

Links to at least 10 job offers for a back-end developer

<https://ca.indeed.com/viewjob?jk=1ab344bc66c1eae9>
<https://ca.indeed.com/viewjob?jk=5bdabbfafcbd63a5>
<https://ca.indeed.com/viewjob?jk=01ea835c46fa6ad5>
<https://www.indeed.com/viewjob?jk=0a590ce8cd4cb974>
<https://www.indeed.com/viewjob?jk=453bab0ecb52da36>
<https://www.indeed.com/viewjob?jk=166c7b8caec06e9a>
<https://www.indeed.com/viewjob?jk=d860846620adca3c>
<https://www.indeed.com/viewjob?jk=af254a1ffd4b3085>
<https://www.indeed.com/viewjob?jk=d739b6632389a0c2>
<https://www.totaljobs.com/job/backend-developer/ic-creative-job85507158>
<https://www.totaljobs.com/job/senior-software-architect/listgrove-limited-job85511915>
<https://stackoverflow.com/jobs/230858/senior-software-engineer-backend-mercari>
<https://www.cwjobs.co.uk/job/backend-developer/vertex-it-solutions-job85751925>

Summary of the interview with a backend developer (my mentor)

The interview was very constructive. We discussed about some good books that would help to learn the concepts of the language and she recommended some books focused on interview process because they usually have detailed explanation about the core concepts, algorithms, data structures, etc. Some examples are CrackingTheCodeInterview, Clean code and “Lulu.com Java J2EE Job Interview, Companion 2nd Edition, Apr 2007”. She also recommended some websites like “<https://examples.javacodegeeks.com/author/ima-miri/>”, “<https://www.javacodegeeks.com/user/ima-miri>” and “<https://www.webcodegeeks.com/user/ima-miri/>”.

Summary of the interview with a backend developer (Caio Lucena)

During the interview we discussed what are and how to practice the skillsets to be a good developer and he said that it's important to understand the basic concepts like data structures, the different programming paradigms such as OO, and after mastering those concepts we can then start digging deeply in the language concepts and tools like the libraries, frameworks, IDE's, etc. We also discussed about database and the data layer, networking, security and a bit about how to balance the personal and professional life.

Blogs and/or articles

- Java Memory Management (<https://dzone.com/articles/java-memory-management>): It's fundamental for a developer to understand (even if in a high level model) how the language he is using does manage the memory. The lack of this understanding can lead to bad designs and software that do a very bad usage of memory and in some cases even lead to a bugs and security problems.
- Writing good Java code (<https://developer.ibm.com/tutorials/j-perry-writing-good-java-code/>): It's also important to get to know and understand the standards, recommendations and good practices to write good code in the language we are using. It makes our code easier to maintain, less prone to errors and bugs and also helps to keep the consistency.

My conclusion is that I target a job in IT or robotics. The role of back-end developer or architect are very attractive to me and I do like to prototype and build new products, dive deep into new technologies. The integration hardware-software always intrigues me and I always feel that we can still get more from the hardware, what means that the software can be improved. For this I believe we can make great projects integrating and expanding Java with external libraries, creating new interfaces, etc. I would like to master the multi-thread concepts in Java, asynchronous IO and low level networking including the protocol interfaces. Hope I can achieve it here!

Learning plan

In order to achieve my objectives I need to develop the below skillsets:

- Understand the core concepts of the Java language;
- Learn how to use its main libraries;
- Learn about the most used frameworks;
- Learn about its package managers;
- Master the database interface and connectors (JDBC);
- Learn about the basic algorithms implementation in Java like lists, maps, trees, sorting, etc;
- Understand the concepts and implementation of the byte code in Java;
- Learn about good practices, security including how code injection works in Java;

It's an open list, more topics will probably come as the time goes.

My goals are:

- 1st week:
 - Create my dev environment this week;
 - Finish my “hello world”;
 - Understand the Java memory management including its GC's implementation (high level overview);
- 2nd week:
 - Finish my first java application
 - Understand the database interface and use a database for my “hello world – db”;
 - Study the implementation of maps, hashmaps, collections and trees;
- 3rd week:
 - Finish the study of the algorithms implementation;
 - Start with web and create my first “hello world – web”;
 - Start studying the web containers and understand how they implement the protocols (http at first);
- 4th week:
- Keep studying the web containers;
- Review the content of the month and prepare a plan for the next month.