Health Check

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SWEN - SW Des Principles and Patterns

Rationale :

We wished to create the project as simple as possible and in order to create that aesthetic we have decided to do the whole project in an MVC pattern in order to have a clear separation of concerns. Using the model, view, and control pattern we have made it so that the model holds the responsibility of archiving the data and specifying in which way the data is handled and used. The view part of the MVC pattern in our project is responsible for all the GUI talks related. The controller is tasked with connecting the model and view, this helps decrease the coupling and increase the cohesion in order to make the app easier to maintain. This also ensures that the application is more suitable for multiple people to work on the application. Besides the MVC pattern, we also use the composite pattern which is implemented around the food items and recipes where each recipe is a composite of other recipes and foods. The composite pattern is used in order to make calculations on the entire collection easier to be done.

Explanation :

Let's start with the MVC pattern for the classes:

The HealthCheck class which extends the healthCheckView class - Serves to start the app.

HealthCheckController class extends the healthCheckView - Controller class which keeps tabs on both the model and the view.

HealthCheckModel class extends the healthCheckView - Model class in charge of holding data and manipulating said data.

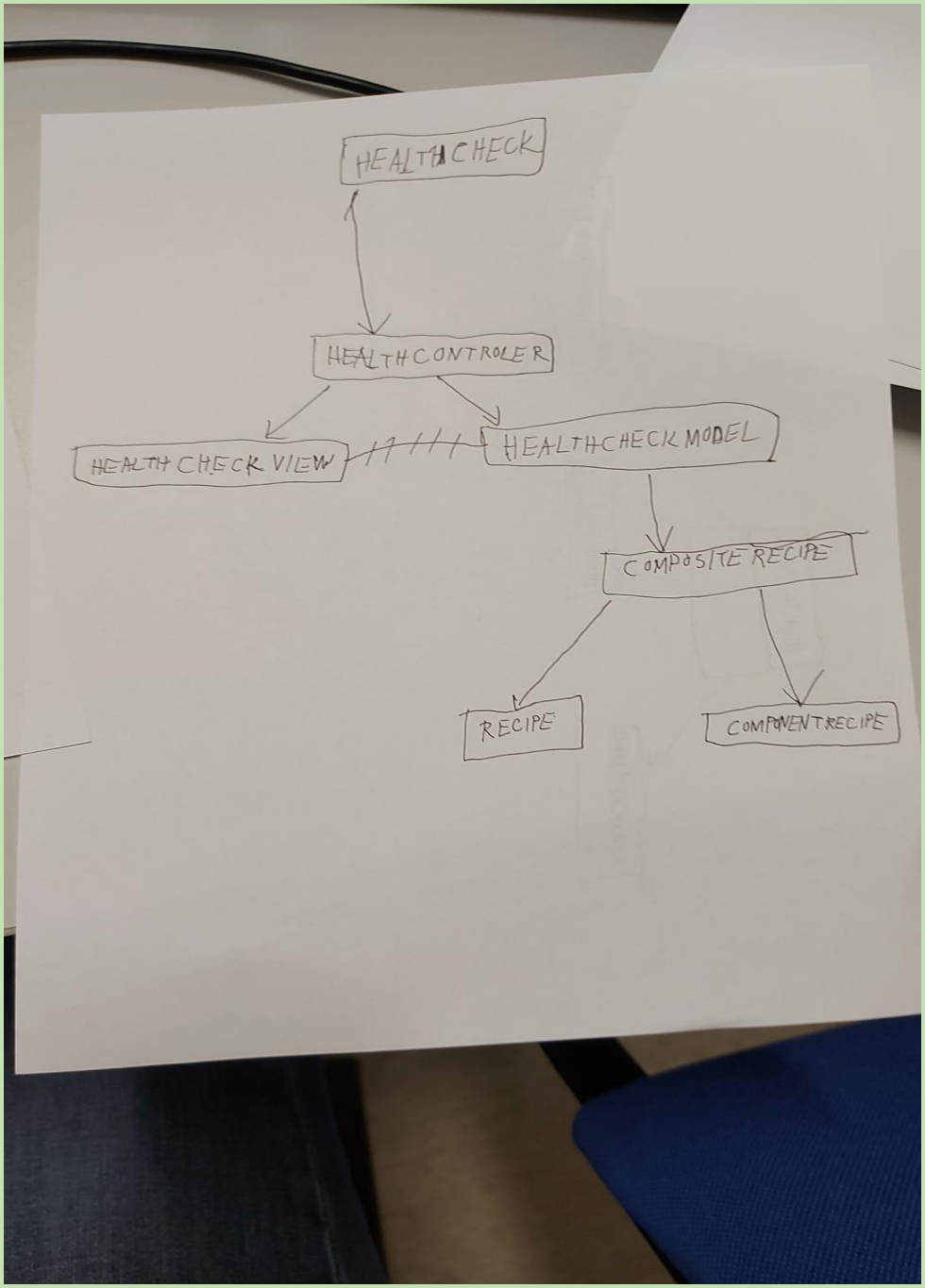
HealthCheckView class extends application and implements event handler - View class in charge of everything GUI related.

