

Développement



# Software Architect

Become an expert in software development! Lead high-level architecture decisions and design complex solutions.



Durée de la formation :  
1100 heures



Temps d'études conseillé à temps plein :  
15 mois



Diplôme de niveau 7 (bac +5) \*

\*Expert en développement logiciel - code NSF 326t - Diplôme de niveau 7 (bac +5) - certification professionnelle enregistrée au Répertoire National des Certifications Professionnelles (RNCP) par décision de France compétences publiée le 14/10/2020

**OPENCLASSROOMS**

# Step Into the Role of a Software Architect

Set yourself up for success in your path. Find out what you are going to learn and get to know your mentor. You will also define your learning goals in this first project!

## Compétences cibles

- Prepare for your training

## Cours associés



### Learn How to Learn

 Facile  6 heures

Learning quickly and effectively is a key skill that can improve your learning capacity and help you take control of your personal and professional development.

# Define Your Project Scope and Get on the Same Page With Your Client

Your client wants to modernize their systems to optimize costs. Your mission is to synthesize your client's needs into a comprehensive client brief outlining functional requirements and a solution.

## Compétences cibles

- Communicate preliminary guidelines for the functional scope of a project with stakeholder
- Extract project requirements from a business requirements brief or need-finding meetings

## Cours associés



### Create a Business-Focused Client Brief

 Moyenne  8 heures

To create software architecture, you'll first need to synthesize client needs. Learn to apply structural guidelines, stakeholder management, and agile methodology to interpret and construct an effective functional project brief.



### Apply a Domain-Driven Design Approach to Development

 Facile  4 heures

Use DDD to communicate the technical architecture to the various stakeholders in your project, and learn functional modeling using UML use-case diagrams and class diagrams.



## Speak in Public



Facile



6 heures

Mobilize good practices in public speaking! Discover how to create your content with the techniques of storytelling and mind mapping, how to rehearse effectively and how to master your performance.

# Audit an Existing Architecture to Propose a New Solution

Your huge company needs your help in shifting to a more powerful solution. It's up to you to perform an audit, assess the existing architecture, and pitch the value of your solution to stakeholders!

## Compétences cibles

- Map out technical risks and limitations for the project
- Justify the value and feasibility of a technical projet
- Catalogue the technologies and functionalities of an existing infrastructure
- Propose a preliminary technology stack for the application solution
- Assess enterprise architectures for relevance and suitability in supporting business needs

## Projet 4 - 80 heures

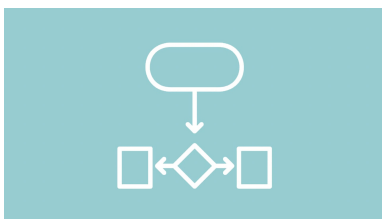
# Research Architectural Solutions for Optimizing an Upgrade

Your client needs some new functionalities to keep up with their changing needs, but they've got a lot of existing architecture constraints. Your job is to figure out the best solution.

## Compétences cibles

- Assess architectural solutions to optimize deployment, operation & continuous enhancements
- Monitor the market for architectural solutions supporting optimization
- Recommend products and services in support of the architecture designs

## Cours associés





### Design Your Software Architecture Using Industry-Standard Patterns

 Difficile  4 heures

To be an effective software architect, you'll need to learn a wide variety of patterns and their applications. Explore software architecture patterns and how to represent them.



### Write the Technical Documentation for Your Project

 Moyenne  6 heures

Produce clear and maintainable documentation for your project with naming conventions, README, API documentation tools, and a technical architecture document.

# Design a New Architecture for Your Software System and Scale up Your Business!

You work for a quickly growing start up whose software system needs a serious revamp! You're in charge of developing a new maintainable system architecture that can keep up with its new customer base.

## Compétences cibles

- Develop maintainable architecture operating models & technical design principles
- Define the structure and behaviour of applications and their interactions
- Devise maintainable digital system architectures for online, cloud or mobile platforms

# Design a Cross-Platform Communication Application

You're a consultant for a major firm who needs your help to streamline and simplify the communication workflow between different departments. Time for you to manage their technical debt and pitch a successful solution!

