# IUTBeans

Zadid Bin Azad

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*Design Patterns Lab-04*

## Problem Statement

You are tasked with developing a system to manage the different beverages and condiments sold at a coffee shop. The shop serves various types of coffee, such as *Espresso*, *Latte*, and *Cappuccino*. Also allows customers to customize their drinks by adding condiments like *milk*, *white sugar*, and *whipped cream*. Each beverage has a base price, and each condiment adds a cost.

The coffee shop owner has some primary requirements:

- Allow the shop to easily introduce new beverages and condiments without rewriting or duplicating existing code.

- Be able to dynamically add one or more condiments to a beverage.

- Provide an accurate description of the drink with all its condiments.

- Calculate the total cost of the beverage with the condiments.

### Additional Considerations

* The coffee shop may want to expand its menu by introducing new beverage types or condiments in the future, and the system should accommodate these changes easily.

* Customers can add the same condiment multiple times (e.g., double milk).

* Condiments should be applied in a flexible and customizable manner to different beverage types.

## Task

Design and implement a solution that simulates the above requirements. Your system should be able to handle various types of beverages and condiments without becoming difficult to maintain or extend. Provide clear reasoning for the design choices you make.