LBAW Presentation

LBAW . Web Applications and Databases Laboratory
MIEIC, 2020/21 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.

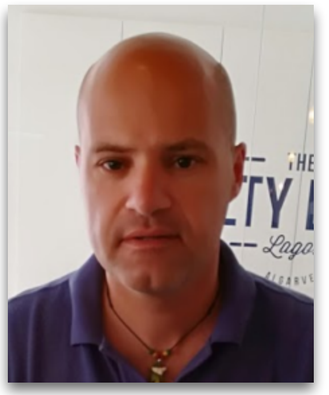
Web Applications and Databases Laboratory

LBAW Team, 20/21 Edition

João Correia Lopes

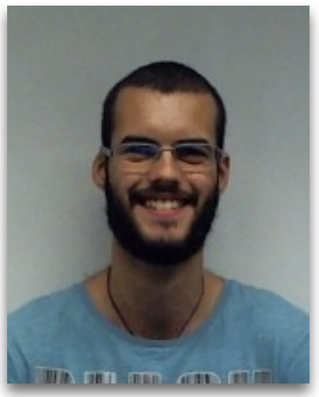
Sérgio Nunes

Tiago Boldt



Fernando Cassola

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



Carlos Albuquerque (monitor)

LBAW Objectives

- Build upon the learning outcome of two previous courses in
  - **databases** (BDAD) and
  - **web languages and technologies** (LTW)
- 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%]

Components + 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 component you will have access to:
  - Artefact description;
  - MediaLibrary example;
  - GitLab template;
  - Checklist.

- Development workflow:
  - Collaboratively develop the component using GitLab;
  - Discuss each artefact in lab class together with the checklist filled;
  - Artefacts can be improved until the submission of the components;
  - Export the component to PDF and submit to Moodle (deadline: previous day, by 19h).

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 discussion (post your questions!);
  - Submission of materials.
- Slack:
  - Last minute warnings;
- 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**.
  - Next two weeks, on Wednesdays (17th and 24th) at 14h30 — same Zoom link.
- 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.

Invited lectures

- Every year, we have invited speakers from the industry (three last lectures).
- These classes will also be on Wednesday afternoon. To be announced.

Monitor Support

- Carlos Albuquerque is the monitor for this edition of LBAW.
- Goal: help you during the semester, mostly with the technologies we will be using in LBAW.
- Weekly schedule to be defined.

Next steps

- Register in a group in Moodle ASAP.
- Answer 'LBAW survey'.
- Next two lectures are about Visual Design and Interaction Design on Wednesday.

Questions or comments?