

What is MVC?

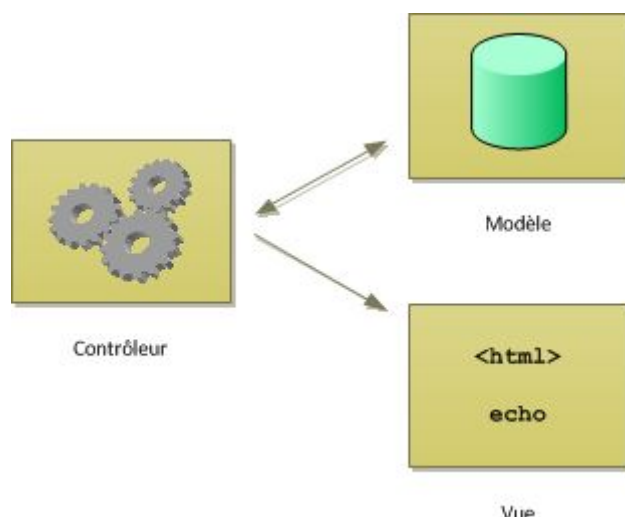
One of the most famous *design patterns* is called MVC, which stands for **Model - View - Controller**. This is the one we are going to see today.

The MVC pattern allows you to organize your code well. It will help you to know which files to create, but above all to define their role. The purpose of MVC is precisely to separate the logic of the code into three parts that are found in separate files.

- **Template** : this part manages the *data* of your site. Its role is to retrieve the "raw" information from the database, organize and assemble it so that it can then be processed by the controller. So there are, among other things, SQL queries.

BUSINESS LOGIC AND ACCESS TO DATA

- **View** : this part focuses on *display*. It does almost no calculation and just collects variables to know what to display. There are mainly HTML code but also some very simple PHP loops and conditions, for example to display a list of messages.
- **Controller** : this part manages the logic of the code which makes *decisions*. It is in a way the intermediary between the model and the view: the controller will ask the model for the data, analyze it, make decisions and return the text to be displayed to the view. The controller contains exclusively PHP. It is in particular him who determines whether the visitor has the right to see the page or not (management of access rights).



1. The controller receives the request from the user.
2. The controller will call the model to request the data. He doesn't care how he gets them.
3. The model translates the request from the controller (usually SQL query), retrieves the info and sends it back to the controller.
4. The controller will now be able to transmit this data to the view which will be responsible for being transmitted to the user.

Advantages

- **It is reusable** : if one day we coded a useful file, we can use it in another project, or in another place of the same project. You save time by not having to redo everything every time!
- **It is easy to work with several people** : each file being independent (and generally small), we can work in teams of 5, 10 or even 100 people on the same project. If everything was mixed in one big file, it would be impossible to modify it at the same time!
- **It's scalable** : when someone comes to ask you for a new feature, it's easy to add it. You are not afraid to break everything. You know it will work, and your code will not be more complicated.

Start adopting MVC

We will take a previous exercise, which displays a list of films.
Using this exercise we will make it MVC compliant.

See the result on git repository.