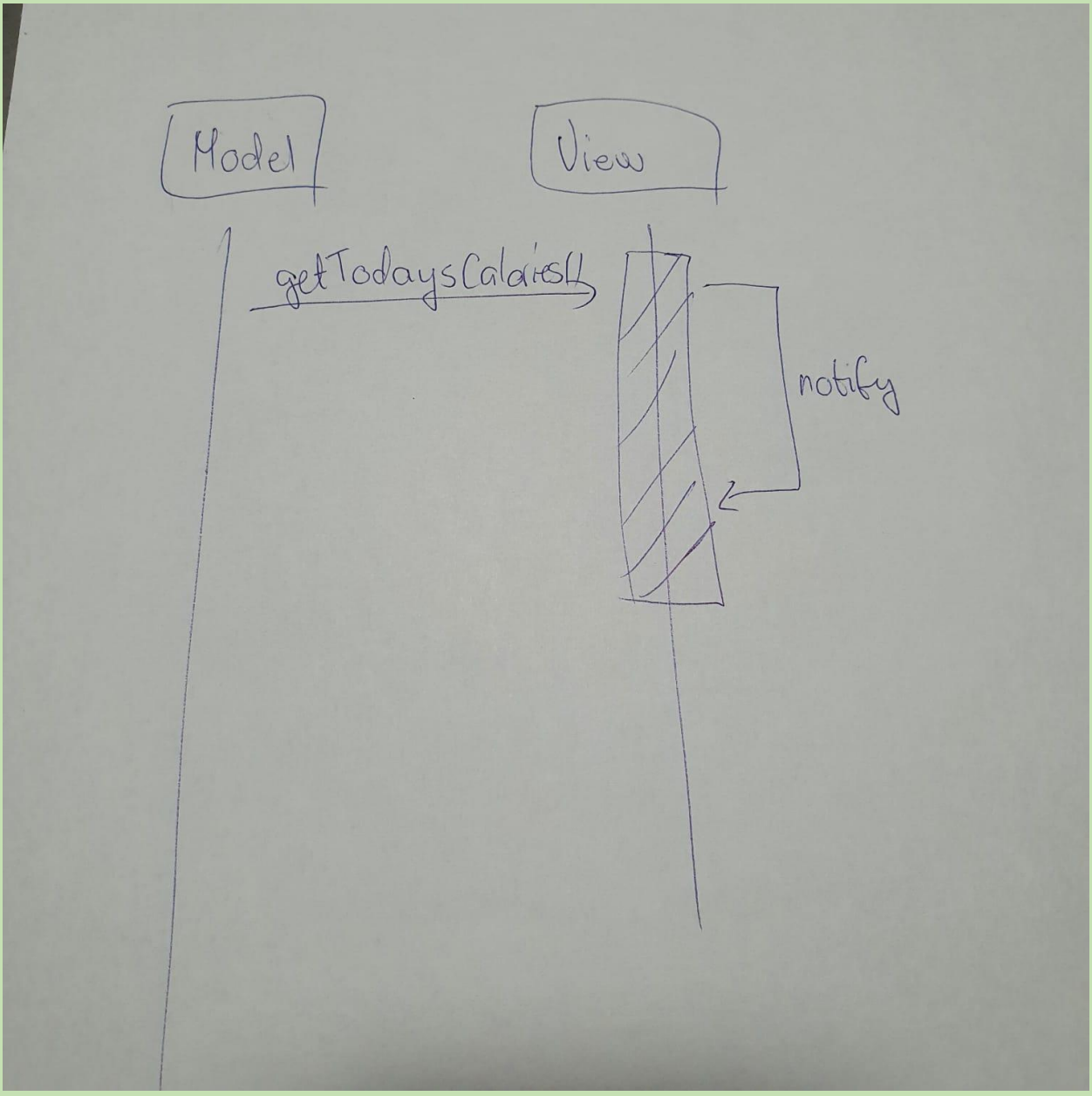
Recipe class extends implements ComponentRecipe - The Recipe class is a leaf of the composite class, it takes data from the file and displays it.

