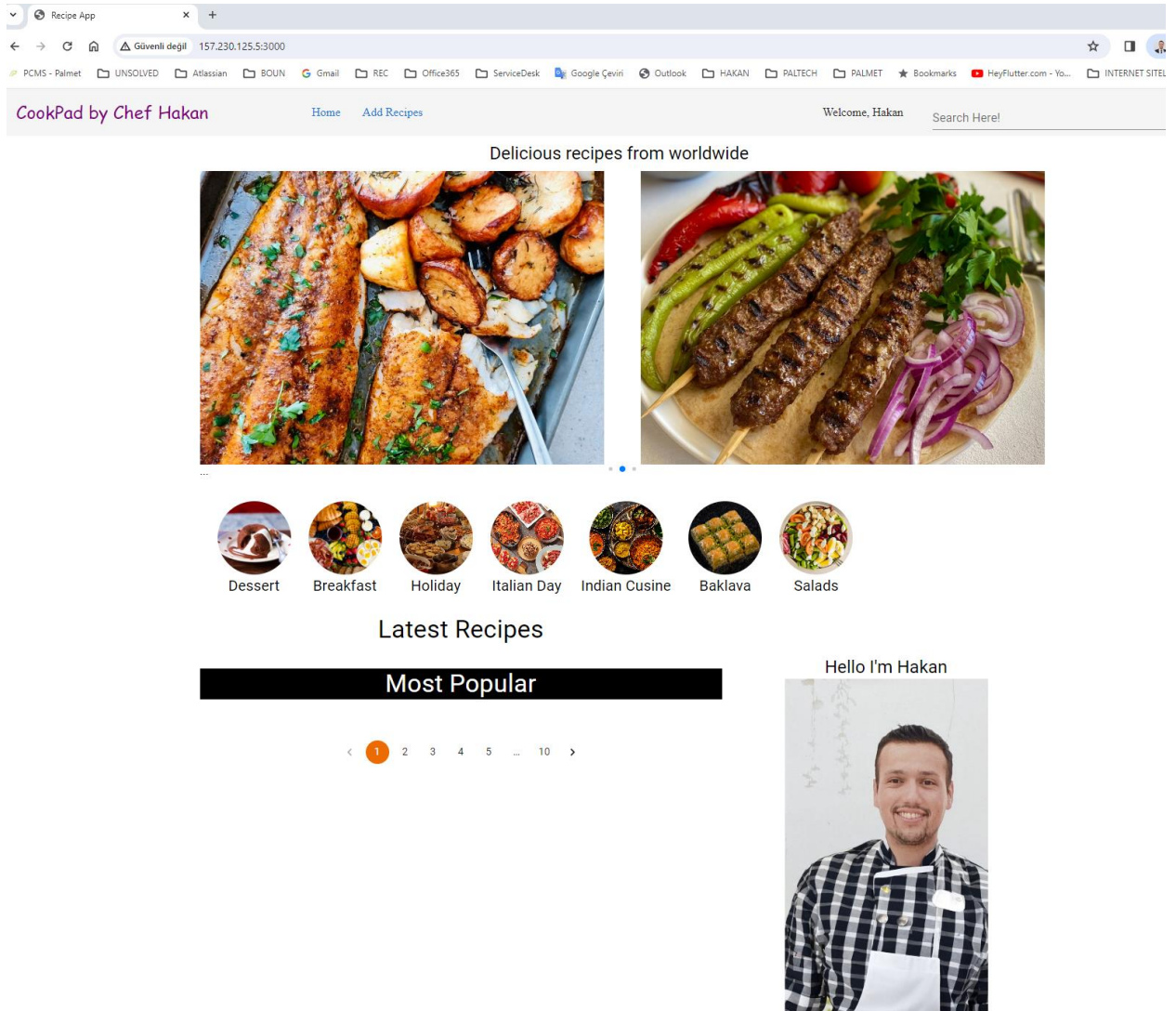
Home Recipes About Us Subscribe ©2023 CookPad by Chef Hakan

Afiyet olsun, Bon appétit :)