## Compétences cibles

- Design a coherent enterprise architecture representation via industry standard techniques
- Analyze the impact of existing technical debt on the scope of a new project

# Ensure Your Project Stays on Track With an Architecture Implementation Roadmap

You're in charge of implementing a software architecture solution for a massive industrial company. Impress your team by defining an optimal delivery roadmap, all while maintaining performance and security.

## Compétences cibles

- Ensure maintenance of operational stability and security via system implementation plans
- Recommend an optimal delivery roadmap

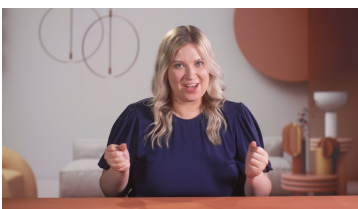
## Cours associés



### Build a Product Roadmap

 Moyenne  20 heures

Roadmaps help define and share what direction your team will take to make the product vision a reality. Use tools like impact mapping and story mapping to help you create a theme-based roadmap that shows how you will achieve your goals.



### Project Management 101

 Facile  6 heures

In this course, learn the basics of project management and its lifecycle. Get ready to become a project manager and initiate, plan, execute, and close your projects.

# Define Success With a Test Plan for Your Architecture Design

You've inherited a new architecture project - only to find out that the logical and physical designs are incomplete. You've got to refine the architecture and come up with a plan for testing!

## Compétences cibles

- Define logical and physical system solutions via client-facing architecture documentation
- Define business driven tests to validate client requirements
- Justify architectural solutions to stakeholders in the context of business strategy

# Manage Risk With Architecture Governance Frameworks

Apply your architectural designs to an existing software system. Define how manage the migration using risk mitigation strategies!

## Compétences cibles

- Ensure the implementation of technical specs for required architecture functionalities
- Implement architectural design governance frameworks
- Implement risk mitigation strategies associated with the architecture

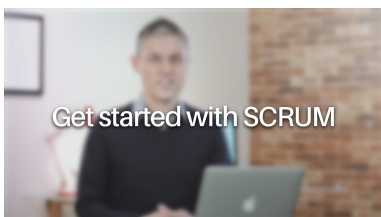
# Coordinate a Development Team to Ensure Efficient Delivery

Work with a development team to certify that your architecture is delivered according to your project roadmap! Coordinate team resources and provide continuous improvement of code.

## Compétences cibles


- Support development teams to deliver architecture implementations according to a roadmap
- Determine necessary development tasks and their distribution among team members
- Coordinate development team resources based on skill requirements
- Ensure continuous improvement of practices and code

## Cours associés



### Learn About Agile Project Management and Scrum

 Facile

 6 heures

Learn the principles of agile software development. Discover how a Scrum Team plans a Sprint, builds feedback, creates retrospectives, and holds daily stand-ups.



## Learn the Fundamentals of Agile Estimation



Moyenne



10 heures

Learn about the nature of estimation and its potential pitfalls. Learn how to estimate user stories and create user story maps. You will learn about concepts like planning poker, team estimation workshops, and velocity.

# Get Stakeholder Buy-in With a Proof of Concept

You are a consultant and need to convince a client in a highly sensitive field that your solution is reliable and safe to roll out. Time to develop a proof of concept (POC) and make sure it's ready to use when the development teams take over!

## Compétences cibles

- Develop a fully-tested PoC to validate implementation choices to stakeholders
- Ensure the application of continuous integration practices during implementation
- Ensure the conformity of the final deliverables with product requirements

## Cours associés



### Scale Up Your Code With Java Concurrency



Difficile



12 heures

Use Java concurrency to decompose a hard problem into independently executing tasks with threads, thread pools, `java.util.concurrent` collections, and more!

# Manage Changing Requirements and Expectations in a Software Architecture Project

You're an external freelancer and have just finished up the delivery of a project - or so you thought! Looks like there's a small issue that's creating a huge problem, and it's up to you to solve it.

## Compétences cibles

- Justify decisions to stakeholders when reconciling conflicting business requirements
- Adapt an architecture solution & its documentation according to changing constraints

## Cours associés



### Resolve Conflicts at Work

 Facile  8 heures

Co-workers don't always get along, and it can affect their work. In this course, you'll learn conflict resolution strategies to help resolve issues or avoid conflict altogether.