Below is a Class diagram:

The Class diagram is a blueprint for a user and coffee machine. This shows the name and cups per day for the user and shows the methods that they may use with the coffee machine. The coffee machine shows the make, model and contents. There is also methods for the coffee machine to use to function correctly.

Design decisions:

Attributes:

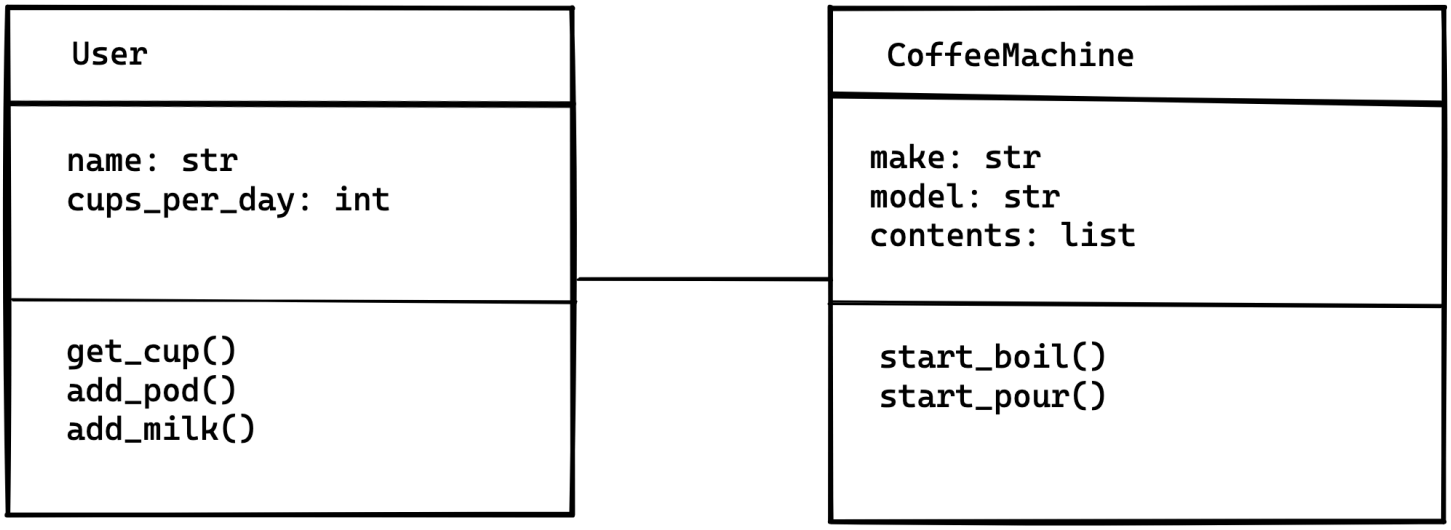
For the name I chose to use a string as this is the way we should be displaying a users name.

For the contents I decided to use a list as I thought this would be a good way to group all the contents of the CoffeeMachine.

Methods:

I chose get_cup, add_pod, add_milk as methods for the user as that's something the user would be controlling.

I chose start_boil and start_pour for the coffee machine as that is something the coffee machine would control.



Below is an Object diagram:

The Object diagram is used to display the specific instances of the classes for a user called John and a Nespresso coffee machine. This shows the name John and cups per day for John. The coffee machine shows the make Nespresso, model Esannza Mini and contents Milk and water.

Design decisions:

Attributes:

John is the name of the User and decided to see how many cup_per_day John would drink.

Make and model is a Nespresso Esannza Mini and has contents of Milk and Water.