

Business Case: Building a Pizza Ordering System

Overview

You are tasked with developing a pizza ordering system for a local pizzeria that allows customers to customize their pizzas. The system needs to handle a variety of pizza options, including different sizes, crust types, sauces, cheeses, and toppings. The pizzeria has a complex set of customizations, so we will use the **Builder** design pattern to create different types of pizzas.

Requirements

- **Pizza Customization:** Customers can choose the size (Small, Medium, Large), type of crust (Thin, Regular, Thick), sauce (Tomato, Pesto), cheese (Mozzarella, Cheddar, Vegan), and multiple toppings (Pepperoni, Mushrooms, Onions, etc.).
- **Order System:** The system should support creating customized pizza orders, adding multiple pizzas to an order, and calculating the total price.
- **Builder Pattern:** Use the Builder pattern to handle the complex creation process of pizzas with multiple customizations.
- **Unit Testing:** Implement unit tests to ensure the correctness of the pizza creation process.
- **Code Coverage:** Ensure that the unit tests achieve at least 85% code coverage.

Conclusion

This business case presents a well-structured implementation of a pizza ordering system using the Builder pattern. With detailed unit tests and a focus on high code coverage, the system is robust and maintainable.