

Task 2

Design changes to an existing architecture

Evaluating design decisions

Here is the background information on your task

Architecture design is the task architects are famous for. Sometimes architects get a clean slate and have the opportunity to suggest the best design they can think of. But very often the system itself already exists, and new features must be built upon the existing base. Or the system itself might be new, but needs to use existing elements, for example old databases.

Another very typical task in software development is to review the work of others. Developers and architects constantly review work of their colleagues. This habit helps to ensure that the work items are of good quality.

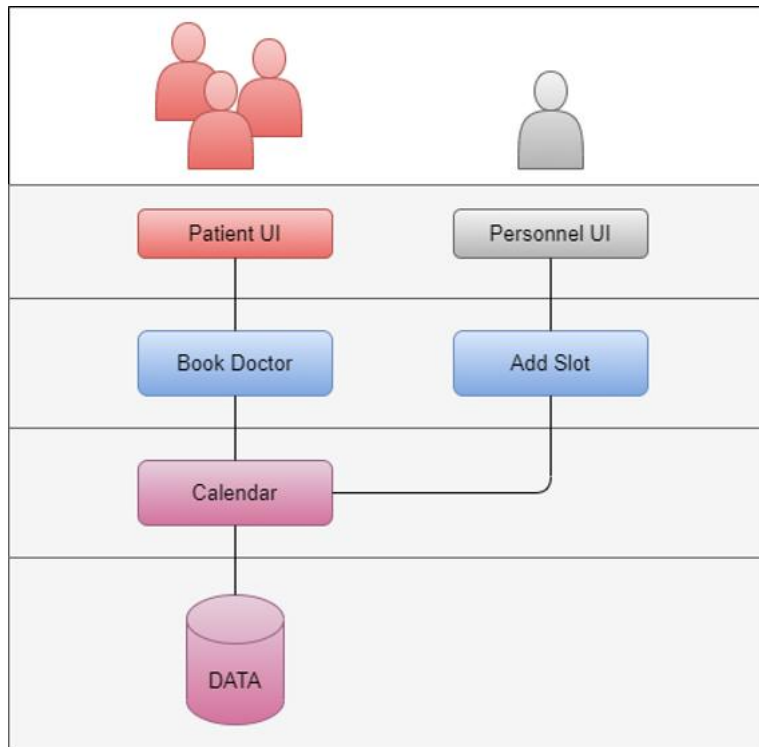
Here is your task

You are provided some existing architectural descriptions of the current system. Digital Healthcare is planning on some new features and you need to analyze if the current architecture could support these. In this task you look at one of them: Services for booking a doctor's appointment.

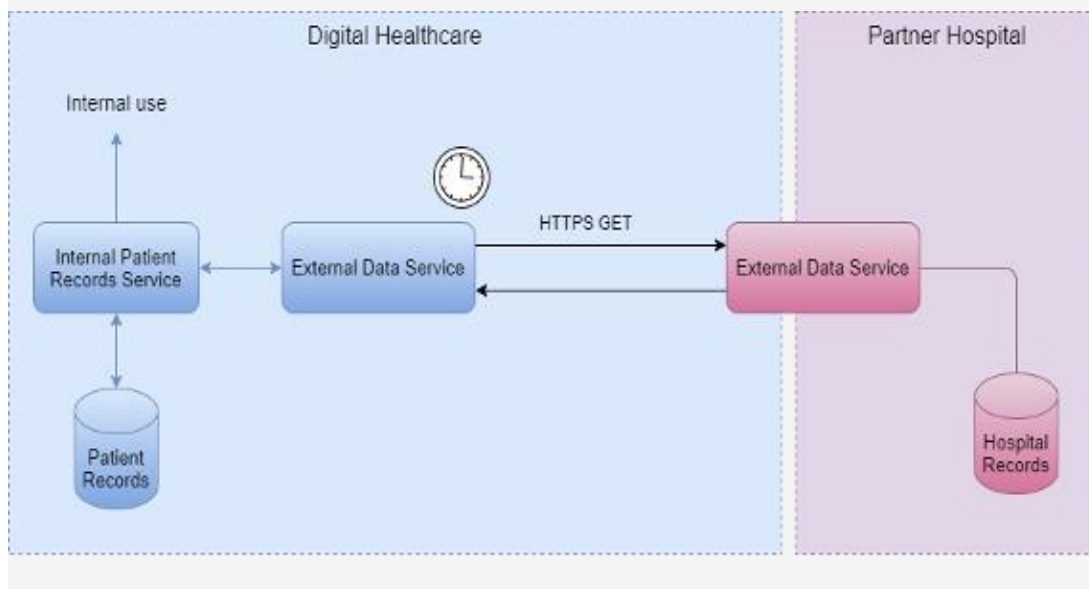
One of your colleagues has already analyzed another description and sketched a suggestion on how it should look: Integration plan with a partner hospital. Your task is to do a peer review of this suggestion to identify details your colleague might have missed.

