

OOP Small Assignment 1

Description: An alchemist manages a collection of magical potions, each with its own unique properties. Every potion has a name, an effect type (such as healing, poison, or stamina boost), a potency level that determines its strength, a rarity classification (common, rare, or legendary), and an expiration status which indicates whether the potion is still usable or expired (potions are given usable or expired, you don't need to model them expiring). The alchemist needs to find and organize potions efficiently. Some of their tasks include searching for the strongest potion by identifying the one with the highest potency level. Alchemists also regularly check how many healing potions they have in stock, as these are commonly used in their craft. Additionally, the alchemist might want to find out which rare or legendary potions are available in their collection.

Beyond inventory management, the alchemist can brew new potions by combining multiple potions of a similar type to create a stronger version, where

- effect type is the effect type that occurs most often in ingredient potions
- potency level is the average of the potency of the ingredient potions added to the maximum potency level among them
 - rarity classification is legendary
- if one of the ingredient potions is expired then the new potion is also going to be expired

Occasionally, the alchemist must ensure that expired potions are removed from the inventory. Alchemists also keep track of how many potions they have used and created over time.

