Hungquery: CRUD web application with (BeautifulSoup) python + Flask + PostgreSQL + Falcon





MOTIVATION: CRUD APPLICATION

 The root of all information technology is data storage and data transfer.

 At the core, all apps are doing the same thing: creating new data, retrieving (or reading) data, updating data, and destroying (or deleting) data.

REAL WORLD EXAMPLE: CRUD APP



Take your Instagram feed for example

- 1. You can make a new post (create)
- 2. You can see a list of other people's post (read)
- 3. You can update a post (**u**pdate)
- 4. Finally, you can delete a post (delete)

Hungquery: CRUD app functionality



- 0. Scrape recipes and store in DB.
- 1. Save new recipes (create)
- 2. Search DB to read existing recipes (read)
- 3. Make changes to a recipe (update)
- 4. Finally, remove unwanted recipes (**d**elete)

Hungquery: High-level steps



- 0. Scrape recipes and store in Postgres DB.
- 1. Upload recipe data to DB.
- 2. Connect Flask app to DB.
- 3. UI Design.
- 4. SQL queries.
- 5. Connect DB to Falcon to create live plotly charts.

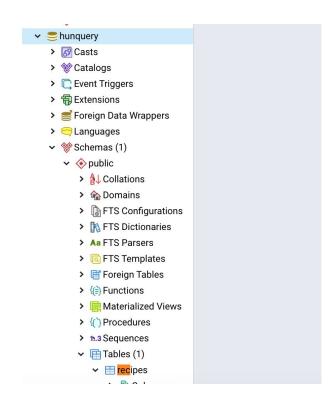
HUNQUERY

Scrape recipes and store in Postgres DB

recipe_name	time	url	special_diet	blurb	course_type	group_by_time
Liverwurst Sanc	3	https://www.sir		Classic liverwu	lunch	low
Cinnamon Toast	3	https://www.sir		Cinnamon toast!	breakfast	low
Tomato Salad wi	4	https://www.sir	Gluten-Free, V€	Fresh garden to	lunch	low
Apple Peanut Bu	4	https://www.sir		Great for kids!	lunch	low
Omelette in a M	4	https://www.sir	Gluten-Free, Lc	Need an easy or	breakfast	low
How to Fry an E	4	https://www.sir		A perfectly fri	breakfast	low
Quick and Easy	5	https://www.sir	Gluten-Free, Ve	Simple white be	lunch	low
Quick and Easy	5	https://www.sir	Gluten-Free, Ve	Simple white be	lunch	low
Homemade Butter	5	https://www.sir		Making your owr	lunch	low

Upload recipe data to DB.





Connect Flask app to DB and create routes



```
@app.route("/search_recipe", methods=['GET', 'POST'])
def SearchRecipe():
    if request.method == 'GET':
        return render_template('search_recipe.html')
        data = request.form
        print(data)
        sql = "SELECT recipe_name, time, url, special_diet, blurb, course_type FROM recipes Where time=" + data["search_time"] + " LIMIT 2 OFFSET 0"
        print(sql)
        res = engine.execute(sql)
        all_recipes = []
        for i in res:
           all recipes.append({
                "recipe_name": i[0],
               "time": i[1],
                "url": i[2],
                "special_diet": i[3],
                "blurb": i[4],
                "course type": i[5],
        print(all_recipes)
        return render template('search recipe.html', all recipes=all recipes
```

Connect Flask app to DB and create routes



```
@app.route("/addnew", methods=['GET', 'POST'])

def Addnew():
    if request.method == 'GET':
        return render_template('addnew.html')
    else:
        data = request.form

        sql = "INSERT INTO recipes(recipe_name, time, url, special_diet, blurb, course_type, group_by_time)"\
        "VALUES ('" + data["Name"] + "', " + data["Minutes"] + ", '" + data["Link"] + "', '" + data["SpecialDiets"] + "', '" + data["blurb"] + "', '" + data["Type"] + "', '" + data["GroupbyTime"] + "');"
        engine.execute(sql)
        print(data)
        return "success"
```

Hungquery: Live Demo

Live Demo: search feature + add new recipe

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http://127.0.0.1:5000/

Connect DB to Falcon



- Falcon is a free and open-source SQL client with inline data visualization.
- Write SQL and Chart the Results.
- Create Live Datasets, so that when our DB updates, the charts and dashboards update as well.

Hungquery: CRUD APP

Future Consideration + QUESTION?



- Smarter search;more filters.
- Search again.
- Better UI Design.
- Incorporate ML.