Home Page

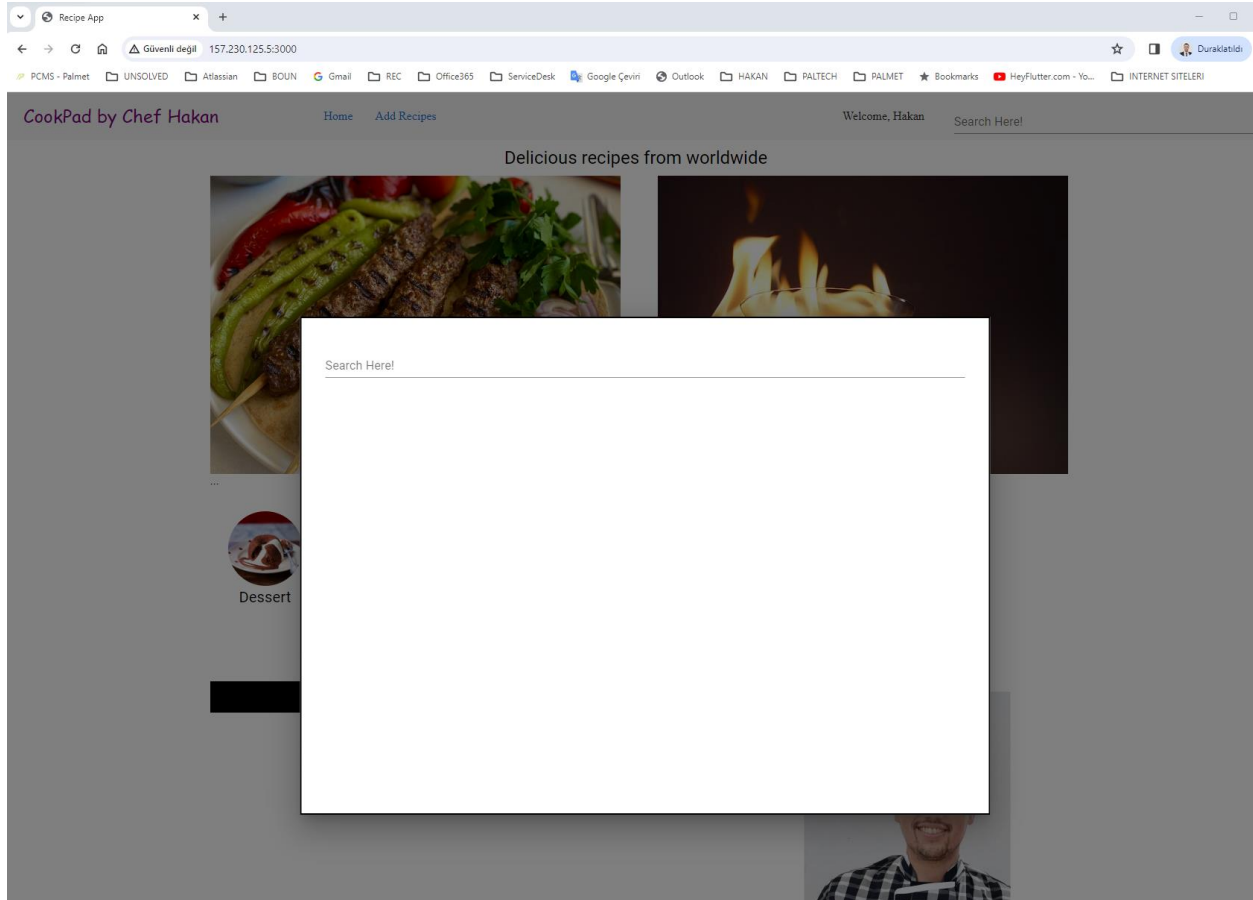
If user login successfully, web site will show the main mage.

User can find the categories, popular recipes and last added recipes at the main page.



Navigation Bar and Search Bar

In the navigation bar user can find create recipe button, and home button. To search any recipe user should type at the search bar.



Category Creation Page

Member can create a category to make an organized recipes. This categories are related with the recipes

The screenshot shows a web browser window with the address bar displaying '157.230.125.5:3000/addcategory'. The browser's address bar also shows 'Güvenli değil' (Not safe). The browser's toolbar includes various icons for navigation and search. The page header features the logo 'CookPad by Chef Hakan' on the left, navigation links 'Home' and 'Add Recipes' in the center, and a user greeting 'Welcome, Hakan' with a search bar 'Search Here!' on the right. The main content area is titled 'Delicious recipes from worldwide' and contains a form for 'Add Category'. The form has a text input field labeled 'Name *' and a button labeled 'Dosya Seç' (Select File) with a status indicator 'Dosya seçilmedi' (File not selected). Below the form is a blue 'SAVE' button. The footer is a purple bar with navigation links 'Home', 'Recipes', 'About Us', and 'Subscribe' on the left, and a copyright notice '©2023 CookPad by Chef Hakan' on the right. The footer also features the text 'Afiyet olsun, Bon appétit :)' in the center.

Recipe App

Güvenli değil 157.230.125.5:3000/addcategory

PCMS - Palmet UNSOLVED Atlassian BOUN Gmail REC Office365 ServiceDesk Google Çeviri Outlook HAKAN PALTECH PALMET Bookmarks HeyFlutter.com - Yo... INTERNET SİTELERİ

CookPad by Chef Hakan Home Add Recipes Welcome, Hakan Search Here!

Delicious recipes from worldwide

Add Category

Name *

Dosya Seç Dosya seçilmedi

SAVE

Home Recipes About Us Subscribe ©2023 CookPad by Chef Hakan

Afiyet olsun, Bon appétit :)

Recipe Creation Page

Users of the web page can easily create recipes and share on their profile.

Firstly they should select a category. Steps of the cooking part and descriptions about the recipes should be filled by the user.

