Exercise 2

1. What is your understanding of the term “Design Patterns”?

Provide a description in your own words.

A design patern is a sort of model that help you fix well know problem in your code

2. Explain the MVC Pattern

- What does MVC stand for?

MVC stand for Model View Controller

- Explain the pattern in detail.

The model is responsible of the logic of the application. The model manage the state of the application. It can handle the serveur requests or manage a database. The view is responsible for the UI and it has to detect the interaction of a user. It can be a button that a user interracts with. The view can be uptaded with model's changes. The controller makes the link between the view and the model. It analyses the data from the model and interpret input from the view.

- What are some use cases for this framework?

This framework can be used to migrate a website to a mobile application. In this case, only the view need to be changed. It also allows many programmers to work on the same project because the code is separated

3. List three other design patterns

- Provide names and details for three additional design patterns.

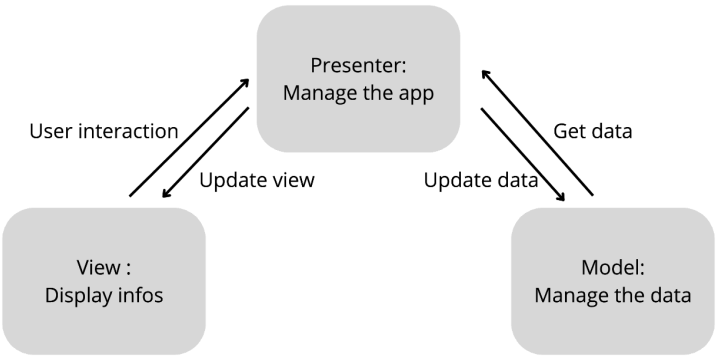
MVP: Really similar to the MVC, but here the controller is replaced by the presenter and the view only displays information. In the MVC, it's the presenter that is responsible for the presentation.
MVVM: In this pattern the controller/presenter is replaced by the view-model. The view-model takes the data from the controller and formats it to send to the view.
Prototype: Used to create new objects by copying old ones instead of reinstantiating objects.

- Explain how you have used those patterns in the past and how they have solved your problem

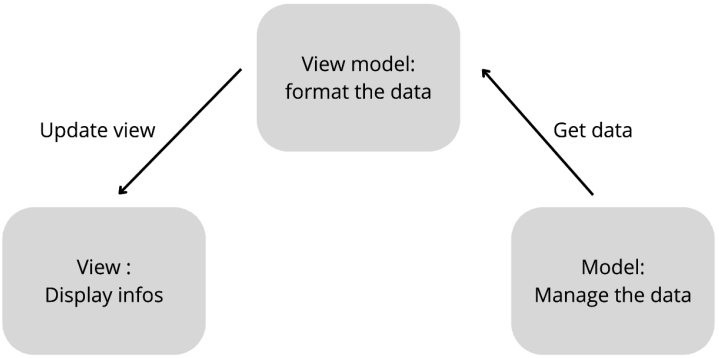
We have used the prototype design pattern (without explicitly calling it that) in a Java course. We created a shape object, then particular shapes (such as rectangles or squares) as clones of the original shape.

- Use diagrams to explain the design patterns.

MVC



MVVM



Prototype