COMP0016 Team6 Legal Essay 1 UCL-GOSH Data Interchange for Sensors Classifications: Legal Implications for the NHS Dashboard Project in acquiring, analyzing and storing the patients' data

Introduction

In today's world, the revolution of information technology has helped humans to make incredible breakthroughs in many fields, including medical treatment, so that it may be difficult for us to imagine what the world without computers looks like. In this project, our team needs to help GOSH, a children hospital in London, to build a dashboard for monitoring the infusion pumps. When the service is running, human-computer interactions with information could be divided into three parts: system acquisition of patient data, system analysis of patient data, system storage of patient data. As a result, some issues other than technical aspects become particularly sensitive, such as what kind of data will be obtained in the system, who is the data subject and who has the right to access these data. Therefore, in this essay, we will conduct an in-depth discussion on data privacy, data security, and some issues related to liability and intellectual property rights.

Data Privacy and Developer's Liability

Although legal systems are diverse in different regions, we will only consider UK laws since this SaaS will serve a children hospital in London. First of all, we need to focus on the General Data Protection Regulation (GDPR), which has replaced the Data Protection Act from 2018. As the name of the law suggests, GDPR is used to protect the software users' data privacy. According to GDPR's personal data definition, all information related to an identifiable natural person should be regarded as data privacy. In our project, specifically, the private data requires to be protected should include the authentication information of clinicians and patients (e-mail and password), patients' clinical data and confidential information such as age, diagnostic conclusion, and treatment plan. Since the software will serve the hospital, we must manage the medical information more carefully to ensure that the information will not be tampered with by non-clinicians or used for any other purpose, especially illegal purpose. Unlike other general SaaS service, only the clinicians and patients who have been authorized by the system are allowed to operate the software, which indicates that not everyone is qualified to use this service. Therefore, the hospital should reach an agreement with the patients on the aspects relevant risks and precautions in advance through user consultation to enable patients to acknowledge who or which organization will keep their information, what are their rights as data subjects and who are the data controllers. Besides, after consulting with our clients, we can confirm that only the hospital will be permitted to provide and hold the data in terms of collecting user data. Therefore, we need to concentrate more on data protection during the users obtaining data, analyzing data and store data. In the system design, we only allow clinicians to browse and modify the clinical data and personal information of patients they supervise. Similarly, each patient can only access their dashboard and confidential information. Besides, when storing some essential information, the database will apply the digest algorithm for encryption instead of directly keeping its input. Take the process of holding a password as an example; the database will not directly store COMP0016 Team6 Legal Essay 2 the user's input password but will spell the user name and password together and then calculate an MD5 hash value for storage. When the user needs to log in again, the database will perform the same operation and then compare it with the value already stored in the database. If they

are consistent, the password entered would be correct. Sensitive data after such processing can effectively avoid being leaked and eventually causing severe losses.

Licenses and Intellectual Property

Our team always has a clear understanding of the license and IP rights. Before the implementation stage, when we try to determine the tech stack, the license is the main factor to influence if we select the technology or not. As a result, there are four dependencies in our project: React[1], Material-UI[2], Node.js[3] and PostgreSQL[4] and we also found licenses for all of them. All of them utilized either MIT LICENSE[5] or BSD LICENSE[6], in specific, the former three dependencies use MIT LICENSE while PostgreSQL uses BSD LICENSE. Both MIT LICENSE and BSD LICENSE are permissive open-source licenses that allow us to use their software services in any way including commercial use without any charge, but the service provider assumes no responsibility and retains the copyright. Since we are developing proprietary software and will deliver it to our clients, we will not retain the license, but, at the same time, we are not responsible for the further maintenance of the SaaS service in the future, and we do not have any liabilities for any potential loss caused by the distribution of the application, even if our team has been informed of the relevant risks.

Conclusion

In a nutshell, we discussed some issues about patients' data privacy involved in our project, potential liabilities as a developer, licenses of our dependencies, our license and IP rights. From our perspective, we have done a lot of work in terms of some general legal issues such as protecting patients' data privacy and seeking licenses of our dependencies, etc. If there is some more time, in the next phase, we will continue our work on making more improvements to provide our client with a better experience, service and product.

References:

[1] GitHub. 2018 facebook/react. [online] Available at: <https://github.com/facebook/react/blob/master/LICENSE> [Accessed 18 March 2021].

[2] GitHub. 2014. mui-org/material-ui. [online] Available at: <https://github.com/mui-org/material-ui/blob/master/LICENSE> [Accessed 18 March 2021].

[3] GitHub. 2018. nodejs/node. [online] Available at: <https://github.com/nodejs/node/blob/master/LICENSE> [Accessed 18 March 2021].

[4] Postgresql.org. 1996. PostgreSQL: License. [online] Available at: <https://www.postgresql.org/about/licence> [Accessed 18 March 2021].

[5] Opensource.org. n.d. The MIT License | Open Source Initiative. [online] Available at: <https://opensource.org/licenses/MIT> [Accessed 18 March 2021].

[6] Oracle.com. 2014. BSD license. [online] Available at: <https://www.oracle.com/downloads/licenses/bsd-license.html> [Accessed 18 March 2021].