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1ST EDITION

Software Architecture for Web Developers

An introductory guide for developers striving to take the first steps toward software architecture or just looking to grow as professionals

MIHAELA ROXANA GHIDERSA

Preface

This book came from a need I had at the beginning of my career: the need to know what it means to build a product from a high level to the details. Web developers often limit themselves to the daily job of coding. They start looking at the application architecture, design, and evolution only if they are lucky enough to find good mentors or the right circumstances in the company that encourage them to grow. I want this book to bring value to every web developer who wants to go to the next level in their career and to be their go-to guide.

Who this audiobook is for

I intend to create a guide for both web developers that aspire for an architect role and web developers that, even though they are not pursuing such a role, want to become better professionals and understand the role and impact of good architecture in their projects.

If you are an architect, I hope that after listening to this book, you reconsider the relationship with the development team. If you are a developer, I hope in this book, you find knowledge, business insights, technical best practices, and ideas that will push you to improve your work.

What this audiobook covers

Chapter 1, *The Role of Architecture*, looks at how, day by day, we do our tasks without realizing that we are building toward architecture. We need to understand how many benefits good architecture brings and how damaging lousy architecture can be. What is the impact of architecture on the other stakeholders besides the development team? We bring light to all these matters from the beginning.

Chapter 2, *Diving into Some Common Architectural Patterns*, discusses how no matter whether we are in the early years of our career or pursuing a career as an architect, as long as we build an application, we need to understand what we are building, what patterns we are creating, and why some decisions were made. This chapter covers some of the most common architectural patterns.

Chapter 3, *Myths about Architecture*, destroys some of the myths that web developers meet or create along the way regarding the architect and the architecture.

Chapter 4, *Discussing What Good Architecture Is*, covers some essential characteristics of good architecture. We will explain them one by one using relevant examples.

Chapter 5, *Design versus Architecture*, compares and explains an application's architecture and design since we often confuse them. We will also point out how they work together.

Chapter 6, *Types of Software Architects and Their Focus*, divides and discusses different types of architecture and architects depending on their focus and level: for example, business, tech, or combined.

Chapter 7, *Leveraging Soft Skills*, focuses on the primary soft skills we need to develop to do a great job as an architect and meet all the requirements. Having a role where you interact with so many stakeholders creates a great need to develop skills such as time management, prioritization, communication, and so on.

Chapter 8, *Who Codes and Who "Architects"?*, focuses on collaboration. Whether we talk about collaboration at the business level or in the team, or about experienced web developers, juniors, architects, or technical leads, the application is built by working together and collaborating.

Chapter 9, *Break the Rules*, discusses self-discipline and engagement in the process. We will also open the discussion about software craftsmanship and related principles that help a web developer become an expert.

Chapter 1

Figure 1.1– Quality model (source: https://iso25000.com/)