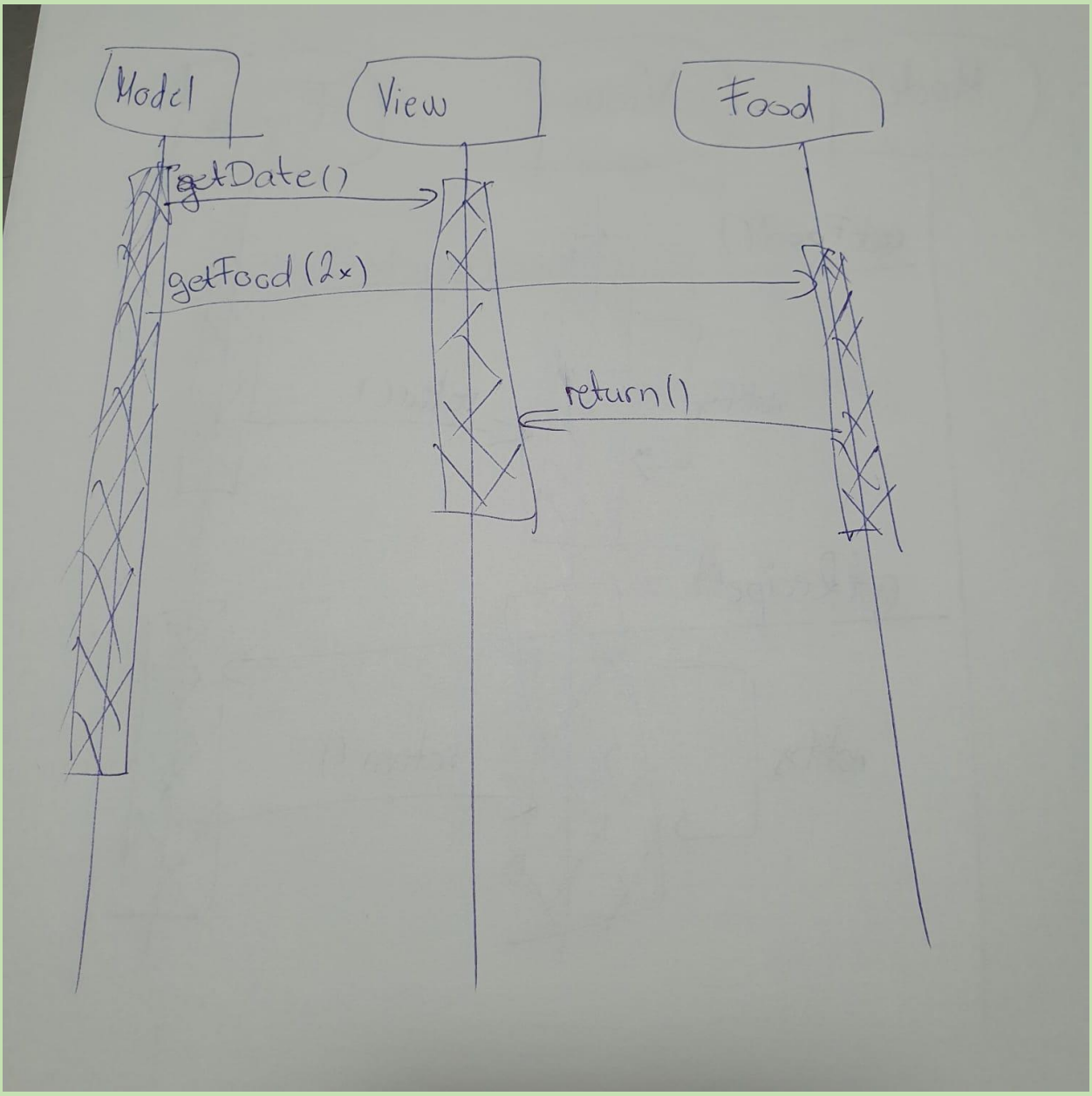
ComponentRecive class - Abstract component class which defines the basic behavior.

