

Use Case 1: Brew Coffee**Scope:** Coffee Maker**Level:** Coffee Drinker Goal**Primary Actor:** Coffee Drinker**Scenario:** None**Related Use Cases:** *Use Case 2: The Coffee Drinker shall get Coffee***Stakeholders & Interests:**

- Coffee Drinker: wants coffee

Preconditions: The System is ready to make Coffee. Power is supplied to the Coffee Maker. The Coffee Drinker already added fresh coffee.**Postconditions:** Coffee is brewed, in the Carafe and ready for serving.**Success Guarantees:** The System brews the coffee.**Main Success Scenario:**

Coffee Drinker	System
1. Add Water	
2. Start the Brewing Process	
	3. Brews the coffee
	4. Alerts when brewing complete

Extensions (Alternative Flows):

- 1a. If the Coffee Drinker does not add water, then the System uses whatever water is already in the Reservoir.
- 1b. If the Coffee Drinker adds too much water to the Reservoir, then the System alerts the Coffee Drinker that too much water added.
- 1c. If the Coffee Drinker adds too much water to the Reservoir, then the System does not add that extra water to the Reservoir, only adding the amount the Reservoir can hold and returning that maximum amount the Reservoir can hold to the Coffee Drinker.
- 3a. If the Coffee Drinker pulls the carafe before the Coffee Maker is finished brewing the coffee, then Coffee Maker stops brewing, continuing once the carafe is returned (under the spigot).
- 3b. If the Carafe is full, and the Coffee Maker continues to brew coffee, causing the Carafe to overflow, then the System alerts the Coffee Maker the Carafe is overflowing.
- 3c. If the Carafe is full, and the Coffee Maker continues to brew coffee, causing the Carafe to overflow, no more coffee is added to the Carafe and the System indicates that to the Coffee Maker.
- 3d. If the Carafe is full, and the Coffee Maker continues to brew coffee, the Reservoir continues to decrease until the Reservoir is empty.

Special Requirements:

- As stated in the Assumptions, the Coffee Drinker adding coffee is not modeled in this Use Case; since this Use Case addressed brewing coffee, the brew behavior will continue regardless of the addition of unbrewed coffee grounds.

Technology & Data Variations List:

- 2a. Predict the adding ability of choice to the Coffee Drinker to automate coffee brewing in future upgrades and improvements.

Frequency of Occurrence: Dependent upon the brewing time combined with the demand of Coffee Drinkers.

Open Issues:

- The size of the carafe is variable
- What about a Coffee Maker with multiple carafes? Would that alter the 3a Alternative Flows?