Chapter 2

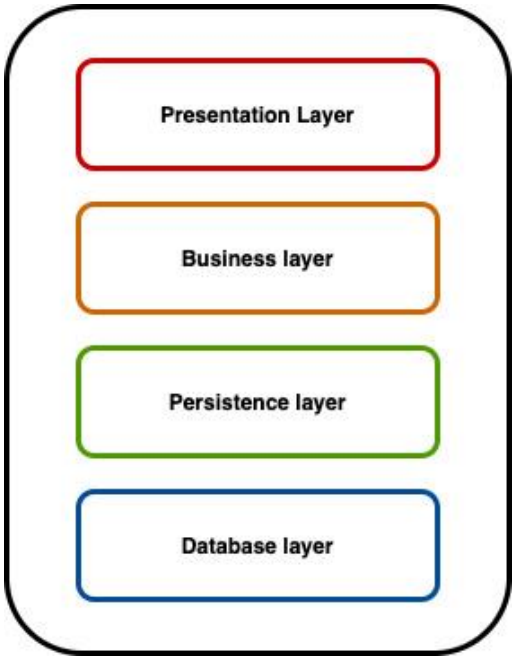

Figure 2.1 – The basic structure of the layered pattern

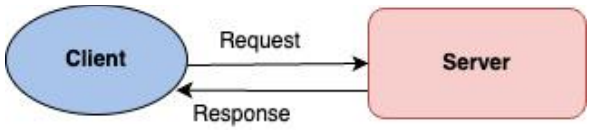

Figure 2.2 – The basic structure of the client-server pattern

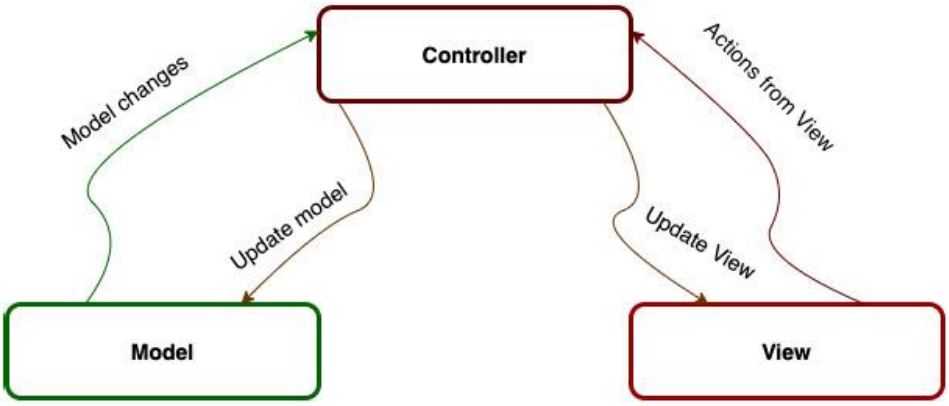

Figure 2.3 – The MVC pattern structure

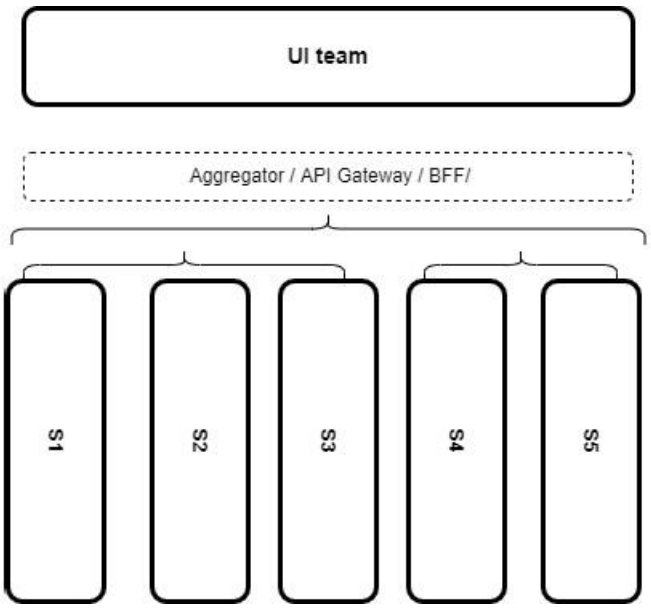

Figure 2.4 – An example structure of the microservices pattern with a middle layer

