

Coffee Machine

1. Functionalities/Requirements:

1. It will be serving some **beverages** (Coffee, Tea etc...).
2. Each beverage will be made using some **ingredients** (**Considering all the ingredients are liquid so measured in ml**).
3. Assume time to prepare a beverage is the same for all cases.
4. The quantity of ingredients used for each beverage can vary. Also, the same ingredient (ex: water) can be used for multiple beverages.
5. There would be N (N is an integer) **outlet** from which beverages can be served.
6. Maximum **N** beverages can be served in **parallel**.
7. Any beverage can be served only if all the ingredients are available in terms of quantity.
8. There would be an **indicator** that would show which all ingredients are running low. We need some methods to refill them.
9. Please provide functional integration test cases for maximum coverage.

2. Requirements

- A. User will come in-front of one outlet and select one of the beverage.
 - a. Machine will check the **ingredients**
 - b. Take the ingredient and serve the beverage
 - c. Check limit of the **ingredients** and update the indicator/Auto-fill

3. Entity/Noun – Machine, Beverage, Ingredient, Outlet, indicator

4. Class Diagram(Not able to develop due to less time)

Assumptions (**Due to less time**):-

1. When there will be less amount of quantity present it will **Auto-fill immediately** (**Considered that infinite backup is available, due to time constraints**).
2. For simplicity, saving the only final stage in the file, **there will be 2 options for Machine refresh and restart**.
3. Not considered **power problem (considered back-up)**.
4. Considered **minLimit = 100 and maxlimit 1000** for any Ingredients

Extra Libraries:

1. json-simple-1.1.1- (for JsonParser) – I have read node by node value (We can use Jackson also)

Entry Point of the application:

Com.company.coffeMachine.client.java

Output 1 :

```
it is restart or refresh?
restart
Welcome ...
Please give the input as Beverage
hot_tea
Beverage Not Available
Please give the input as Beverage
hot_tea
Please give the input as Beverage
hot_tea is prepared get it from outlet no : 3

shutdown
```

Output 2 :

```
it is restart or refresh?
refresh
Welcome ...
Please give the input as Beverage
hot_tea
Please give the input as Beverage
black_tea
Please give the input as Beverage
hot_tea is prepared get it from outlet no : 3
black_tea is prepared get it from outlet no : 1
hot_tea
Please give the input as Beverage
Auto filling is going on hot_water
hot_tea
Please give the input as Beverage
Auto filling is going on tea_leaves_syrup
hot_tea
Please give the input as Beverage
Auto filling is going on hot_water
hot_tea
Please give the input as Beverage
hot_tea is prepared get it from outlet no : 2
hot_tea is prepared get it from outlet no : 3
hot_tea is prepared get it from outlet no : 1
hot_tea is prepared get it from outlet no : 2

shutdown
```