

# Project: Search



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# Project Brief

I'm planning to bake something for my friend's birthday. However, there are certain ingredients to which my friend is allergic, as shown in the next two slides.

Since I'm currently learning Python, I'll use it to help me check for the ingredients to which my friend is **NOT** allergic.

I'll then use **Edamam's API** to help me search for cake recipes that not only taste delicious but also accommodate my friend's food allergies.

By entering the required ingredients, this function will return a list of recipes that use the entered ingredients.



# Common Food Allergies



Dairy



Eggs



Peanuts



Soy



Wheat



Fish



Tree nuts



Shellfish

# What my friend is allergic to



Dairy



Eggs



Peanuts



Soy



Wheat



Fish



Tree nuts



Shellfish

# Checking for ingredients to which my friend is allergic

I'll first input the list of items that my friend is allergic to. I'll then identify if my friend is allergic to certain ingredients by using the "**if, else**" function.

If the ingredient I entered appears to be within the list of food which my friend is allergic to, the output will return "**My friend is allergic to this :(**". Otherwise, the output will return "**My friend can eat this yay!**"

```
ingredients = input('Enter an ingredient? ')  
  
is_allergic = ['peanuts', 'milk', 'butter', 'cheese', 'yogurt',  
               'wheat', 'shellfish', 'fish', 'treenuts', 'nuts']  
  
if ingredients in is_allergic:  
    print('My friend is allergic to this :(')  
else:  
    print('My friend can eat this yay!')
```

When an ingredient to which my friend is allergic is entered, the output will be shown as follows:

```
Enter an ingredient? peanuts
```

```
My friend is allergic to this :(
```

```
Enter an ingredient? cheese
```

```
My friend is allergic to this :(
```

The output when entering ingredients to which my friend is not allergic:

```
Enter an ingredient? bananas, cranberries, eggs
```

```
My friend can eat this yay!
```

Since my friend is not allergic to **bananas, cranberries** and **eggs**, let's try to run all these ingredients using the Edamam API search function, which will be shown in the following slides to find a delicious recipe.

# Searching for recipes

I'll first import the **requests** library to interact with the **Edamam API** for recipe searches. The **recipe\_search** function will take the entered ingredient as input and return a list of matching recipes. The API credentials (**app\_id** and **app\_key**) are obtained from EDAMAM's website, whereby the function will construct the API request URL to extract recipe data.

```
import requests

1 usage

def recipe_search(ingredient):
    # Register to get an APP ID and key https://developer.edamam.com/
    app_id = '6c45474b'
    app_key = 'b3f673127fa8ff3bd4e66c07cfed02d3'
    result = requests.get(
        'https://api.edamam.com/search?q={}&app_id={}&app_key={}'.format(ingredient, app_id,
                                                                           app_key)
    )
    data = result.json()

    return data['hits']
```

I'll then create a **run** function asking users to input their desired ingredients available in their kitchen.

It uses a **while** loop to continuously prompt users to enter as many ingredients as they wish. Once the user has no more ingredients to enter and clicks "**done**," the loop ends.

```
1 usage
def run():
    ingredients = []

    while True:
        ingredient = input('What do you have in your kitchen? (enter "done" to finish): ')

        if ingredient.lower() == 'done':
            break

        ingredients.append(ingredient)

    for ingredient in ingredients:
        results = recipe_search(ingredient)

        for result in results:
            recipe = result['recipe']

            print(recipe['label'])
            print(recipe['uri'])
            print()

run()
```

After hitting “**done**”, the code will generate a list of recipes with the URLs attached below based on the ingredients entered above. I have chosen the “**Banana Cranberry Bread**” recipe to bake for my friend.

Kindly refer to the next few slides for the detailed recipe and instructions after I click on the URL.

