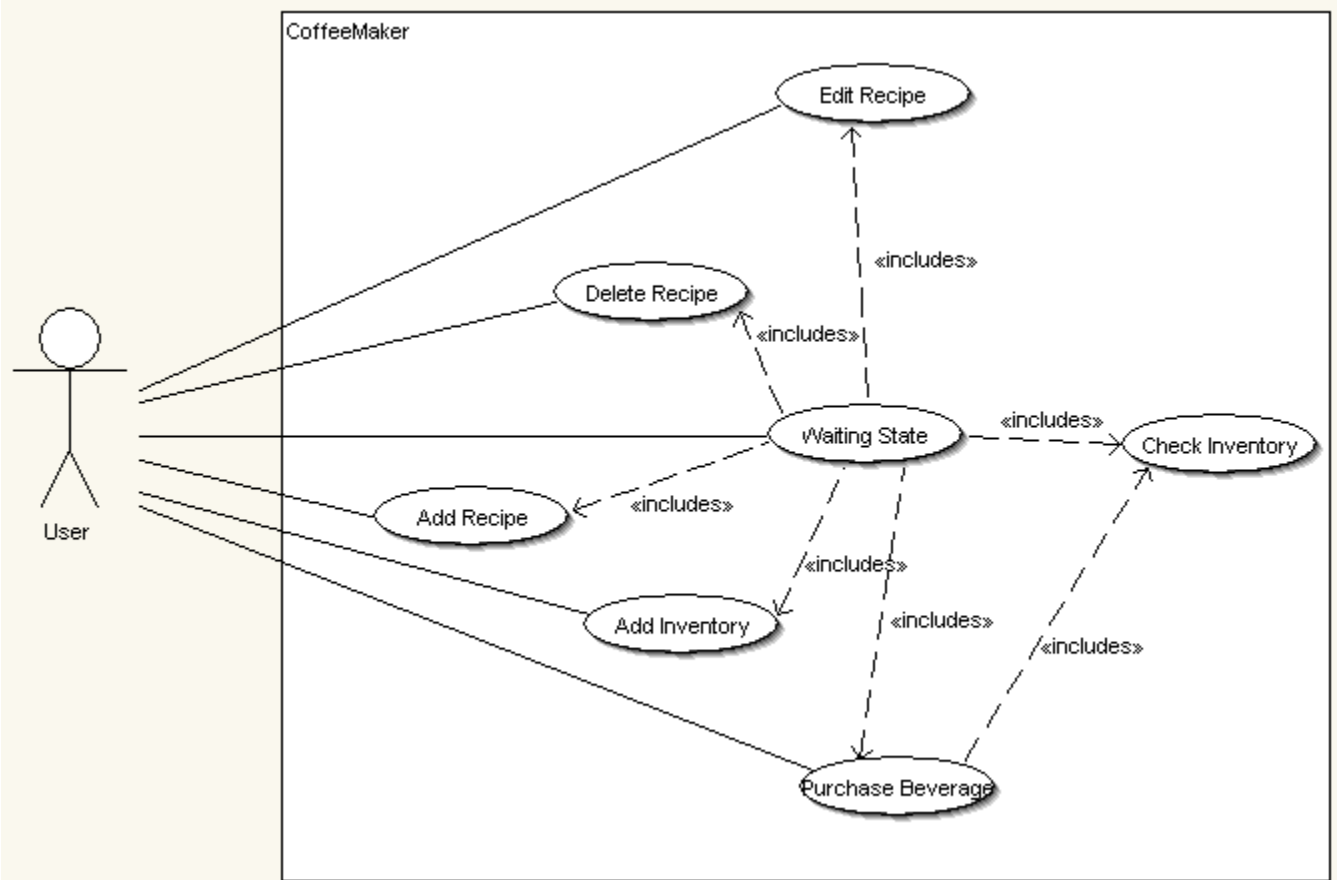


Requirements - Use Cases



UC1: Flow of Events for the *Waiting State* Use Case

1.1 Preconditions: None

1.2 Main Flow: The Coffee Maker waits for user input. There are six options to choose from [E1]: 1) add recipe [UC2], 2) delete a recipe [UC3], 3) edit a recipe [UC4], 4) add inventory [UC5], 5) check inventory [UC6], and 6) purchase beverage [UC7].