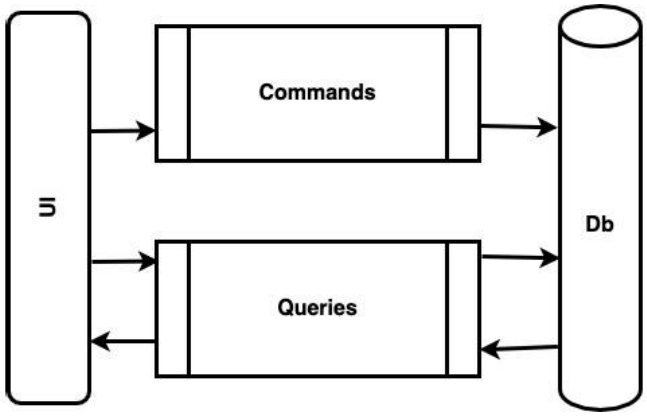

Figure 2.5 – An example structure of a CQRS pattern

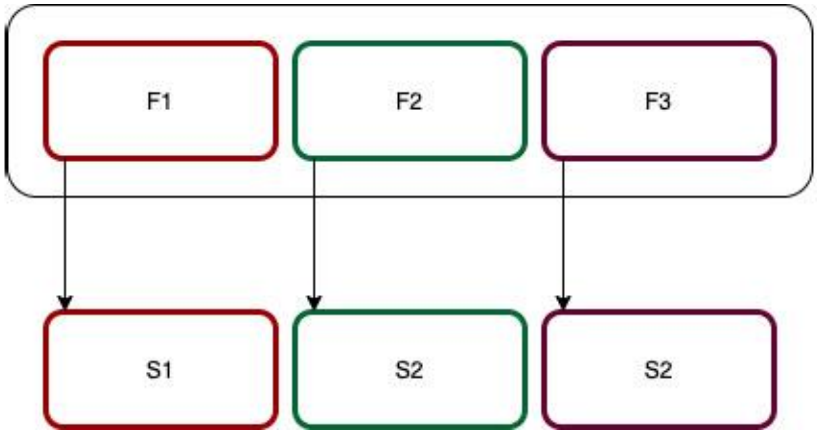

Figure 2.6 – The simple structure of a micro-frontends architecture

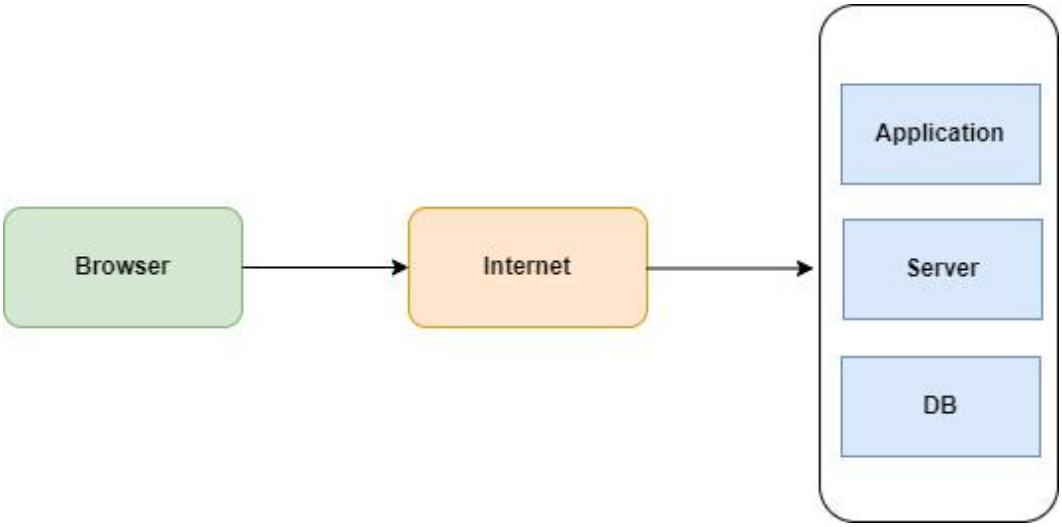

Figure 2.7 – The client-server approach

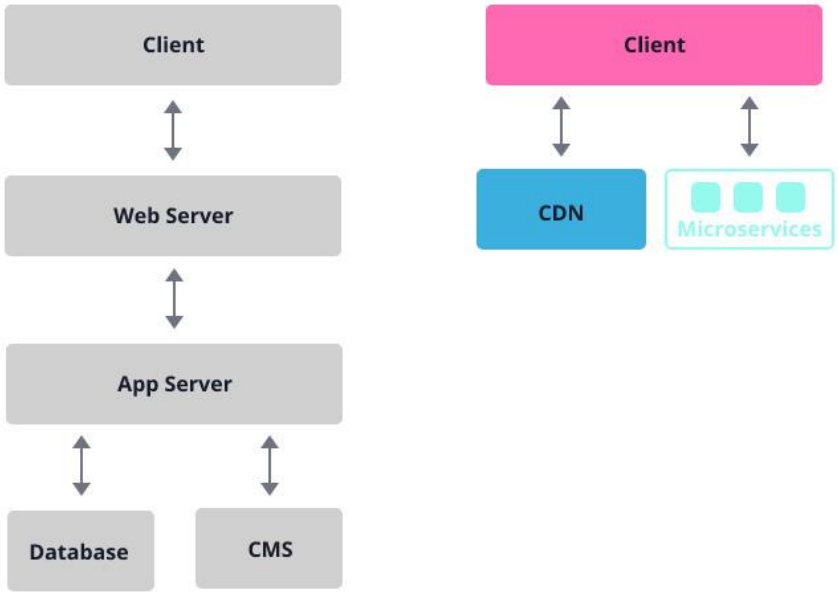

Figure 2.8 – A Jamstack structure (source: https://jamstack.org/)

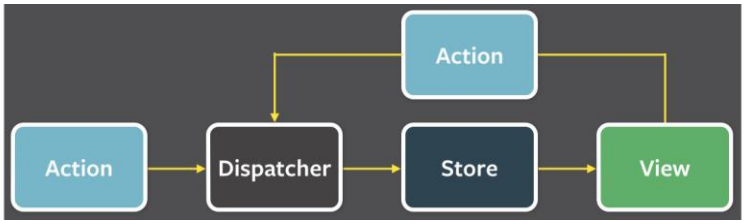

Figure 2.9 – The flux pattern structure (source: https://facebook.github.io/flux/docs/in-depth-overview)

