Lab 10

Part 1

Write a ProductCommandService where you can add, delete and update products. Products have a productNumber, name and price.

Write a StockCommandService where you can add, delete and update the number of products we have in stock. A Stock class has the attributes productNumber, quantity.

Write a ProductQueryService where you can retrieve products. Products have a productNumber, name, price and numberInStock.

Give all services their own Mongo collection.

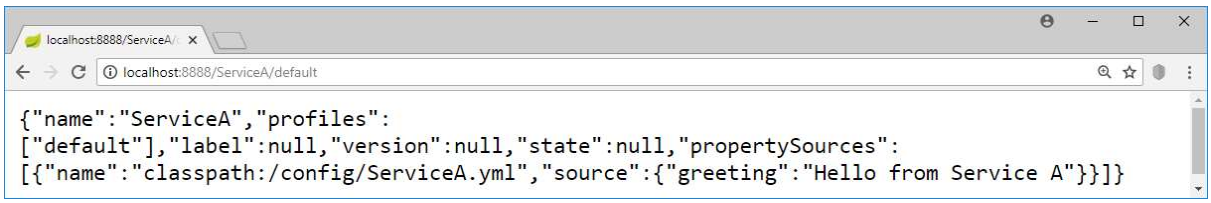
Make sure that if products or quantity in stock is changed, this will show up in the products we get back from the ProductQueryService service.

Part 2

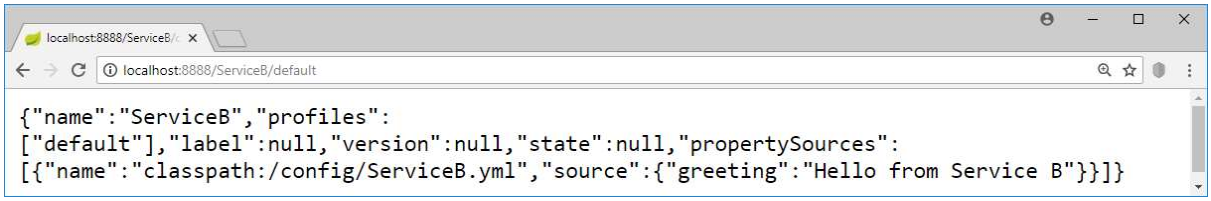
Given are the projects ConfigServer, ServiceAApplication and ServiceBApplication

First run the ConfigServer and check if it works:

We can check if the configserver works correctly with the url :
http://localhost:8888/ServiceA/default



And http://localhost:8888/ServiceB/default



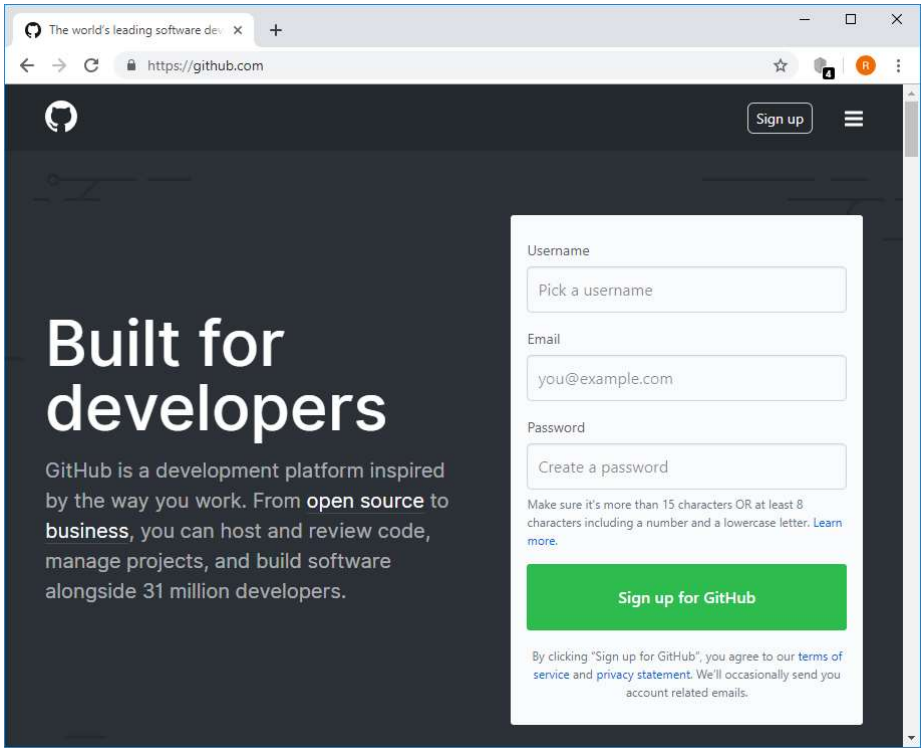
Then run ServiceAApplication and ServiceBApplication and test if the applications work correctly:

Modify the configuration in the ConfigServer and check if this modification is shown in ServiceAApplication and ServiceBApplication (You have to restart the applications)

Part 3

First we need to create a GitHub account

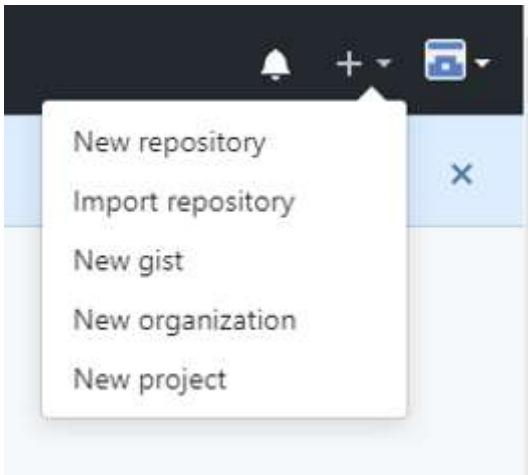
Go to https://github.com/ and Sign up for a free GitHub account.

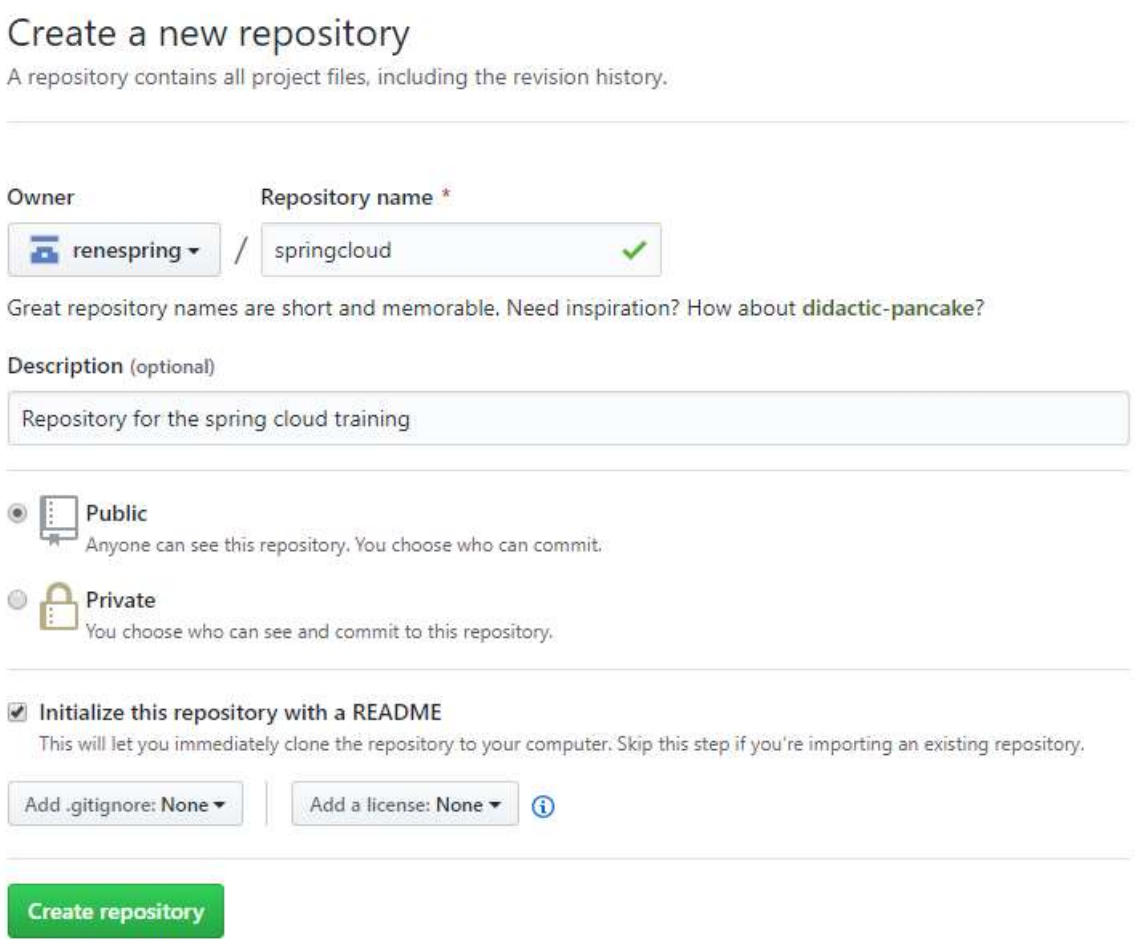


Make sure you remember your password.

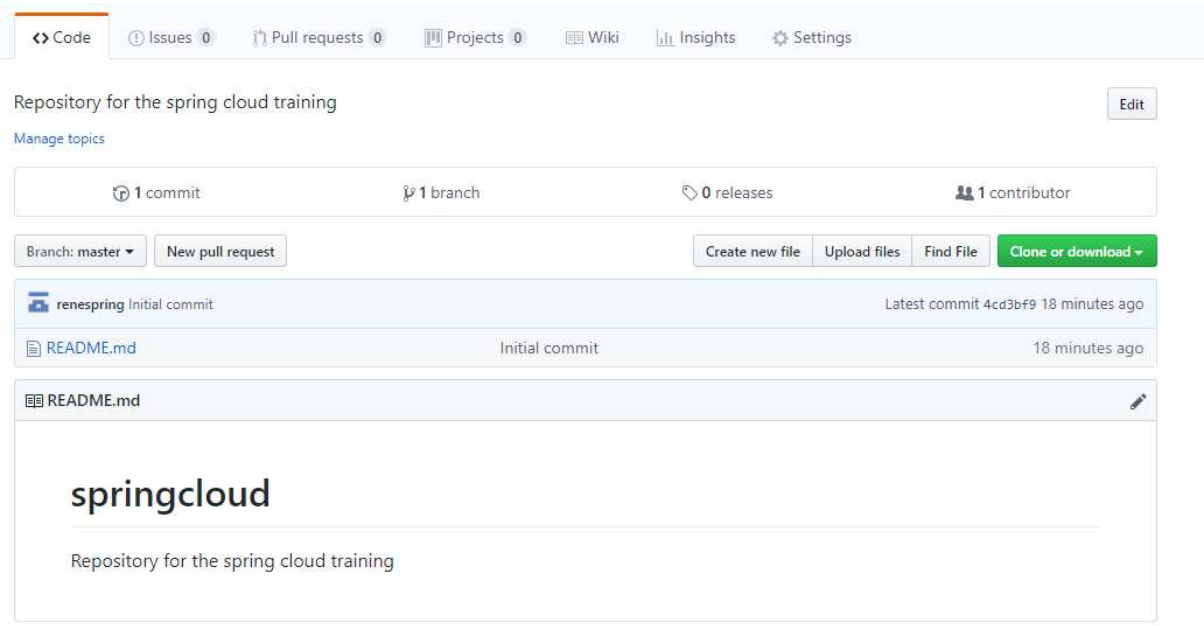
Once you have a github account, we first create a new repository.

