# Professionalism Report

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# Introduction

This report will be analysing the aspects of professionalism that need to be taken into consideration for the project and final artefact. These are social impact, ethical issues, legal implications and security aspects. In order to make sure the project meets these criteria each one has been analysed and identified how they’re represented within it.

# Social Impact

A social impact is the consequences something may have on the lives of others such as through affecting job prospects, communication, organisation, daily routine as well as the effect it may have on minority and those with disabilities. Social impact can be both positive and negative and because of such should be taken into consideration when creating a piece of software. In relation to this project and artefact consideration needs to be taken in particular around where the artefacts focus on reminders and how they may affect daily life. Saucken and Lachner (2014) state that UX design is used to elicit an emotional response, however it can also be assumed that this response could be negative if it is poorly designed.

A positive consequence of this is from how reminders were found by Chen and Wang (2010) to increase memory recollection that normally decreases with age, this could mean that an application focussed around this would provide a positive social impact in the improving in the daily lives of users who typically struggle to remember their routines.

Another which links closely to this is that older members of society who typically struggle in their age to keep up with their daily routines or stay motivated may find relief in using an application which focuses on this which may improve their mental wellbeing. When looking at health conditions such as Alzheimer’s and Dementia Cahill, Macijauskiene, Nygård, Faulkner and Hagen (2007) believed it important for technology to help maintain skills so they are not lost to these individuals, as this application is focussed around daily reminders which could be of use to people struggling with degenerative mental conditions this could lead to positive societal change if successfully implemented.

A potential negative effect could come from if this application is poorly designed or executed, it could give the opposite effect. Poor design could lead to users getting frustrated with the application and instead wishing to spend less time organising daily routines or setting reminders which could lead to more difficulties in daily life. Poorly written code could also lead to reminders not being displayed properly or at the right time which would mean reliance on the application could punish the user causing them to miss important events which may affect their future prospects.

# Ethical Issues

Ethical issues typically relate to the way this application may conflict with most people morals and principles. Ethical issues also link closely with negative social impact in the way that negative social impacts of an application often cause ethical issues for the creators on if their product causes more harm than good. Myers and Venable (2014) state that an artefact should be of “public good” and needs to maintain human values, this links closely with the ethical beliefs of morals and is an important consideration. Plagiarism is also mentioned as whilst being a legal concern it is also an ethical issue due to the effects plagiarising another person’s work may have negatively on the victim of plagiarism.

For this application the probability of ethical issues is low and the focus of which will mainly on the need of an application to be inclusive off all people regardless of conditions or disabilities. Another ethical concern comes from the recording of the users voice however this will be done at the users own command and only serves to create reminders for themselves which won’t be used anywhere else except locally on their own device.

Voice recording has become increasingly more of a concern in mainstream media due to the rise in voice activated virtual assistants such as ‘Alexa’ or the ‘Google Nest’. The overreliance on virtual assistants is also looked upon such as by Danaher (2018) who believed technology such as these may negatively impact the well-being of humans due to daily tasks, we normally do ourselves being instead given to a virtual AI. This relates to the application due to how reminders given by application and potentially driven by an AI could also cause overreliance however due to the fact research done by Chen and Wang (2010) that reminders positively impacted memory.

Overall commercial AI technology is still relatively new and research looking at both the positive and negative ethics of them are likely still to be done. When looking at the ethics of usability, Shneiderman (2000) believed that companies should focus on keeping websites as simple as possible so that regardless of gender, age or disability the user is still able to access the website. This still relates to modern mobile application especially ones with the focus on providing reminders to users older in age or struggling with mental conditions who may typically struggle to use technology so ensuring they can, is a large ethical issue of this project.

# Legal Implications

There are certain legal implications when creating a project such as this that must be followed both in the research and eventual production of the artefact. There are many which may affect this project and must be followed such as the Equality Act, various copyright issues and the Data Protection Act. These laws are often put in place to protect consumers from companies, protecting companies’ assets from being stolen as well as “ensure equality” (ENL Legal, 2019).

In relation to the mobile application this means care must be taken to ensure these laws are followed as well as making sure anything which is created that isn’t wanted to be used for commercial gain by others must be properly protected. The Equality Act (Legislation.gov.uk, 2010) when relating to software often means that if a service is provided effort must be made to accommodate those with disabilities as well as other users. This means that when creating this application some thought into the design and use of the final artefact must allow for those with disabilities to still be able to use the application even if this is in a more limited format. The Data Protection Act (GOV.UK, 2018) was set to ensure creators of products and applications ensure that all data collected by themselves is “kept to date”, “used fairly, lawfully and transparently” as well as “used in a way that is adequate, relevant and limited to only what is necessary”. This means that the data collected must be relevant to whatever the purpose of the data collection is. In the case of a reminder application this is whatever the user wishes to set themselves as a reminder.