UC2: Flow of Events for the *Add Recipe* Use Case

2.1 Preconditions: None

2.2 Main Flow: A user selects the menu option to add a recipe. The user enters the name, price [E2][E3][E4], units coffee [E2][E3][E4], units sugar [E2][E3][E4], units milk [E2][E3][E4], and units chocolate [E2][E3][E4] that make up the recipe. [E1][E5]

2.3 Subflows: None

2.4 Alternative Flows:

[E1] If there are already three recipes in the system, then a new recipe may not be added. The user is returned to the main menu.

[E2] The price must be a integer. If the price is not an integer then, a status message is printed, and the user is returned to the main menu.

[E3] The units of coffee, sugar, milk, and chocolate must be integers. If the unit value on any of the ingredients is not an integer, a status message is printed, and the user is returned to the main menu.

[E4] The price and units of ingredients must be positive. If any number is negative, a status message is printed, and the user is returned to the main menu.

[E5] If the name of the new recipe already exists in a recipe in the system, the new recipe will not be added.

UC3: Flow of Events for the *Delete Recipe* Use Case

3.1 Preconditions: None

3.2 Main Flow: The user will be shown a list of all recipes in the system, and asked to choose the recipe, by number, that they wish to delete. [S1][E1][E2][E3]

3.3 Subflows:

[S1] A message is printed describing the successful deletion of the selected recipe.

3.4 Alternative Flows:

[E1] If the user selects a number that is out of bounds of the number of recipes, the user is returned to the main menu.

[E2] If the user enters a alphabetic character, the user is returned to the main menu.

[E3] If the user selects an empty recipe to delete, the user is returned to the main menu.

UC4: Flow of Events for the *Edit Recipe* Use Case

4.1 Preconditions: None

4.2 Main Flow: The user will be shown a list of all recipes in the system, and asked to choose the recipe, by number, that they wish to edit. [E1][E2] The user enters the price [E3][E4][E5], units coffee [E3][E4][E5], units sugar [E3][E4][E5], units milk [E3][E4][E5], and units chocolate [E3][E4][E5] that make up the modified selected recipe. [E6]

4.3 Subflows: None

4.4 Alternative Flows:

[E1] If the user selects a number that is out of bounds of the number of recipes, the user is returned to the main menu.

[E2] If the user enters a alphabetic character, the user is returned to the main menu.

[E3] The price must be a integer. If the price is not a number then, a status message is printed, and the user is returned to the main menu.

[E4] The units of coffee, sugar, milk, and chocolate must be integers. If the unit value on any of the ingredients is not an integer, a status message is printed, and the user is returned to the main menu.

[E5] The price and units of ingredients must be positive. If any number is negative, a status message is printed, and the user is returned to the main menu.

[E6] If the user selects an empty recipe to edit, the user is returned to the main menu.

UC5: Flow of Events for the *Add Inventory* Use Case

5.1 Preconditions: None

5.2 Main Flow: The user will be prompted for the units of each of the four ingredients they wish to add to the inventory. [E1][E2]

5.3 Subflows: None

5.4 Alternative Flows:

[E1] If the user selects a number that is negative or a non-Integer, the user will be reprompted for the amount.

[E2] If the user enters a alphabetic character, the user will be reprompted for the amount.

UC6: Flow of Events for the *Check Inventory* Use Case

6.1 Preconditions: None

6.2 Main Flow: The user will be shown a listing of the inventory of ingredients in the CoffeeMaker

6.3 Subflows: None

6.4 Alternative Flows: None

UC7: Flow of Events for the *Purchase Beverage* Use Case

7.1 Preconditions: None

7.2 Main Flow: The user will select the beverage they wish to purchase. The user will deposit money to pay for the beverage. [S1][S2]

7.3 Subflows:

[S1] The CoffeeMaker will check if there are enough ingredients in the inventory to make the selected drink. [E1]

[S2] The CoffeeMaker will make sure enough money was deposited [E2], the beverage will be dispensed, and any extra change will be returned.

7.4 Alternative Flows:

[E1] If there is not enough inventory to make the beverage, a message will be displayed, the user's money will be returned, and the user will be returned to the main menu.

[E2] If the user does not enter enough money, their money will be returned, and the user will be returned to the main menu.