In the upper right corner, next to your avatar or identicon, click **+** and then select **New repository**.

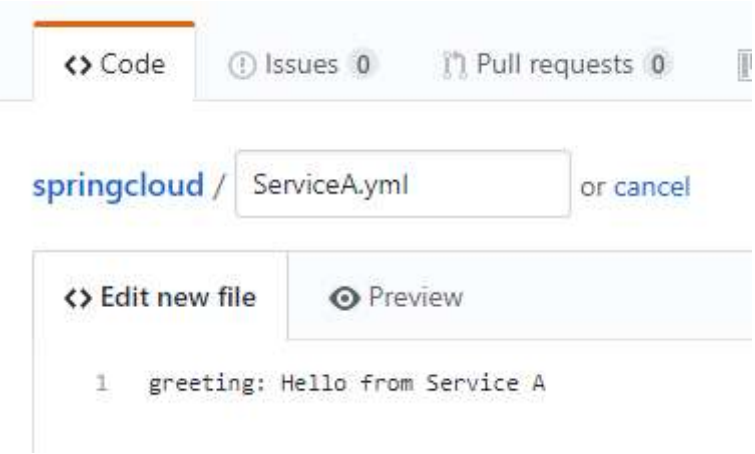




Name your repository **springcloud**.
Write a short description.
Select **Initialize this repository with a README**
Click **Create Repository**

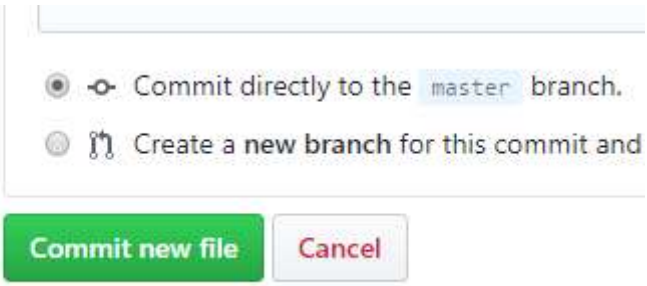


Click the **Create new file** button.

