LBAW Presentation

LBAW . Web Applications and Databases Laboratory
MIEIC, 2019/20 Edition

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Lecture #1 Plan

- Course presentation

  - Topics, materials, evaluation, project, groups, overall dynamics, caveats.

- Requirements specification

  - Actors, user stories, supplementary requirements.

Web Applications and Databases Laboratory

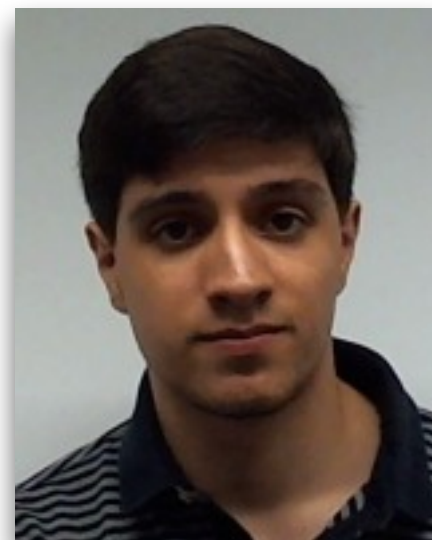# LBAW Team, 19/20 Edition

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Tiago Boldt

Fernando Cassola

Pedro Fernandes (monitor)

! Moodle will be the primary means of communication in the course.

LBAW Objectives

- Build upon the learning outcome of two previous courses in **databases** and **web languages and technologies**.

- Learn how to design and develop web-based information systems backed by database management systems.

Databases

- Prior knowledge: data modeling, relational model, SQL (construction, querying, management).

- What's new?

    - Client-server model;

    - Scale, integration;

    - Indices;

    - Transactions;

    - PostgreSQL.

    - + Information Retrieval

Web technologies

- Prior knowledge: URL, HTTP, HTML, CSS, JavaScript, PHP.

- What's new?

  - Server-side frameworks;

  - Client-side libraries;

  - Scale, integration;

  - Performance;

  - Laravel.

Additional learning outcomes

- Structured development of a medium sized project.

- Writing technical documentation to support development.

- Working in teams (again).

- Docker to support development based on containers.

- **!** Visual design and interaction design.

Evaluation

- Final grade =

  - 80% project grade +

  - 20% individual grade (minitest)

- Project grade =

  - 20% requirements specification +

  - 20% database specification +

  - 20% web architecture specification +

  - 40% product +

  - individual delta of [-10%, +10%]

Artefacts

- **ER: Requirements Specification [20%]**

  - A1: Project presentation

  - A2: Actors and User Stories

  - A3: User Interface Prototype

- **EBD: Database Specification [20%]**

  - A4: Conceptual Data Model

  - A5: Relational Schema

  - A6: Implemented Database (integrity constraints, indices, transactions)

- **EAP: Application Architecture and Prototype [20%]**

  - A7: Application Architecture

  - A8: Vertical Prototype

- **PA: Product and Presentation [40%]**

  - A9: Product

  - A10: Presentation

Weekly Workflow

- For each artifact you will have access to:

  - Artifact description;

  - MediaLibrary example;

  - GitLab template;

  - Checklist.

- Development workflow:

  - Collaboratively develop the artefact using GitLab;

  - Export to PDF and submit to Moodle (deadline: previous day, by 19h);

  - Present the artefact in lab class together with the checklist filled;

  - Artefacts can be improved until the submission of the components (deadline: week after the last artefact);

Materials

- The course's web page is the starting point:

  - https://web.fe.up.pt/~jlopes/doku.php/teach/lbaw/index

  - For each lecture and lab class an information page is available.

- Moodle is used for:

  - Announcements and communication (post your questions!);

  - Submission of materials.

- GitLab is used for

  - Collaborative artefact development;

  - Code repository.

- Each group has access to a Google Spreadsheet shared with the teachers for recording the checklist evaluation.

Why Design topics?

- You will have two lectures on **Visual Design** and **Web Interaction Design**.

- Three of the lab classes will be with a Designer to help and give feedback on the development of the user interfaces (A3).

- We think Visual Design knowledge is important.

    - There is a close collaboration between 'developers' and 'designers', particularly on the web.

    - Understanding the process and vocabulary of designers improves your ability to interact and collaborate.

    - Basic visual design skills will help you appreciate what is possible.

    - Visual design skills will improve your prototypes and your autonomy.

Design lab classes

- Due to holidays, some Design lab classes will need to be rescheduled.

- Monday and Tuesday classes on the 3rd week will be held Wednesday and Thursday on the same week.

- We will post a message in Moodle with this information.

Invited lectures

- Every year, we have invited speakers from the industry in the last four lectures. Given this year's schedule (Friday 8am!) we are planning on having these lectures on Wednesday of Thursdays afternoon.

Monitor Support

- Pedro Fernandes is the monitor for this edition of LBAW.

- Goal: help you during the semester, mostly with the technologies we will be using in LBAW.

- Two weekly sessions: Mondays (13h30) and Wednesdays (14h), B107

- Any suggestions? (other days, other model, ...)

Questions or comments?