Chapter 4

Figures

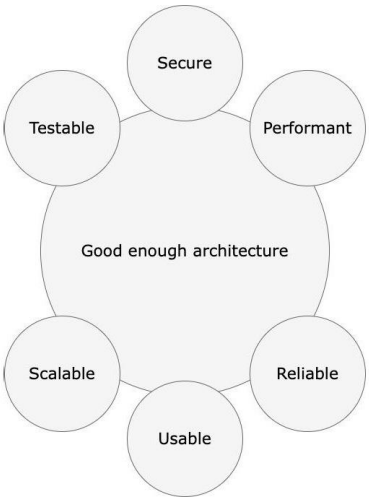

Figure 4.1 – Some characteristics of a "good enough" architecture

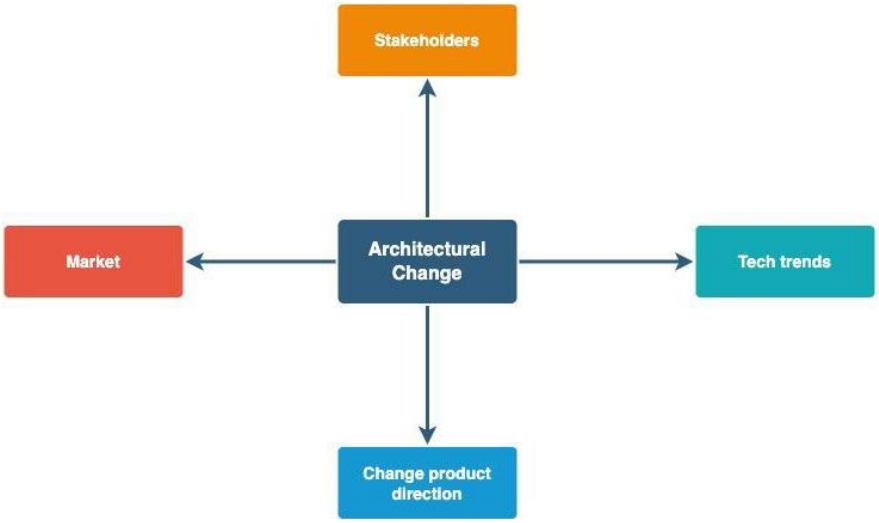

Figure 4.2 – Factors that influence change in a system

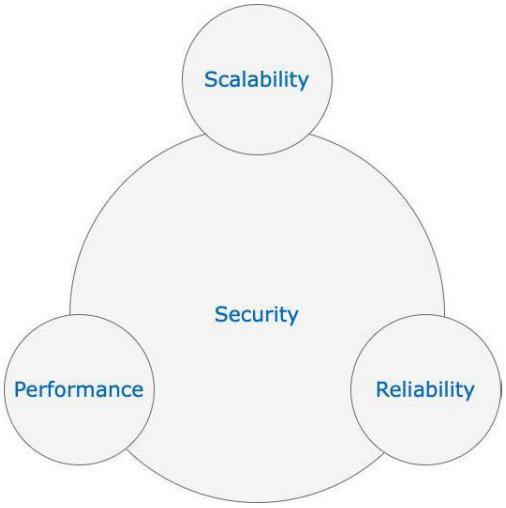

Figure 4.3 – Example of quality attributes that influence how secure a system might be

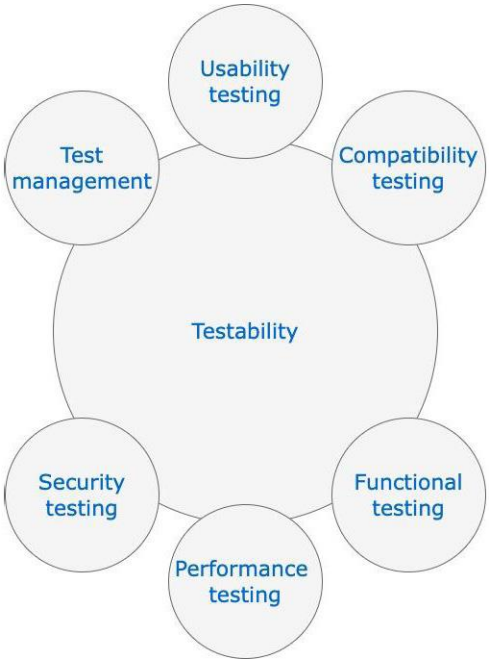

Figure 4.4 – Examples of how to test a system at different levels

Chapter 9

Links

- Transposition: https://snohetta.com/process/transpositioning