

LE07: 27/03/2020

Master in Informatics and Computing Engineering
Database and Web Applications Laboratory
Instance: 2019/2020

Lecture #7 :: 27/03/2020

Goals

By the end of this class, the student should be able to:

- Describe what is a web framework.
- Describe typical components of a web framework.
- Understand the use of the Laravel framework in the development of web applications.
- Understand the use of Docker for software deployment.

Content

1. Web development using frameworks
 - MVC architectures
 - Web frameworks
 - URL routing
 - Templating
 - Data access with object-relational mapping
2. Container Virtualization
 - Docker containers
 - Docker images
 - Docker Hub
3. Practical assignment development overview
 - Development environment
 - Working with Git
 - Docker for Laravel
 - Docker for PostgreSQL
4. Application deployment
 - Docker for building and publishing an image

Execution

This class will be held using a [flipped classroom](#) strategy, where students research the topics and materials referenced, and bring their questions to class.

For this class, students need to review the slides linked below and follow the steps from the [template repository](#) to learn how to bootstrap a web application using a framework.

The class will start at 8:00 in a Google Meet session. The first 30 minutes will be used for answering students' questions related to the course. After 8:30 the session will be focused on addressing questions from the students related to the class topics. Please ask them on the chat and wait for them to be addressed. You can also request to speak - please wait to be asked to speak to keep the session understandable to all participants.

Note that questions should relate to the topics described in the contents and not be related to issues with your laptop or setup - please address those with the monitor beforehand.

Bibliography

- MDN Web Docs, *Server-side web frameworks*, Online at https://developer.mozilla.org/en-US/docs/Learn/Server-side/First_steps/Web_frameworks, last accessed on March 2020
- Laravel, *Laravel Documentation*, Online at <https://laravel.com/docs/5.8/readme>, last accessed on March 2020

Materials

- Illustrations presented in class: [Web frameworks](#)
- Video recording of the class: [Shared Drive da UP](#)
- Tiago Boldt, André Restivo, *Developing the project with Docker, Laravel & PostgreSQL: Computational resources*
- Tiago Boldt, André Restivo. [LBAW's Laravel and Docker skeleton project](#), March 2020

Summary

- Introduction to web frameworks, by Sérgio Nunes. Practical assignment development with Laravel, Docker and PostgreSQL, by Tiago Boldt.¹⁾

— LBAW, 2019/20

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¹⁾

Introdução a frameworks web, por Sérgio Nunes. Desenvolvimento do Projeto com Laravel, Docker e PostgreSQL, por Tiago Boldt.

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