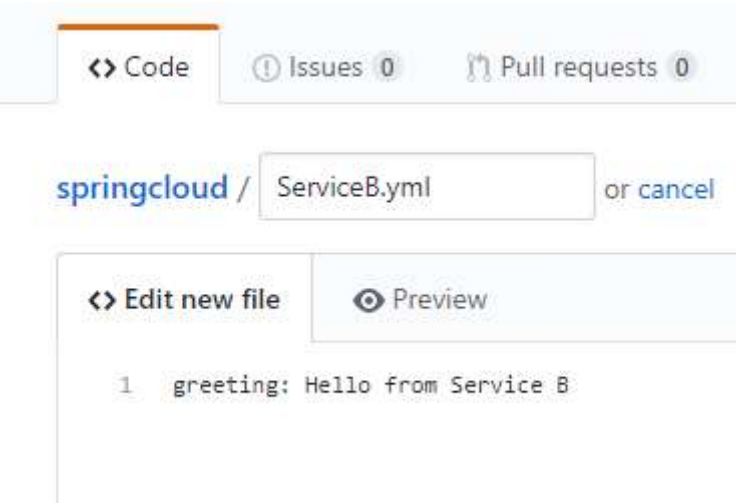


Name the file **ServiceA.yml** and enter the text

greeting: Hello from ServiceA

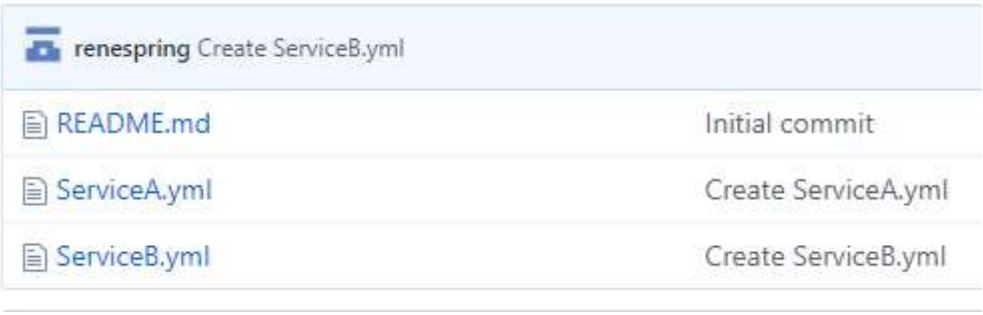


Then click the **Commit new file** button.



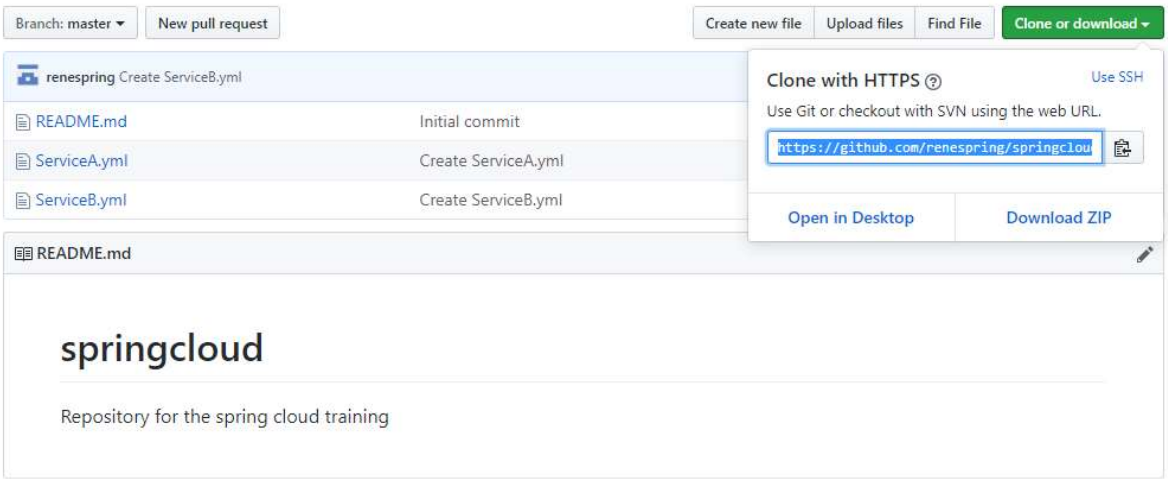
In a similar way, create a **ServiceB.yml** file.

We have now 2 yml files:



Now we need to change application.properties from the ConfigServer so that it uses the GIT repository instead of the local file repository.

We can get the URL to our git repository byn clicking the **Clone or download button**:

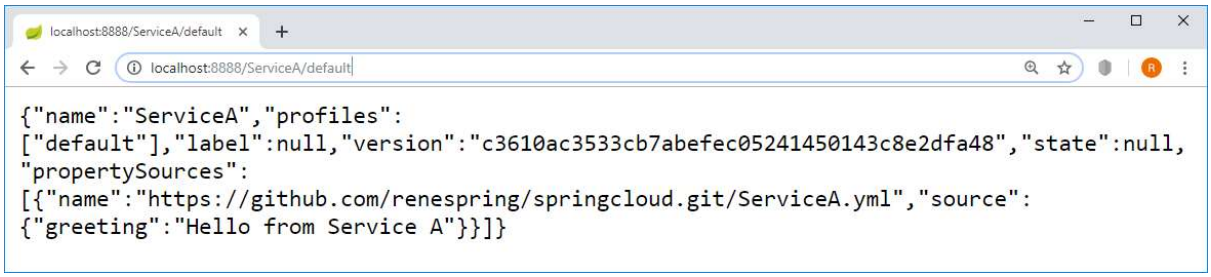


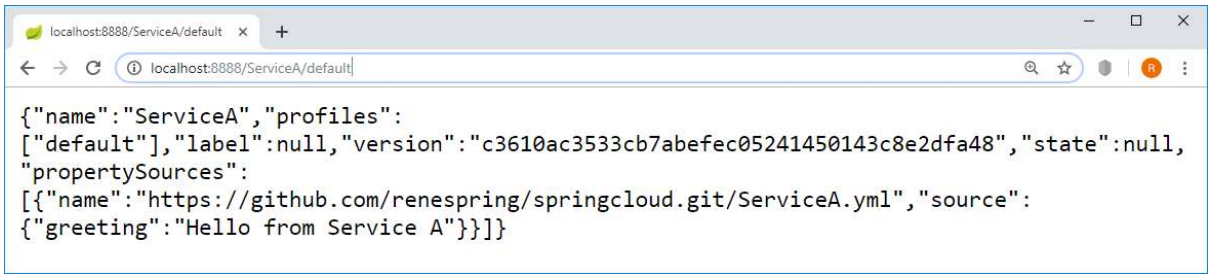
Change application.properties so that the property: spring.cloud.config.server.git.uri points to your git repository

```
server.port=8888

spring.cloud.config.server.git.uri=https://github.com/renespring/springcloud.git
```

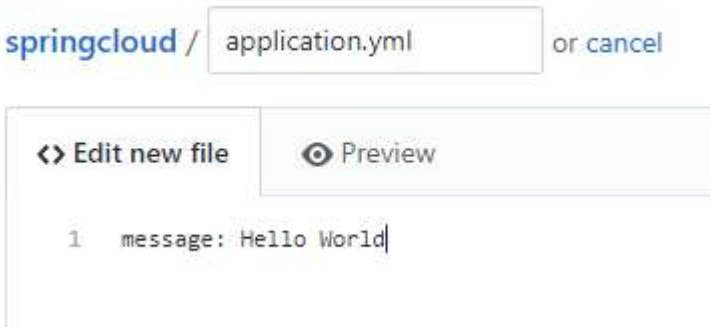
Now start (or restart) the ConfigServer and check if it works correctly:



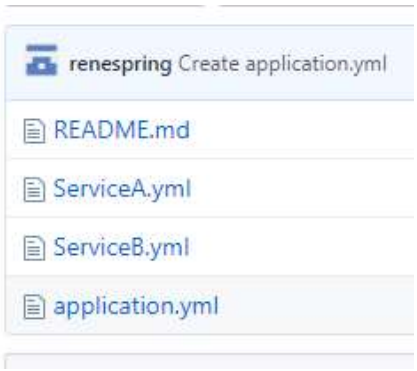


Also check if ServiceA and ServiceB are still working correctly:

In GitHub, create a new file called **application.yml** and enter the **message** property:



We now have 3 configuration files:



In ServiceAApplication, change the controller as follows:

```
@RestController
@RefreshScope
public class ServiceAController {
  @Value("${greeting}")
  private String greeting;

  @Value("${message}")
  private String message;

  @RequestMapping("/")
  public String getName() {
    return message+" , "+greeting;
  }
}
```

Do the same for ServiceBApplication, and restart the services. Check now if the shared configuration **message** is picked up by both services:

What to hand in?

1. A zip file containing all services for part 1
2. A zip file containing all services for part 2
3. Write a readme.txt file with the following statement and sign with your name:

   I hereby declare that this submission is my own original work and to the best of my knowledge it contains no materials previously published or written by another person. I am aware that submitting solutions that are not my own work will result in an NC of the course.

   [your name as signature]