Foods of the ingredients list should be added one by one.

Every food has own unit type. And it has own nutrition values at the database.

If their recipe has an image, web page allows to share the file.

CookPad by Chef Hakan Home Add Recipes Welcome, Hakan Search Here!

Delicious recipes from worldwide

Add Recipe

Category: Breakfast

Title * Turkish Breakfast Slug * turkish-breakfast

Excerpt * Turkish Breakfast

Description * Breakfast means kahvaltı in Turkish. It is a combination of two words: Kahve and altı (Coffee and beforehand). When combined, these two words describe the food.

Instruction List
1 kilo şeker 3 bardak yağ ekleyiniz

Ingredients List Name
Breakfast List

Food	Unit	Amount
Flour	g	10
salt	g	3
oil	ml	20

Food: Unit: Amount: 3 **ADD FOOD**

Dosya Seç | breakfast.jpg
Seçilen Dosya: breakfast.jpg

SAVE

Home Recipes About Us Subscribe

Unit Tests

https://github.com/HakanAkozBoun/SWE_573/blob/main/backend/blog_api/test.py

Category Test def test_entry(self): cat=category() cat.name="TestCategory" cat.save()

```
record=category.objects.get(pk=cat.id)
self.assertEqual(record,cat)
```

Testing Project K6

Testing Project Technologies:

- Open Source Library K6 (Needs Docker)
- Docker Desktop (Needs WSL)
- Python

Stress Test- Regularly putting stress on the system - duration(for 10 seconds) + target (number) Spike Test - Instant Load test -- 1400 in 10 seconds -- Instantaneous load Load Test - gives 100 req, response time -- Soak Test - Checking whether you are standing for a long time - 100 req for 2 hours Spike Test is sudden large bursts or spikes in the load generated by the virtual users Soak tests are run to make sure the software can handle the expected load over a long period of time. Soak tests are similar to spike tests, except they test the system over time.

Testing Results:

```

JS stress_test.js M
JS stress_test.js > options > stages > target
6 //Sleep: sonsuza dek çalışmasın diye işlemlerimiz bittikten sonra uyku moduna alıyoruz.
7 import { check, sleep } from "k6";
8
9 // Test configuration
10 export const options = {
11   thresholds: {
12     //3000ms içinde %99'u bitmesini istiyoruz.
13     http_req_duration: ["p(99) < 3000"],
14   },
15   stages: [
16     { duration: "30s", target: 1 },
17     { duration: "10s", target: 0 },
18   ],
19 };

```

PROBLEMS OUTPUT DEBUG CONSOLE PORTS COMMENTS TERMINAL

AKG .io

execution: local
script: stress_test.js
output: -

scenarios: (100.00%) 1 scenario, 1 max VUs, 1m10s max duration (incl. graceful stop):
* default: Up to 1 looping VUs for 40s over 2 stages (gracefulRampDown: 30s, gracefulStop: 30s)

✓ status was 200

checks.....	100.00%	✓ 38	X 0			
data_received.....	44 kB	1.1 kB/s				
data_sent.....	3.2 kB	78 B/s				
http_req_blocked.....	avg=1.61ms	min=0s	med=0s	max=61.3ms	p(90)=0s	p(95)=0s
http_req_connecting.....	avg=1.61ms	min=0s	med=0s	max=61.3ms	p(90)=0s	p(95)=0s
✓ http_req_duration.....	avg=64.46ms	min=61.67ms	med=64.46ms	max=69.41ms	p(90)=65.89ms	p(95)=66.48ms
{ expected_response:true }...	avg=64.46ms	min=61.67ms	med=64.46ms	max=69.41ms	p(90)=65.89ms	p(95)=66.48ms
http_req_failed.....	0.00%	✓ 0	X 38			
http_req_receiving.....	avg=112.96µs	min=0s	med=0s	max=1.06ms	p(90)=575.13µs	p(95)=991.86µs
http_req_sending.....	avg=17.77µs	min=0s	med=0s	max=425.5µs	p(90)=0s	p(95)=37.48µs
http_req_tls_handshaking.....	avg=0s	min=0s	med=0s	max=0s	p(90)=0s	p(95)=0s
http_req_waiting.....	avg=64.33ms	min=61.67ms	med=64.38ms	max=69.41ms	p(90)=65.89ms	p(95)=66.48ms
http_reqs.....	38	0.928897/s				
iteration_duration.....	avg=1.07s	min=1.06s	med=1.07s	max=1.12s	p(90)=1.07s	p(95)=1.07s
iterations.....	38	0.928897/s				
vus.....	1	min=1	max=1			
vus_max.....	1	min=1	max=1			

running (0m40.9s), 0/1 VUs, 38 complete and 0 interrupted iterations
default ✓ [=====] 0/1 VUs 40s

Video Link: <https://youtu.be/esaM1BKwnUQ>

<https://youtu.be/MBI45qILOBU> (Faster version of first link)