

Exercise 2.5: Django MVT revisited.

Task 2.5: Recipe Application.

Summary of model changes

1. Adding the Image Field to the Recipe Model: An `image` field will be added to the `Recipe` class using `models.ImageField(upload_to='recipes', default='no_image.png')`.

- **The Logic:** This provides each recipe with its own visual representation. By using `upload_to='recipes'`, Django automatically organizes these uploads into a specific subfolder within the project's `media/` directory. For recipes where no image is provided, a default `no_image.png` can be handled via logic or a field default to ensure the UI remains consistent.

2. Decoupling Visuals from Calculation Logic: The existing logic for `calculate_difficulty` is based on `cooking_time` and the number of ingredients counted via the `RecipeIngredient` junction table.

- **The Logic:** To maintain a clean database, no default image is assigned to ingredients. Instead, the field is set to `null=True` and `blank=True`. This allows the database to store a `NULL` value if no image is provided, which is more efficient for ingredients that do not require visual representation.

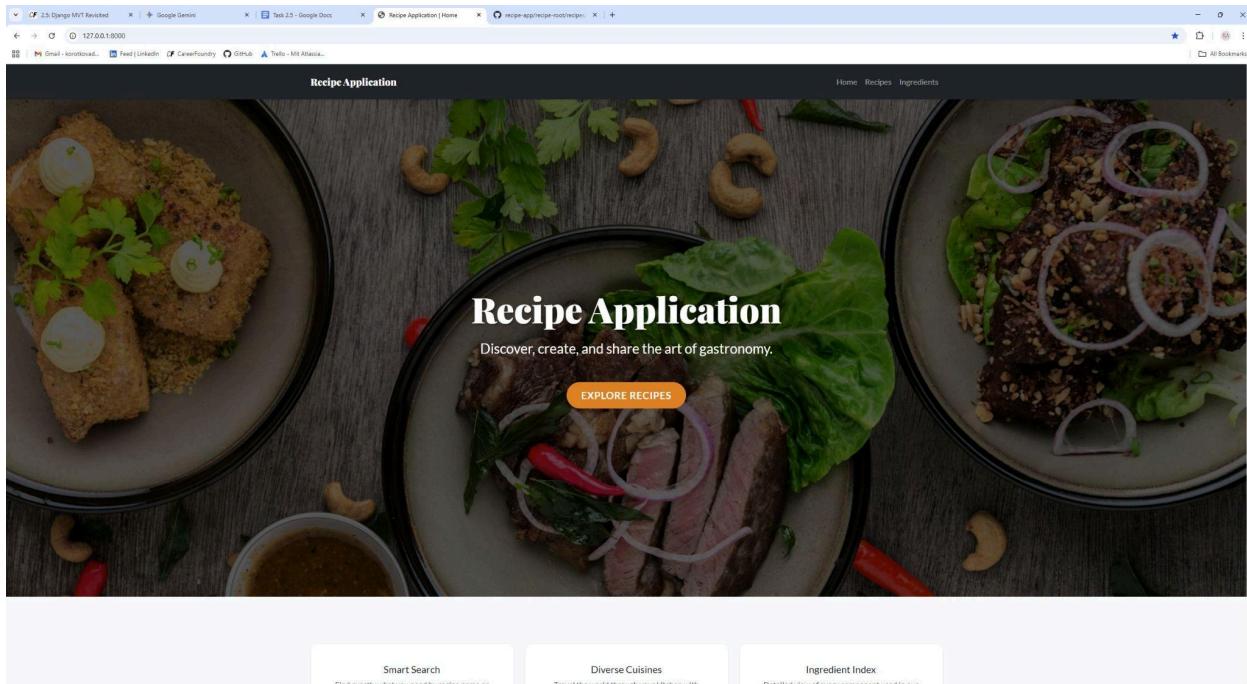
3. Handling Optional Ingredient Pictures: An `image` field has also been added to the `Ingredient` model.

- **The Logic:** Using `blank=True, null=True` for ingredient images ensures the model remains flexible. This allows for recipes to be created even if a specific photo for an ingredient - like "salt" - is unavailable.