What do you have in your kitchen? (enter "done" to finish): *bananas, cranberries*

What do you have in your kitchen? (enter "done" to finish): *eggs*

What do you have in your kitchen? (enter "done" to finish): *done*

Banana-Cranberry Bran Muffins

[http://www.edamam.com/ontologies/edamam.owl#recipe\\_0b02e9f8a572b5ffa2a2ede925bd8a9d](http://www.edamam.com/ontologies/edamam.owl#recipe_0b02e9f8a572b5ffa2a2ede925bd8a9d)

Banana Cranberry Bread

[http://www.edamam.com/ontologies/edamam.owl#recipe\\_d0aa4d35fa74c0f79a121fbb874f3e9b](http://www.edamam.com/ontologies/edamam.owl#recipe_d0aa4d35fa74c0f79a121fbb874f3e9b)

Healthy Banana Cranberry Oat Bars recipes

[http://www.edamam.com/ontologies/edamam.owl#recipe\\_c9cf0ae35ce813b9ca27ae3b9aee4d4d](http://www.edamam.com/ontologies/edamam.owl#recipe_c9cf0ae35ce813b9ca27ae3b9aee4d4d)

Banana-Cranberry Blossoms

[http://www.edamam.com/ontologies/edamam.owl#recipe\\_46462eed400c0aa1cd1792bfb06b0f15](http://www.edamam.com/ontologies/edamam.owl#recipe_46462eed400c0aa1cd1792bfb06b0f15)

From the Blender: Mellow Cranberry Smoothie Recipe

[http://www.edamam.com/ontologies/edamam.owl#recipe\\_dba0113ec325610faf1dee9e34b3168a](http://www.edamam.com/ontologies/edamam.owl#recipe_dba0113ec325610faf1dee9e34b3168a)

By clicking on the URL, it will take me to Edamam's webpage for the Banana Cranberry Bread recipe as shown in the screenshot below. The webpage also provides **nutrition facts** and **allergy information** for the respective recipe as circled in red.

The screenshot shows the Edamam website interface for a search query "banana+bread". The results page features a large image of banana cranberry bread on a cooling rack. Below the image, the title "Banana Cranberry Bread" is displayed, along with a link to "See full recipe on: [recipes.sparkpeople.com](#)". To the right, there is a "Try also" section with another bread image and a link to "taste.com.au". On the left, a sidebar lists the "9 Ingredients" required for the recipe, including Cranberries, Molasses, Oat Flour, and Salt. A red box highlights the "Nutrition" section, which provides the following details:

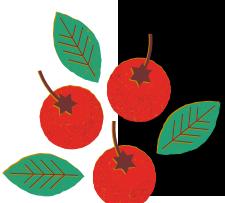
93	5%	16
CALORIES / SERVING	DAILY VALUE	SERVINGS
Balanced, Low-Sodium, Vegetarian, Dairy-Free, Gluten-Free, Peanut-Free, Tree-Nut-Free, Soy-Free, Fish-Free, Shellfish-Free		

# Banana Cranberry Bread

Recipe from : [Edamam](#)

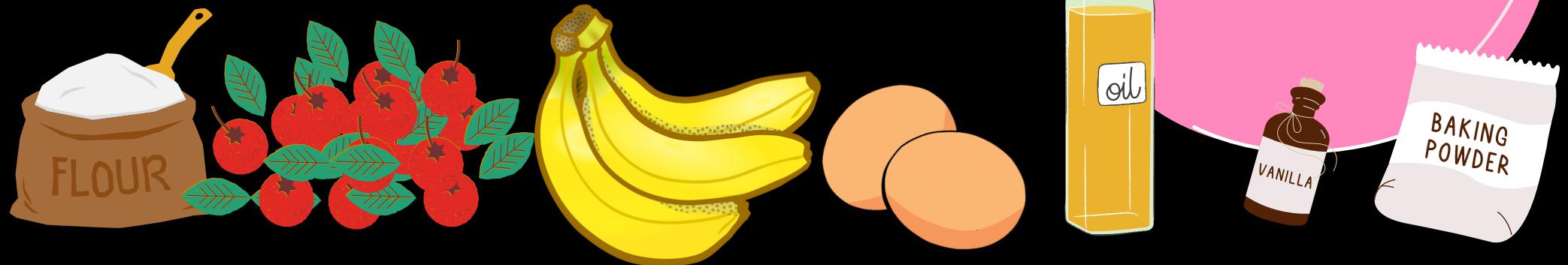
## Ingredients:

- Cranberries, 1 cup, whole
- Molasses, 2 tbsp
- Oat Flour - 1.5 cup
- Salt, .25 tsp
- Coconut Oil, 2 tbsp
- 1 Tablespoon Baking Powder
- 2 Bananas
- 3 Medium Eggs
- Vanilla Extract, 1tsp
- Olive Oil, 1 1tsp

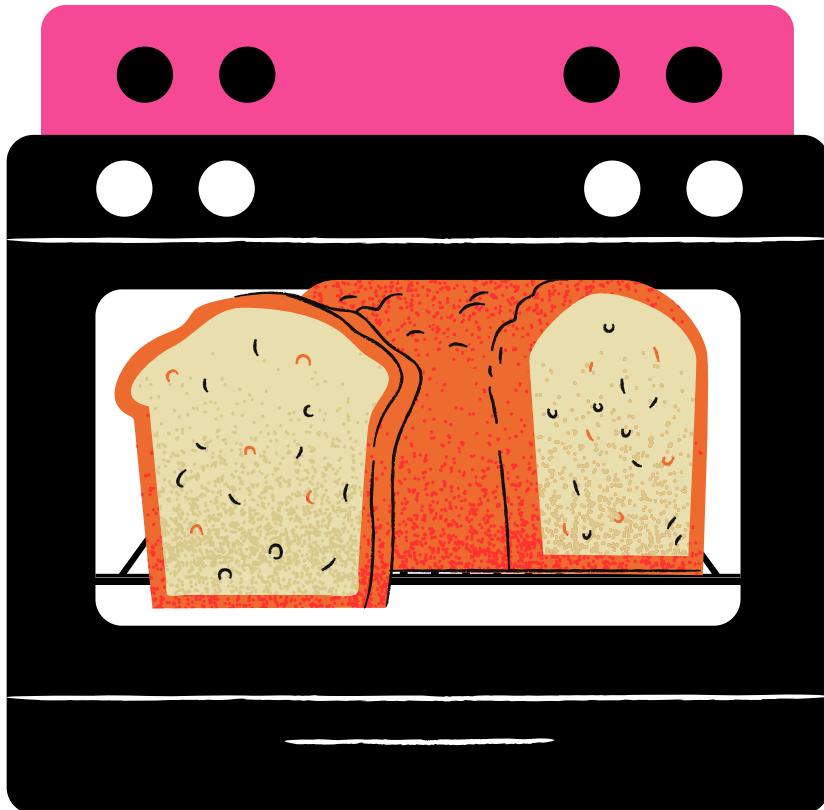


# Instructions:

1. In a small saucepan heat the olive oil, then add cranberries. Sauté over medium heat until the cranberries burst, about 3 minutes.
2. Preheat oven to 350°F. Lightly spray a loaf pan with baking spray.
3. In a medium bowl, combine flour, baking soda and salt with a wire whisk. Set aside.



# Instructions:

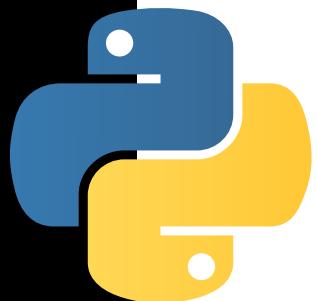


4. In a large bowl cream butter and brown sugar with an electric mixer. Add egg whites, bananas, and vanilla, and beat at medium speed until thick. Scrape down sides of the bowl.
5. Add flour mixture and blend at low speed until combined, do not over mix. Fold in cranberries and pour batter into the prepared loaf pan; sprinkle with turbinado sugar on top and bake in the center rack for about 60 minutes, or until a toothpick inserted in the center comes out clean.

6. Transfer the pan to a wire rack and let the pan cool at least 25 minutes, bread should be room temperature before slicing.



The banana bread was a success  
and my friend loved it <3



# Thank You!

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Hai Ling Tan

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