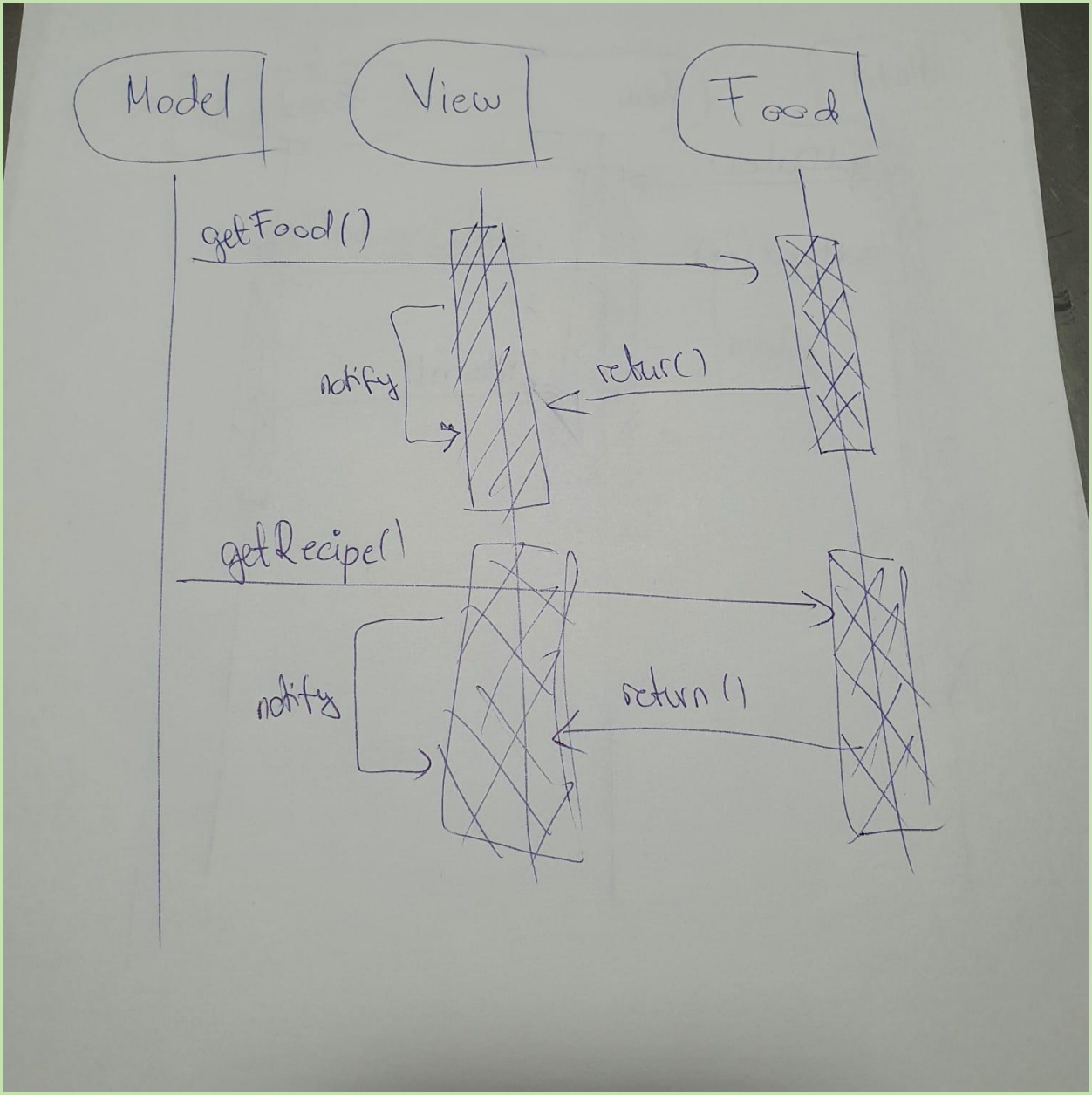
CompositeRecipe class - Composite class which holds food recipes recipes.

Diagrams:


HEALTHCHECK
HEALTHCONTROLER
HEALTHCHECK VIEW
HEALTHCHECK MODEL
COMPOSITE RECIPE
RECIPE
COMPONENTRECIPE


Model
View
getTodaysCalories()
notify


Model
View
Food
getDate()
getFood(2x)
return()


Model
View
Food
getFood()
notify
return()
getRecipe()
notify
return()