When collecting through surveys any data collected must be ensure to only be kept as long as necessary as well as the reminders created by the users, this means once it done its purpose it should be disposed of correctly. As this artefact will only use local storage, only collects data the user personally decides they want to set as a reminder and that this data will only be used for this purpose means that the artefact will meet all legal implications of the Data Protection Act.

Copyright law (Government Digital Service, 2014) in the UK is free and covers any personal work that you create, this applies both to large companies as well as individual people. This means that software such as the one to be produced can’t be copied by others in order to claim it as their own or for monetary gain without your permission or unless its licensed to do so. Contrary to popular belief there is no need to register copyright in the UK or mark any works as “Copyright Protected”. When creating this application however when using assets not created by yourself such as code, images and audio care must be taken to ensure that these materials are publicly available to be used for a project such as this which doesn’t collect any profit. This can be done by contacting the creator or viewing licensing/user agreements. Failure to meet copyright guidelines could lead to being sued and forced to pay the creator compensation or having the software you created using copyrighted material being removed from the public space.

As most assets used within the artefact are to be produced personally and the API’s used are fine by being used freely for small scale businesses and non-profit use, no issues should arise from copyright protection.

# Security Aspects

Security refers to the handling of data as well as encryption of any that needs to be done. Because of its relevance to data and its security this also links very closely to the Data Protection Act (GOV.UK., 2018). It is stated that data must be “handled in a way that ensures appropriate security, including protection against unlawful or unauthorised processing, access, loss, destruction or damage” meaning that data needs to be properly secured to prevent it being accessed by those who aren’t supposed to reach it, used in a way by the company which is illegal or purposely given to those who may use it this way and that data intended to be secured should be protected from loss or destruction.

In order to prevent data being accessed other than by the user, all data in this artefact will be locally stored this is also due to the fact there is no need to send the data to any remote location. Data collected for use in the application also shouldn’t be sensitive due to the purpose of it being for daily reminders, also as there aren’t any plans for logging in or storing passwords, encryption will be unlikely to be needed. Data however will need to be protected from being corrupted as best it can, this will need to be achieved by ensuring all code is functional and working as intended and that the correct application flow in the case of it being interrupted in order to save the user’s state.

Security also links to the artefact through relevance to the security of the user, as this application can’t cause any physical harm to the user this is unlikely to be a concern. The use of the Google Map API planned to be used to store locations of events or reminders could potentially be used to find the users location so it should be ensured that this data is only stored on the device and that the map doesn’t record the users current position, only the location of reminder set by themselves.

# Conclusion

If a high standard of professionalism is upheld and these criteria are kept in consideration during the design, testing and creation of the final artifact then no issues should arise. The purpose of these criteria is to ensure all work done follows all UK law, protects the consumer, ensures proper security and that any ethical issues are properly addressed. Overall due to the aim of the artefact being an application used for reminders, the risk of breaking the law or reaching strong ethical concerns is very low.

# References

Cahill, S., Macijauskiene, J., Nygård, A.-M., Faulkner, J.-P. and Hagen, I. (2007). Technology in dementia care. *Technology and Disability*, 19(2–3), pp.55–60.

C. V. Saucken, F. Lachner and U. Lindemann (2014). “Principles for User Experience: What We Can Learn from Bad Examples”. *KEER2014. Proceedings of the 5th Kanesi Engineering and Emotion Research; International Conference*. Sweden, 2014. Linköping : Linköping University. pp. 1331-1341

Danaher, J. (2018). Toward an Ethics of AI Assistants: an Initial Framework. *Philosophy & Technology*, 31(4), pp.629–653.

ENL Legal (2019). *Why do we have laws in our society?* [online] Executive Network Legal Ltd. Available at: <https://www.enllegal.co.uk/enl/news/categories/archive/why-do-we-have-laws-in-our-society#:~:text=Ultimately%2C%20the%20legal%20system%20in> [Accessed 9th Feb 2021].

Legislation.gov.uk (2010). *Equality Act 2010*. [online] Legislation.gov.uk. Available at: <https://www.legislation.gov.uk/ukpga/2010/15/contents>. [Accessed 1st February 2021]

M. S. Chen and C. N. Wang (2010). “The effects of memory cue and Memory Aid on prospective memory in older and younger adults”. *2010 IEEE International Conference on Industrial Engineering and Engineering Management*. Macao, 2010. New York, USA: IEEE. pp. 832-836

Myers, M.D. and Venable, J.R. (2014). A set of ethical principles for design science research in information systems. *Information & Management*, 51(6), pp.801–809.

Shneiderman, B. (2000). Universal usability. *Communications of the ACM*, 43(5), pp.84–91.

Government Digital Service (2014). *How copyright protects your work*. [online] GOV.UK. Available at: <https://www.gov.uk/copyright>. [Accessed 1st February 2021]

GOV.UK. (2018). *Data protection*. [online] Available at: <https://www.gov.uk/data-protection#:~:text=The%20Data%20Protection%20Act%202018>. [Accessed 1st February 2021]