Resources to help you with the task

Existing description of services involved when booking a doctor's appointment:



Your colleague's suggested integration with a partner hospital:



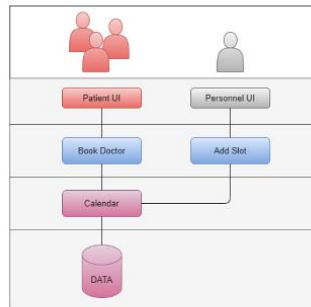
Start your task

You may only credit this task to your CV if you make a genuine attempt at the work.

Practice or learning attempt:

accenture

Q 1/4: There is already a service for reserving a doctor's appointment. There is a need for additional services to book appointments with psychiatrists and nutritionists. How would you proceed?



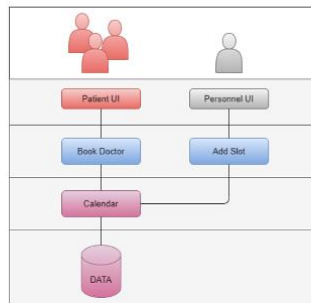
Two more databases are needed to hold calendar data for nutritionists and psychiatrists

Adding services for booking a nutritionist and booking a psychiatrist should be enough

No architectural changes needed here



Q 2/4: What could be the reason for patient UI and personnel UI being in different boxes? Why are they separated, even if they have similarities?



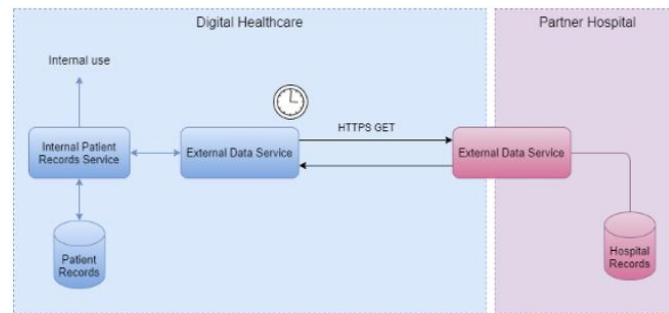
The picture is more readable this way, but there isn't any difference

They are entirely different systems

They are kept separated, as this is more user friendly



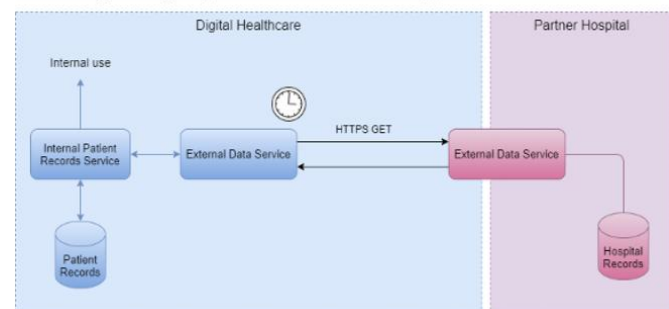
Q 3/4: Your colleague has drawn a suggestion on how Digital Healthcare could integrate with a partner hospital. The integration would be used for getting patient records once a day. Review the suggestion and choose the option that best describes the scenario.



External Data Service of the partner hospital sends data from their External Data Service on agreed intervals. The data is exported from the partner hospital's database and imported to a corresponding Digital Healthcare database.

A timer launches automatically sending a request from External Data Service of Digital Healthcare to External Data Service of the partner hospital. The partner hospital responds with the latest changes in patient records on this request. This information is stored in Digital Healthcare's patient records database.

Q 4/4: What kind of challenges might you face with this integration?



The data is transferred every day, even if we don't have an immediate need for all the data.

Data is requested only once a day, and the huge amount of data coming at the same response might slow the system down.

The partner hospital might not respond to the request sent by Digital Healthcare.