Research Report

Jordy Walraven

Table of Contents

[Introduction 1](#_Toc161040562)

[Problem 1](#_Toc161040563)

[Research questions 2](#_Toc161040564)

[Deliverables 3](#_Toc161040565)

# Introduction

# 

# Problem

The sheer number of design and architecture patterns available is overwhelming. Each seems to offer a perfect solution, but selecting the right one for a system designed to handle a million users feels like navigating a maze. The core challenge lies in striking a delicate balance my non-functional requirements..

Through research, I aim to identify the ideal design patterns and architectural approaches that can overcome these challenges. This will help me build a system that is not only scalable but also remains understandable and manageable for future development and maintenance.

# Research questions

Main question: How can I design and architect a software application that meets my non-functional requirements?

Sub questions:

* What are the non-functional requirements of my system?
* What architectural styles best suit the requirements of my system?
* How do different services or components communicate with each other?
* How does a client communicate with the different services?
* How to deploy a scalable application?
* How do I make sure the application is reliable deployed without breaking issues?