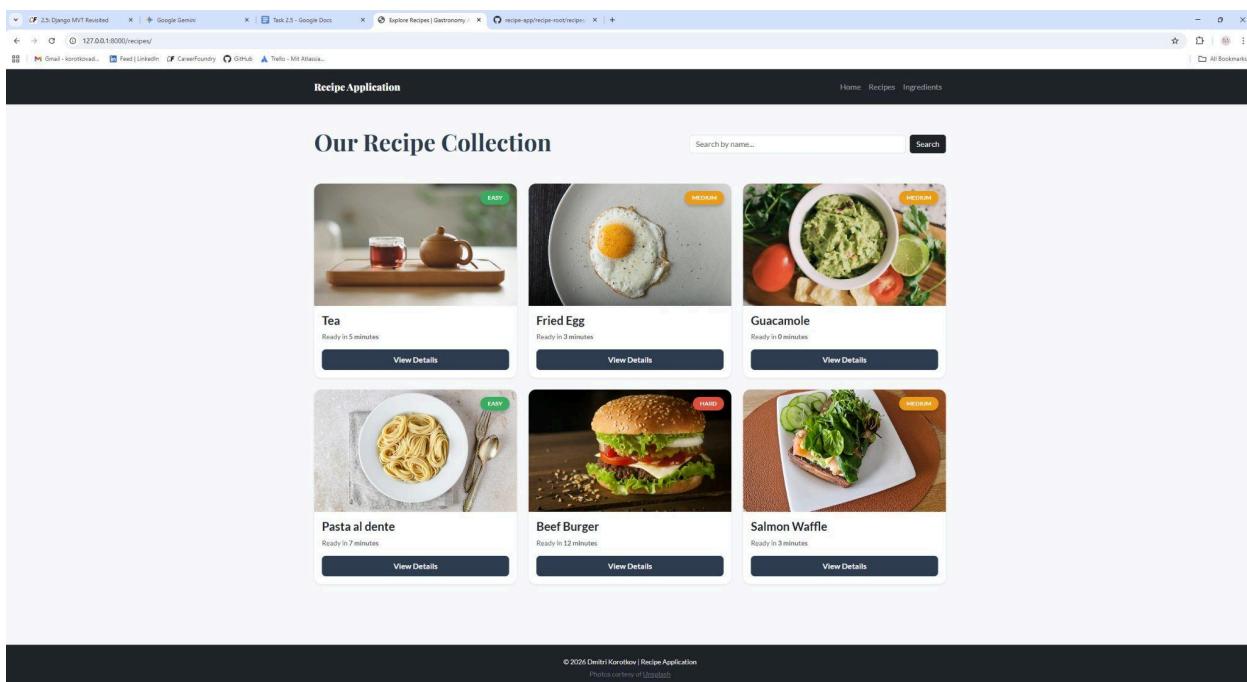
4. Data Consistency and Display The current `__str__` method provides a clear summary of the recipe's ID, Name, and Difficulty.

- **The Logic:** Including the `image` field allows for future integration into the front-end templates and the admin panel, while preserving the rigorous data integrity established in the `save()` methods.

Recipe application homepage



Recipe overview page



Recipe details

The screenshot shows a web browser window displaying a recipe for "Tea". The main image is a photograph of a brown teapot and a glass cup filled with tea leaves and water, resting on a wooden surface. Below the image, the title "Tea" is centered. To the left of the title are three small boxes: "TIME 5 mins", "DIFFICULTY Easy", and "INGREDIENTS 3 items". To the right is a "Chef's Note" box containing the text: "This recipe's difficulty was automatically calculated as easy based on its preparation time and the complexity of its ingredient list." Below the note is a text input field with the placeholder "ID: 1". At the bottom of the page is a dark footer bar with the text "© 2026 Dmitri Korotkov | Recipe Application" and "Photo credit: iStockphoto".

The screenshot shows a web browser window displaying a recipe for "Beef Burger". The main image is a close-up photograph of a large, multi-layered beef burger with lettuce, tomato, cheese, and onions. Below the image, the title "Beef Burger" is centered. To the left of the title are three small boxes: "TIME 12 mins", "DIFFICULTY Hard", and "INGREDIENTS 5 items". To the right is a "Chef's Note" box containing the text: "This recipe's difficulty was automatically calculated as hard based on its preparation time and the complexity of its ingredient list." Below the note is a text input field with the placeholder "ID: 5". At the bottom of the page is a dark footer bar.

The screenshot shows a web browser window with multiple tabs open. The active tab is titled "Salmon Waffle | Recipe Application". The page content includes a large image of a salmon waffle sandwich with various toppings. Below the image, the title "Salmon Waffle" is displayed. To the left of the main content area, there are three boxes: "TIME 3 mins", "DIFFICULTY Medium", and "INGREDIENTS 7 items". To the right, a "Chef's Note" section states: "This recipe's difficulty was automatically calculated as medium based on its preparation time and the complexity of its ingredient list." Below the note is a text input field with the ID "6". At the bottom of the page, there are navigation links for "Home", "Recipes", and "Ingredients".

Ingredient list

The screenshot shows a web browser window with multiple tabs open. The active tab is titled "Ingredient Index | Recipe App". The page content features a grid of ingredient categories labeled A through W. Each category has a list of ingredients with their counts. A search bar at the top right says "Find an ingredient...". At the bottom of the page, there is a copyright notice: "© 2026 Dmitri Korotkov | Recipe Application" and "Photos courtesy of [Unsplash](#)".

Category	Ingredients
A	Arugula (Rocket) 1, Avocado 2
B	Brioche 0, Burger Bun 1, Butter 1
C	Cheddar Cheese 0, Cheese 1, Cilantro 1, Cream Cheese 1, Cucumber 1
E	Egg 1
G	Garlic 0, Ground Beef 1
L	Lemon 0, Lettuce 1, Lime 1
M	Mustard Sauce 1
O	Olive Oil 0, Onion 2
P	Pasta 1, Pepper 1
S	Salt 0, Smoked Salmon 1, Sugar 1
T	Tea Leaves 1, Tomato 0
W	Waffle 1, Water 2