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| **Lecturer Name:** | **Gemma Deery** | | | | | |
| **Assignment Title:** | **Assignment 1:** **Comparison of Web Frameworks (Research Paper)** | | | | | |
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# Introduction

## Goals

The purpose of this paper is to compare one client-side web framework (Angular) and one server-side framework (node). This paper will include a detailed analysis of each framework, comparing their similarities, and contrasting their differences.

## Terminology Description

A web development framework is a set of resources used to develop web applications and websites. These frameworks can also be used to develop application programming interfaces (API’s.) Web development frameworks are often referred to as web application frameworks or just web frameworks. (Sheldon, 2023)

## Server-side vs Client-side Frameworks

Server-side and client-side both refer to where certain tasks are performed in a web application. Client-side refers to actions taken on the user device e.g. in the browser. (*What is the difference between server-side and client-side?*, 2023.)

Any client-side process is only executed after the website or web application is delivered to the user’s device. (*What is the difference between server-side and client-side?*, 2023.)

Server-side refers to processes executed on the web server that hosts the website or web application. Server-side processes are executed before the web application is sent to the user’s device. (*What is the difference between server-side and client-side?*, 2023.)

As such, server-side and client-side frameworks each cater their resources towards executing processes either on the web server or on the user’s device.

Server-side and client-side frameworks also make use of different technologies.

Server-side frameworks allow developers to write simplified syntax which then generates server-side code. This makes it much easier for the developer to interact with higher-level code. (*Server-side web frameworks - Learn web development | MDN*, 2024)

Client-side frameworks help streamline UI development. They allow user interaction to be implemented with much less code than would otherwise be possible (*Introduction to client-side frameworks - Learn web development | MDN*, 2023).

## Opinionated vs Unopinionated

## MVC

## Push vs Pull

# Frameworks 1 description

## Framework 1

## History

## Architecture

## Example of use

## Requirements

## Supported Technologies

# Frameworks 2 description

## Framework 2

## History

## Architecture

## Example of use

## Requirements

## Supported Technologies

# Conclusion

# Bibliography

* Sheldon, R. (2023) *web development framework (WDF)*. https://www.techtarget.com/searchcontentmanagement/definition/web-development-framework-WDF.
* *What is the difference between server-side and client-side?* (2023). https://www.enonic.com/blog/what-is-the-difference-between-server-side-and-client-side.
* *Server-side web frameworks - Learn web development | MDN* (2024). https://developer.mozilla.org/en-US/docs/Learn/Server-side/First\_steps/Web\_frameworks.
* *Introduction to client-side frameworks - Learn web development | MDN* (2023). https://developer.mozilla.org/en-US/docs/Learn/Tools\_and\_testing/Client-side\_JavaScript\_frameworks/Introduction.

# Appendix