Java Backend Course

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POTENTIAL

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Topics to cover

- Methodology
- Course structure
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Methodology

Learning style

Project based

Students will code their projects in an agile way using incremental iterations instead of a waterfall approach using a constantly evolving Prioritized Product backlog from SCRUM.

Close monitoring

Our grading system considers the working code and the correct understanding of the project requirements to produce high code quality with low coupling, avoiding side effects.

Mentor support

Students will have access to qualified staff that co-create the projects before the course starts to answer any students' doubts.

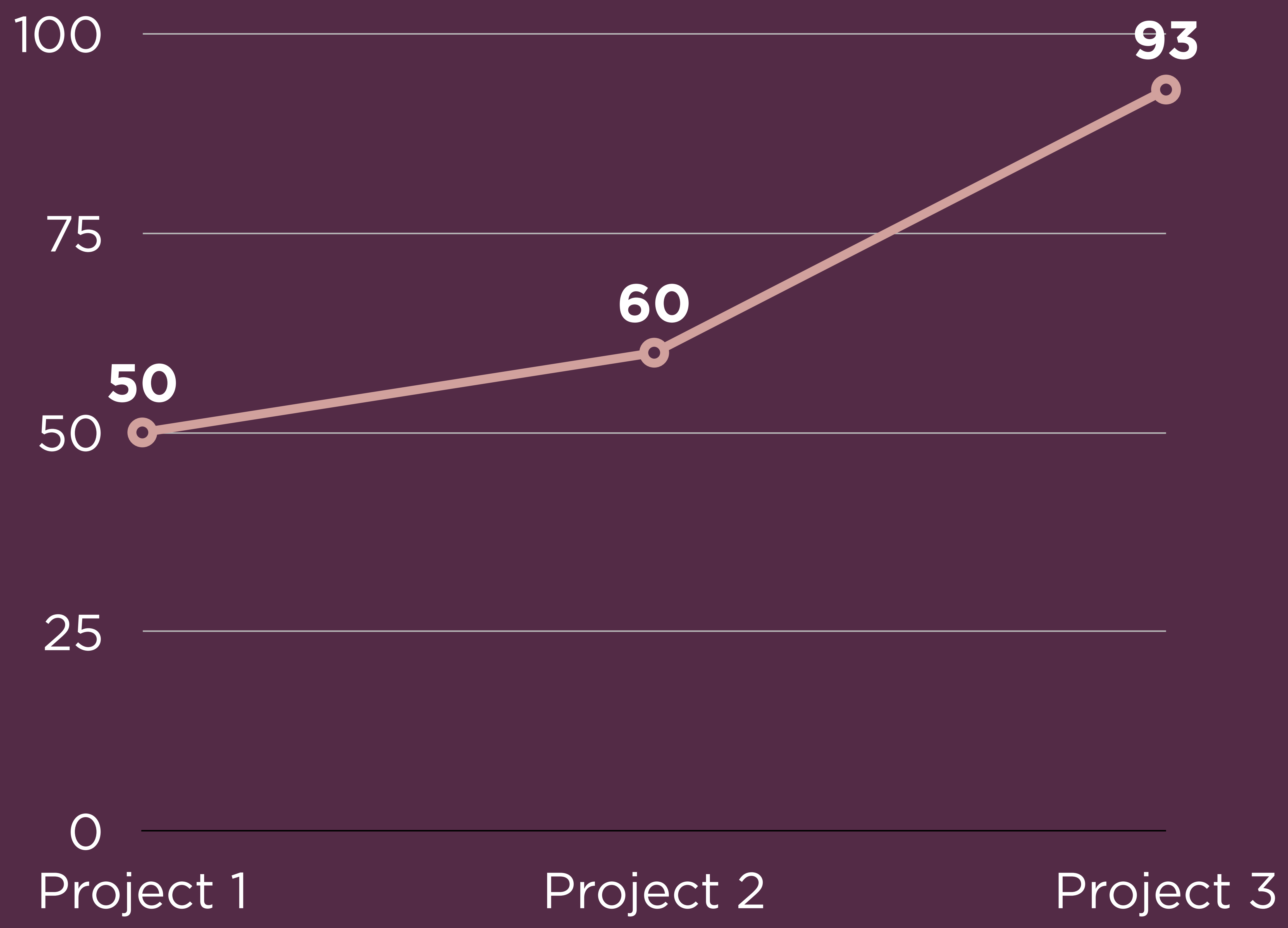
Close monitoring

Keeping the quality up

Gradding criteria

Topic	Description
Planification	Understanding the project requirements and organize the project in a agile way.
Functionality	Making sure the app meets the required functionality.
Code quality	We grade the code quality based on criteria taken from the Clean Code book by Robert Martin.
Overall feedback	Extra feedback or tips that do not fit in the other categories.
Final score	**From 0 to 100**

Student progress chart



Course structure

What will be teached

- Course introduction
- Java basics
- Java advanced
- Full-stack development
- Backend development
- Large scale projects

Course structure

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Course introduction

This module starts the whole course by giving the correct mentality to our candidates that projects succeed or fail before the first line of code is ever written.

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Java advanced

Teaches how to utilize Java to interact with the rest of the computer using the built-in functions of the Java SDK.

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Backend development

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Large scale projects

At this part of the course, the students combine their previous modules' knowledge to build a full-stack app while applying continuous integration.

Course structure

Curricula details

Course introduction	Java basics	Java advanced	Full-stack development	Backend development	Large scale projects
Requirement gathering	IDE (Intelli-J idea)	Good coding practices (3R's in software architecture)	Crash course in HTML, CSS and TypeScript Angular for creating UI while consuming REST API's.	Build REST API's with Spring boot	Dev ops
Prioritized Product Backlog (SCRUM)	Syntax	Java SDK (how to use FileStream to manipulate files, etc)	Angular for creating UI	Database management using MySQL	Integration testing
Bring ideas to life (UML diagrams, whiteboard discussions)	Object oriented principles	Design patterns (factory, MVC, etc)	Consume REST API's with Angular	Docker container	Security
	Version control (Git)			Deploy to Amazon Web Services cloud	

Expected outcomes

What students know after graduation

Topic	Outcome		
Course introduction	✓ Understand the key to coding (software practices)	✓ Organize projects using Agile and SCRUM	
Java basics	✓ Basic knowledge of Object-Oriented Programming	✓ Can read someone else's code	
Java advanced	✓ Understanding of Object-Oriented Programming	✓ Can maintain someone else code	
Full-stack development	✓ Can build basic interfaces in Angular with CSS templates	✓ Can consume APIs from a backend	✓ Can deploy code to a hosting provider
Backend-development	✓ Can create Restful APIs	✓ Can manage databases using SQL	✓ Can deploy code to the cloud
Large scale applications	✓ Can build an application from start to finish	✓ Understand DevOps and continuous integration	✓ Delivers apps with unit testing in the critical parts

Project deliverable

Time estimates

Task name	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
Recruitment	Done before summer							
Pre-course				Summer				
Full-course					12 weeks			
Graduation & employment								🎓

Summary

Java Backend Couse

Project
based

Close
monitoring

Mentor
support

Six
modules

Twelve
weeks

Summer
pre-course