I am SHANSHAN, you can call chloe.

I have bachelor's degree of engineering and my major is computer science and technology.

Since 2006 I have been developing my coding and testing skills in IT of industries,

especially in media, financial, and banking domain.

I have 2 years of experience in java Core/j2EE.....etc(etcetera)

I have a good knowledge of springMVC web application development.

Now, I am studying and taking an intership at Montreal College of IT.

Doing some workshops for the students, if you want to get more reference,

I can give you my teacher's contact information.

My last job is junor java developer in China UnionPay company in China between 04/2016 to 03/2017,

then I immigrated to Canada. My responsibility includes maintaining, debugging codes and developing user interface.

It's an agile project, so I maintained relevant documents every spring.(project name:Web and Mobile Payment)

Before that, I worked in a financial company and developed an OA system for about above 300+ employees.

I was responsable for two modules, employees information management and conference room booking.

I was also responsable for some testing work. And we used Jenkins deployment for continuous integration

I enjoied that time, since I learned a lot of new technologies,

so now I have strong learning abilities in new technologies in a short time.

And I really have too much enthusiasm for the developing industry, this is the reason I always keep learning new things.

Before I introduce spring data, why do we need learn it. When we create a spring/springMVC project, we need write too much configuration and include lot of dependencies, even if you used Maven. Do you know springboot? Most Spring Boot applications need very little Spring configuration. Based on these benefits, more and more companies are using spring boot to develop springmvc project. If you want to learn springboot, you should know spring data.

Spring Data is a high level SpringSource project whose purpose is to unify and ease the access to different kinds of persistence stores, both relational database systems and NoSQL data stores.

In company, different types files is stored in different types dataset. Spring data supports the following data stores.

Environment:

When we write an application, we deploy all the software on our laptop including database, web/app servers and web services. In company, They are deployed in different servers that system is linux.

Most of company used Nginx as load balancer. It is a popular web server as a powerful load balancer to improve our servers resource availability and efficiency.

As we know, database queries are much slower than caching, even if database has his own second level cache. If the user's request is stored in the cache, the cache returns the result of the query directly. Next is data stores, including many database service and web services.

Therefore, I simulate the actual development environment to build my laptop. I used VirtualBox to create a virtual machine, then I installed linux operation system on virtual space, and installed MySQL database on linux system.

Dokcer:

Docker is an open source project to pack, ship and run any application as a lightweight container. Docker began as an open-source implementation of the deployment engine which powered [dotCloud](http://web.archive.org/web/20130530031104/https:/www.dotcloud.com/), a popular Platform-as-a-Service. This means they can run anywhere, from your laptop to the largest cloud compute instance and everything in between - and they don't require you to use a particular language, framework or packaging system.

The Docker deployment framework supports easy installation and configuration of MySQL Server. You need to have Docker installed on your system before you can use a MySQL Server Docker image.

After download completes, initialization for the container begins, and the container appears in the list of running containers when you run the **docker ps** command. The container initialization might take some time. Once the server is ready, you can run the **[mysql](https://dev.mysql.com/doc/refman/8.0/en/mysql.html" \o "4.5.1 mysql — The MySQL Command-Line Tool)** client within the MySQL Server container you just started, and connect it to the MySQL Server. The MySQL Docker images maintained by the MySQL team are built specifically for Linux platforms.

Everything is OK, Let’s get started to do exercises.

The goal of the Spring Data repository abstraction is to significantly reduce the amount of boilerplate code required to implement data access layers for various persistence stores.

In [computer programming](https://en.wikipedia.org/wiki/Computer_programming), create, read, update, and delete[[1]](https://en.wikipedia.org/wiki/Create,_read,_update_and_delete" \l "cite_note-james-martin-1) (CRUD) are the four basic functions of [persistent storage](https://en.wikipedia.org/wiki/Persistent_storage).

讲name queries之前：

Let’s do one exercise and then I will analysis the process.

The main() method uses Spring Boot’s SpringApplication.run() method to launch an application. Did you notice that there wasn’t a single line of XML? No **web.xml** file either. This web application is 100% pure Java and you didn’t have to deal with configuring any plumbing or infrastructure.