SLEP Assignment Sem1
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I will be basing this assignment on Project Specification 6 - An Android mobile application to record and monitor attendance with a look into modern technologies. I have noticed several Social, Legal, Ethical and Professional (SLEP) issues with this students' project. First of all Android is the only platform the app is going to be developed for, thus users who do not own an Android device will not be able to use the app at all. One statistics website shows a chart with the "Market share held by mobile operating systems in the United Kingdom (UK) from December 2011 to September 2018" (Statista, 2018). The chart shows in the first half of 2018, Android is the market leaders, however, in August 2018, IOS jumped to the top. Although Android is increasing in sales and share of the market over the years, it seems to be levelling out to 50 – 50. IOS devices are popular in the UK, therefore half or more of the target audience will be unable to use the app. This is an important factor because the target clients (i.e Schools, collages workplaces, etc) won't be able to obtain any data for most users, meaning the app may not be fit for purpose.

A social issue is that if, for example, a school implements the app, they will need a separate way of logging the students who don't have an Android device. This could cause social issues in the school such as bullying and segregation, as there will be a larger focus on what type of phone each student has. For example, if a student doesn't have a phone, or has a low budget phone, they may feel inadequate and different from the other students. The Telegraph published an article about a government report, "A document published by the Department for Children, Schools and Families warned that schools with a relatively small number of deprived children had a duty to stop them feeling "swamped" by wealthier peers." (Graeme Paton, 2010)Focusing on material possessions more could cause even more of a divide between ‘rich' and ‘poor' students.

Users could find a way around actually clocking in/out and falsely tracking their attendance. For example, a user could ask a friend to take their phone and clock in for them, as it is the device that is tracked, not the user. The student has said he wants to use NFC for an instant clock in, but he has not explained anything about any security features to stop users taking advantage and falsely clocking in/out. If the app made use of biometrics that most ‘new/modern' mobile phones have, this would be more secure so that only the correct user can authorise access the clock in/out page of the app. For example, NFC is used for apps such as ApplePay (Apple, n.d.) or Gpay, which is the Google version, and these apps are secure as they use the phones security setting, which could be biometrics (scanning irises or fingerprint) or a password/pin.

This could cause problems with health and safety in the building. For example, if there was a fire or a natural disaster and a user has been clocked in on their phone

by someone else, but they are not actually in the room themselves, once they have gathered everyone outside and checked the register to make sure everyone is accounted for, they may realize a person is missing and firefighters or members of the public could be harmed trying to rescue them. The teachers will probably spend the same amount of time registering students, or if not longer, as there are now two different methods of being registered. It is important everyone is accounted for, and users of the app or non-users could easily be missed out. This could become confusing and become more effort than its worth.

I have noticed some legal and ethical issues with this application, such as complying to data protection and privacy laws. The student wants to use a "time and location stamp" and to "integrate the use of the mobile camera" for his app, which the user will need to agree to before they can start using the app. The fact that the app is collecting sensitive data could leave users unsure whether to give access, so clear terms and conditions and a privacy policy should be written.

The app will be collecting, storing and processing sensitive data about the user, such as their location and an API key for the Google account login of the user. This could be a concern, as the data submitted to the application through an API is no longer in the developer's or users' control, therefore there must be a well-defined agreement between the two applications (Google and the students' app) before the app can be rolled out to users.

This type of data is protected under the GDPR ruling (Infomation Commissioner's Office, n.d.) so the student will need to be thoroughly informed about how to protect the user(s) data well so no information is leaked or shared to anyone without the authority to see it. If the student hasn't thoroughly researched the GDPR law, he could be fined up to 20 million euros or 4% annual turnover, whichever is the highest (Wired, n.d.).For example, Facebook's data high jacking scandal involving the data analytics company Cambridge Analytica. "Alongside London-based elections consultancy Cambridge Analytica, the social media giant is at the centre of an ongoing dispute over the alleged harvesting and use of personal data. The allegations have heightened concerns over whether such data was then used to try and influence the outcome of the 2016 U.S. presidential election and the Brexit vote." (cnbc, n.d.) This scandal has had a massive impact on data protection laws, so companies cannot exploit customers data.

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