Exploring the design space of back end services: Or how to lose your sanity with C

Eduardo Rodriguez Fernandez
Chair for Data Processing, Technical University of Munich
eduardo.rodriguez@tum.de

***Abstract*—Most of the popular modern web-development frameworks, like Node.js, Flask or the standard library of Go, handle the creation and management of a running back-end service, in a mostly abstracted high-level way that does not allow a developer much freedom of modification of the inherent system architecture of the server. Such an inflexible and abstracted, often plug-and-play, server implementation helps to facilitate web development by concealing the system-level design choices from the end user. The problem of blindly relying in a web framework without understanding its internal architecture is that it might not be the most suitable choice for a particular web application, which then ends up having unnecessarily bloated and difficult to maintain dependency-prone services. The aim of this paper is to explore the design space of a dependency-free, cloud deployable back-end service purely written in C through a literature review and an actual software implementation. In order, to**

***Index Terms*—C, Networking, Back-end services, Databases, Software architecture, Systems programming, Software engineering principles.**

I. Introduction

A. State of the art

II. Conclusion

Appendix A
Proof of the First Zonklar Equation

Some text for the appendix.

Eduardo Rodriguez is an Electrical Engineering and IT graduate student at TUM.