DSD Lab 10: RestController and RestTemplate (max: 11p)

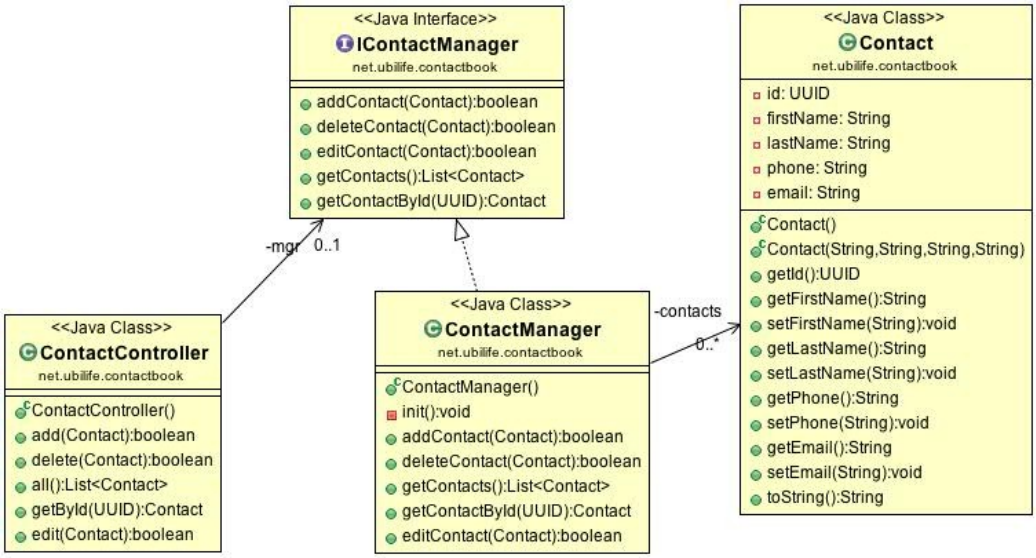
IN both TASKS, modify pom.xml:

- Under <properties>, change **<org-springframework-version>** to the latest version **4.3.4.RELEASE**
- Add **org.springframework:spring-web** dependency.
- Add these Jackson dependencies for JSON marshalling:
  - **com.fasterxml.jackson.core:jackson-core** (remove <type>bundle</type> property!)
  - **com.fasterxml.jackson.core:jackson-databind** (remove <type>bundle</type> property!)

TASK 1: RESTful contact book (7p)

Use the Spring MVC project template: File > New > Spring Legacy Project > Spring MVC Project

Write a contact book application with the following classes. It is quite similar to the bulletinboard app last week, but in this task you'll use @RestController and JSON. So no JSP views this time!



IMPORTANT: you must design what endpoint URLs and HTTP methods to use.

ContactController (@RestController):

- add new contact
- delete existing contact
- get one contact by id
- get all contacts
- edit existing contact (i.e. replace)

  ContactController uses ContactManager for business logic and data management.

ContactManager (@Service):

- manages an ArrayList of Contact objects. Business methods are defined in the **IContactManager** interface.

Contact - represents an address book contact.

TASK 2: Contact book client (4p)

Create a new **Simple Spring Maven** Project (NOT MVC!). In the project:

- Copy Contact.java from TASK 1 project to this new project.
- Write a client with **RestTemplate** that tests your RESTful contact book endpoints.

TIP: if a web service method returns a JSON array (e.g. ContactController's all() method), you should use an array as the *ResponseType*. For example, consider a kennel service that returns all Dogs:

```
@RequestMapping(value = "/all", ...)
public List<Dog> all() {
	// return an ArrayList of Dog objects
}
```

To call this endpoint with RestTemplate, you can write something like (*URL* is the base URL for the kennel service):

```
Dog[] dogs = restTemplate.getForObject("http://localhost:8080/kennelapp/all", Dog[].class);
```