

## Additional Question

**How would you set up a development environment for your application?**

Choose the technologies that I will use for my application both front and back end part.

Choose the IDE that I will use .

Install dependencies libraries needed

Configure my version control system Git

Add documentation set up environnement

**How would you extend your application in order to implement concurrency management (i.e. two users cannot work on the same patient at the same time) ?**

By Implementing Locking mechanism

I will add a table lock , when a user start open patient folder to edit we have a row that is created in our database with user-id and patient-id .

Other user can't edit patient while his patient is in the patient table  
The row is deleted when the user finish editing.

**How would you proceed after receiving the following request:**

« Dear colleague,  
We would like to monitor the amount of participants in the database with a dashboard containing a couple of graphs. Can you do this for us? We would need it in 2 weeks.  
Thanks in advance,  
John Doe »

I will ask my colleague John Doe to clarify more the task by responding on those question if possible

- which database should I work on , with data should I display
- which graphs I should integrate exactly
- which design should I implement

**How would you change your model to include additional exam types or treatment types?**

I have added a enumeration table in my structure examType and Treatment Type so I will set new values to the enumeration table directly.

## Additional Question

**How would you extend your model to include the medical specialty of the clinicians? The specialties will be taken from an international ontology with a substantial number of values such as SNOMEDCT (cf Medical practioner).**

I will add a new field speciality to the clinicians table.

**How would you extends your model to include audit trace information? The goal would be to trace any edit (creation, update, deletion) of the collected information.**

I will add a new Trace table with those information (user ID - dataChanged)

**Can you suggest a DBMS suitable to implement such a model?**

MySql it is known for its ease of use and high availability but not suitable for very large-scale data processing, if we process with large-scale data we can use Microsoft Sql Server

**Do you know other DBMS?**

MongoDB it's Nosql Database flexible good performance for read-heavy workloads

**If so, what are the relative strengths and weaknesses?**

less support for complex querying