Red Snakes Conference Management Documentation

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## Short presentation of the brief

Our aim was to create a Conference Management System capable of automatically managing the information related to scientific conferences and their organisation.

Firstly, the client desired the application to be capable of supporting multiple types of users, such as:

* Listeners, that attend conferences;
* Speakers, that register papers that will later on be presented in said conferences. Those mentioned papers may eventually be published;
* Chair members, that organize, as well as manage the conferences and review and suggest improvements to the papers. Chair members can also belong to the following committees:
  + Program Committee member, that manage one conference and its sections, and choose which papers will be presented in each of the sections
  + Steering Committee member, that decides on the dates and locations of future conferences

Secondly, specific functionalities and privileges should be accessible depending on the type of the authenticated user (for example, only speakers should be able to upload, or only chair members should be able to review submitted papers).

Finally, the application should be able to facilitate and optimize the organisation of conferences and the UX should be friendly and easy to use.

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## Stages of implementing the application

* In the beginning, we had a couple of meetings to discuss and understand the requirements and functionalities needed by the client.
* Secondly, we chose the technologies we considered to be the most suited for solving said problem, keeping in mind not only memory efficiency, but also time efficiency.

* Then, we designed our entities using the chosen ORM and we created various diagrams to help us in the implementation phase.
* Then, following the bottom-up approach, we developed the backend of the application, alongside some web APIs that would deliver the data to the frontend of the application.
* Afterwards, we designed and created the frontend, using said web APIs and trying to achieve a pleasant user interface and an easy-to-use UX.
* Last but not least, we tested our application, resolving any bug or issue encountered, wrapping up by writing the documentation.

## Description of technologies used: programming language, ORM, diagrams, version control, UI prototyping, testing etc.

* We opted for Python as the programming language of the application, together with the Django web framework for the backend side, using an SQLite database layer.
* For the frontend technologies, we chose to use HTML, CSS6, Javascript, together with jQuery and Bootstrap.
* We decided on Django ORM for interactions with our databases, because of its great integration with the rest of the tools we used.
* Concerning the diagrams, we used a multitude of tools, however the vast majority of them were created using the draw.io online diagram tool.
* Regarding version control, we decided to use Git, because most of us were already familiar with it, and used GitHub to host our code repository.
* We used Photoshop together with MS Paint in order to obtain a prototype for our UX. Following this approach, we settled on the aspect of each page of our web application.
* For the testing phase of the application, we used manual testing in Python, coupled with blackbox automatic testing using the Django Simpletest framework.

## Diagrams: use cases, sequence, communication, architecture, class, database.

The diagrams used in the design of our applications are available within [our Github repository](https://github.com/IcerOut/RedSnakes/tree/master/doc), in the “doc/” folder

*P.S.: We chose to leave a link to the folder containing the diagrams rather than add them all to the document to avoid overcrowding the document with redundant information and to keep its readability high.*