

Pizza Menu

Introduction

Please ensure you have the starter project running in Xcode/Android Studio on your machine.

Pizza Menu

This exercise involves manipulating data structures representing components of a pizza. These might be used in an app to allow users to customise and order a pizza from a menu.

In this system, pizzas are comprised of a **base**, and a collection of **toppings**.

Pizzas

Pizza objects have the following properties:

- A name
- A **Base**
- A collection of **Toppings**

Bases

Base objects have the following properties:

- A name
- Whether this base is vegan
- A list of allergens this base contains

Toppings

Topping objects have the following properties:

- A name
- Whether this topping is vegan
- A list of allergens this topping contains

Example Topping and Base objects can be found in the test class.

Task

In the codebase you will find the `Topping` and `Base` objects already exist. The `Pizza` data

structure exists but is incomplete.

1. Complete the `Pizza` data structure as described above
2. Create a function which works out whether a pizza is vegan (according to its components)
3. Create a function which works out whether a pizza is gluten-free
4. Create a function which provides a list of all allergens, in alphabetical order
5. All pizza toppings have a "type", which can be either Sauce (e.g. "tomato sauce"), Cheese (e.g. "mozzarella") or Topping (for any other type of topping, e.g. "mushrooms" or "ham"). Enhance the `Topping` data structure to include the concept of "topping type".
6. Create a function which returns all of a pizza's toppings, ordered by sauce, then cheese, then all other toppings (ordered alphabetically)

Notes

- ***Please concentrate on implementing and testing the business logic described above, rather than any app UI***
- Please take the time to fully test any code you write, before moving on from a task. Think carefully about test scenarios.