

# **Information issues report**

## **Problems overview**

Our project mainly enhances a Scheduler named Intelligent Course Scheduler, which offers interactive degree planning and makes picking courses simple and enjoyable for students. Meanwhile, this system gets the data about course and degree from ANU website and store the data in the Google cloud. After communicating with tutor, we discussed related potential risks with our clients and ask some questions about information source. This report will mainly talk about the related discussion.

## **Information source issue**

At present, the data about courses and degrees the system used in this system comes from ANU website. After our client's explanation we got known that this system interpreted the data on Programs and Courses into its own data model and hosted that on its web server (in Google Cloud). Meanwhile, this system also has links to Programs and Courses that students can click. And the data this system using is already available publicly. Google already has access to the data, just like we do. By hosting Programs and Courses data on our servers, we are not providing anyone (including Google) access to ANU data that they didn't have before. In that case, we got more details and deepened our understanding about the source of information for this project.

## **Google cloud issue**

Another issue is about Google cloud and this system uses Google cloud as its web service provider which may has potential risks about storage and security. We provided some related potential risks with clients and get their feedback quickly. For information security issue, we asked about Google cloud's storage location which may be abroad. Our client thought that this situation could not be a problem because "the data is being served from Australia (and therefore is in Australia) but that doesn't guarantee that it isn't copied and stored somewhere else too." And Google Cloud will keep data forever as long as we keep paying for the services. If we stop using the service and stop paying, and when we stop using their service, there's probably a part that says we can request that they delete our data.

## Related email screenshots

### 1.

Hi Yichen,

The answers to your questions are:

1. We did not explicitly ask for permission from ANU to store their Programs and Courses data on Google Cloud. We interpreted the data on Programs and Courses into our own data model and hosted that on our web server (in Google Cloud). (Our website also has links to Programs and Courses that students can click).
2. That's right. Usernames are saved in the database, which is on Google Cloud (at the moment it's just on your local computer, but when its running online it will be on the cloud). I have no idea about what "information security problems" there are with Google Cloud. Perhaps ask your tutor to show you specific examples of what the problems are. I cannot think of any problems that relate to the Google Cloud platform itself.

While the Google Cloud platform itself is relatively secure, we must ensure we use it correctly in the most secure way. An example of this is making sure that we do not store passwords in the database. We are currently already doing this correctly, by using the Django accounts system, which stores salted hashes of passwords. The effect of this is that even if the database gets stolen, people's passwords cannot be recovered. If we are going to store more sensitive information on our database (like students' grades), then we would need to take more steps. But last I checked, you guys weren't planning to implement such a feature.

Let me know if you have any more questions.

Kind regards,

Joseph

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**From:** Yichen Li <Yichen.Li@anu.edu.au>

**Date:** Monday, 19 August 2019 at 3:19 PM

**To:** Joseph Meltzer <Joseph.Meltzer@anu.edu.au>

**Subject:** some question about information safety

Hi Joseph,

We talked about the the security of data with our tutor last Friday and there are still some questions as following:

1. At present, the data about courses and degrees you used in this system comes from ANU website. Did your team ask ANU for agreement of using the data and storing it in google cloud last year?
2. When new users create accounts and use this system, their information about schedule will be saved in google cloud. How to deal with the information security problems with google cloud?

Thanks,

Yichen

## 2.



Joseph Meltzer

周一 2019/8/19 14:33

Yichen Li ✉



Hi Yichen,

Yes I believe that Google would indeed store the data outside Australia. Currently the data is being served from Australia (and therefore is in Australia) but that doesn't guarantee that it isn't copied and stored somewhere else too. I don't see this as an issue. I would encourage you and your team to think about why you think the data being outside Australia is a problem, and also to think about why your tutor thinks it's a problem.

Regarding the 'five years' thing: Google Cloud will keep your data forever as long as we keep paying for the services. If we stop using the service and stop paying, then they might start deleting things. As for "how they deal with data after five years": I'm not sure what you're getting at. Are you suggesting that they'll keep the data for their own purposes? If that's true then it would be in the license agreement/contract. I haven't read the license agreement in full, but I'd say there's probably a part that says we can request that they delete our data.

I should also mention that in the case of Programs and Courses data – that data is already available publicly. Google already has access to the data, just like we do. By hosting Programs and Courses data on our servers we are not providing anyone (including Google) access to ANU data that they didn't have before.

Kind regards,  
Joseph

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**From:** Yichen Li <Yichen.Li@anu.edu.au>

**Date:** Monday, 19 August 2019 at 4:21 PM

**To:** Joseph Meltzer <Joseph.Meltzer@anu.edu.au>

**Subject:** 回复: some question about information safety

Hi Joseph,

Thanks for your replying and our tutor actually talked some risks in last tutorial. First is that we can not ensure the data is saved in Australia because google cloud have many servers all over the world and it's a potential risk for this system. Second risk is google only keeps these data for five years and we don't know how they deal with data after five years. These risks may affect the information security.

Regards,  
Yichen Li