# Exercises: The Right Way - Architecture

Problems for exercises and homework for the [“Java MVC Frameworks - Spring” course @ SoftUni](https://softuni.bg/trainings/1538/java-mvc-frameworks-spring-march-2017).

# Eventures

**Eventures** **Inc**. is a fast-rising newly made Start-Up Company, which specializes in **Event Tickets Sales**. It is said to be the killer of systems like Eventim, Eventbride, etc.

You have been appointed as the developer of the **main web application**. This is a great responsibility, so do your best and do not dissapoint your employers. The application functionality is not that complex, and it will be **separated** into **several parts**, each part consisting of **several tasks**.

Your current task is to extend the **business logic** of the **application**, implementing, **validation**, **error handling**, and **pagination**, so get started.

## Validation

Implement **data validation** for the **data models** which are **affected** by **user input** (User, Event).

### User

The following data constraints should be present:

Username

* Should **NOT** be **NULL**.
* Should be **at least 3 symbols long**.
* May only contain:
  + **alphanumeric characters**
  + **dashes** and **underscores**
  + **dots**, **asterisks** and **tildes**

Password

* Should **NOT** be **NULL**.
* Should be **at least 5 symbols long**.
* May contain **any** character.

Email

* Should **NOT** be **NULL**.
* Should be a valid **email**. (implement a **basic** email validation)

Unique Citizen Number (UCN)

* Should **NOT** be **NULL**.
* Should consist of **exactly** **10 numbers**.

### Event

Name

* Should **NOT** be **NULL**.
* Should be **at least 10 symbols long**.
* May contain **any** character.

Place

* Should **NOT** be **NULL**.
* Should **NOT** be **empty**.
* May contain **any** character.

Start

* Should **NOT** be **NULL**.
* Should be a **valid date**.

End

* Should **NOT** be **NULL**.
* Should be a **valid date**.

Total Tickets

* Should **NOT** be **NULL**.
* Should be a **non-zero integer number**.

Price per Ticket

* Should **NOT** be **NULL**.
* Should be a **decimal number**.

## Error Handling

Implement basic **error handling** in the Eventures application.

Instead of handling **binding errors** or any other **request-connected errors** in the Controllers, throw **exceptions** and **handle** them with error handlers.

Implement **custom view pages** for the **errors**, so that you could provide the client with a **suitable response**.

## Pagination

Implement a basic **pagination** for the **tables** of the Events and the Orders. But don’t make it too basic … Make it have at least **previous**, **next** and **indexed pages** functionalities.