3PROJ - Rendering

Soumettre un Devoir

À rendre le 19 Juin par 23:59 **Points** 600
Soumission en cours un téléchargement de fichier

iDrive

1 - Project overview

Pear is a well known IT company which wants to develop a new solution to create, display, store and allow access to a storage solution.

You will need to design both the backend solution and the frontend but also the hardware/cloud architecture. It is expected that you demo both a web based application and a mobile one (on Android or iOS) but also that you explain the server architecture which will support your solution (you can use both a Linux or Windows distribution, or even use Docker or others cloud solutions)

Your team is in competition with several other subcontractors to do the development, the best project will win the contract.

2 - Functional Expression

2.1 - Generalities

The solution should be working 24/7 without interruption and without losing a document from a user. Also the user should always knows if the operation was a success or not

2.2 - Software development

2.2.1 - Features for customers

Here is a non exhaustive list of functionalities:

- To create an account.
- To log in/out.
- To display a list of documents

- To be able to see information of each document (when it was uploaded, size, file type …)
- Display the preview for images
- Display a preview image for a video
- To upload a new document
- Allow the copy/paste of document (copy an existing document already uploaded)

2.2.2 - Features for admin

Here is a non exhaustive list of functionalities:

- To list all users
- To block an user
- To see the storage used by an user
- Impersonate a user to see his documents
- To see all relevant information as an admin (resources used … error if any..)

2.3 - Supporting architecture

The proposed architecture must be reasonable in terms of cost and size. You have the choice of offering on-premise or cloud-based solutions, but keep in mind that the customer you are talking to will not be able to maintain his infrastructure on his own or at great expense. So you need to think simple, robust, secure... and again affordable!
It is expected to provide a budget estimation

2.3.1 - Database

You will pay particular attention to the database, which is the heart of the solution's operation. You will thus seek to isolate the data that is relevant to the configuration from the data that is relevant to the operation, especially given the database's exposure; which also implies the management of users, certificates, etc.

You will carry out different treatments to maintain a good optimization, for example by deleting or compressing no longer relevant data.

You are free to use any database you know or want to use

2.3.2 - Webserver

The webserver will host the administrative interface, so you need to guarantee a high security level. You will therefore propose a setup and a configuration accordingly.

2.3.3 - Monitoring

You will set up a monitoring job that can alert you on the status of services and the health of your servers' resources. For exemples when your storage is almost full or any others alert you think is relevant

3 - Deliverables

Students should include the following elements in their final delivery:

- A zip archive with the project source code and any other files (images, sounds, etc.).
- A technical documentation explaining your choices and/or implementation choices/details on the following items (at least):
  - UML diagrams.
  - Full database schema.
  - Network / Cloud / Architecture schema.
  - Step-by-step implementation guide.
  - Server configuration files.
  - Database clean-up scripts.
- A manual for the user
- A small video of the solution

These documents can be in French or in English, as you wish.

4 - Graded items

The project will be graded as follows, on a 600/650 scale:

- Technical documentation: 60 points
- General design of the application: 100 points
  - Architecture server: 40pts
  - Web App: 30pts
  - Mobile app: 30pts
- Relevant graphical design : 40
- Features for customers: 100 points
- Features for admin: 80 points
- Database: 80 points
- Monitoring: 40 points
- Technical solution of the server: 100
- Bonus features: 50 points (depending on the bonus feature done, relevance, to be decided by the jury)

5 - Global information

This projet need to be done by a group of 4 students top

You will be grader two times. One linked to the archive you will send and another one with a presentation of your work.
The oral part will represent 30% of the total mark, while your work will be 70%

You will need to register your group on Canvas using the page "Personnes" then selecting "3PROJ". The first member will automatically be the project manager and will be the one responsible to send the archive

The deadline of the project is **19 juin 2022 à 23h59.** You campus will communicate with you about the oral defense time slot.