

Professional, Legal, Ethical and Social Issues

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Case Study I

“The Blind Leading the Blind”

- As a part of your project you need to capture some retinal images – images of the backs of people's eyes (very useful diagnostically)
- You ask your fellow students to volunteer telling them that you will use eye drops to dilate their pupils and the process may affect their vision for a little while after the exercise

Case Study I

“The Blind Leading the Blind”

- This is what an excessively dilated pupil looks like – you can barely see the iris
- This condition is called *mydriasis*
- The opposite condition – pupil contraction – is called *miosis*



Case Study I

“The Blind Leading the Blind”

- Your plan is to
 - Use mydriatic drops to dilate the pupils
 - Capture the images you need
 - Use miotic drops to return pupils to normal again
- You have informed the subjects of this
 - You have obtained their consent
 - It is a common ophthalmic procedure
 - What can go wrong?

Case Study I

“The Blind Leading the Blind”

- What can go wrong?
 - You have made one of your subjects permanently blind!
 - 3 in 10,000 people will develop acute open angle glaucoma (a sight threatening condition) as a result of routine dilation of the pupils
 - Immediate remedial action could have saved the subject's sight but you weren't in a position to provide this
- What do you do? What should you have done?

Case Study I

“The Blind Leading the Blind”

- What you should do now
 - Hire a good lawyer
 - You are in big trouble because you were not licensed to use the mydriasis inducing medication and, even if you were, you did not seek approval from the University's Ethics or Safety committees
 - Don't expect any support from the University
 - In fact, expect the opposite - you are in violation of the University's Ethics and Safety policies and you can expect to be disciplined by the University for your actions

Case Study I

“The Blind Leading the Blind”

- What you should have done
 - Consulted your supervisor
 - NEVER take a decision to conduct experiments on human subjects ON YOUR OWN – always consult your supervisor before even thinking about it
 - Completed all the Ethics and Risk Assessment forms required by the University
 - Complied with the procedures laid down for this type of experimental work

Case Study II

“Free and Easy Feedback”

- As a part of your project you create a website
- You ask your fellow students to give you feedback on the usability of your website via an online questionnaire
- You store all the feedback, unencrypted, along with the name of the person who supplied it in a file in your personal filespace

Case Study II

“Free and Easy Feedback”

- In a free-text box for general comments at the end of your questionnaire one, very thoughtful, respondent states -
"The reason I found the font and background colours difficult to distinguish might be due to my dyslexia"

Case Study II

“Free and Easy Feedback”

This is what some people with dyslexia look like -



Case Study II

“Free and Easy Feedback”

- Six months after you have left university you receive an angry e-mail from the respondent who had stayed on for further study and is now standing for the sabbatical post of President of the Students' Association
- A fellow candidate is distributing election material alluding to the respondent's dyslexia

Case Study II

“Free and Easy Feedback”

- The respondent is adamant that the only way the information could have been obtained was through the response submitted to your website questionnaire
- You did not release the information personally
- What do you do? What should you have done?

Case Study II

“Free and Easy Feedback”

- What you should do now
 - Don’t just delete the data
 - Your filespace has been hacked so report it to identify the culprit
 - Don’t try to investigate it yourself
 - Your filespace is evidence and if you try investigating it yourself you are likely to invalidate that evidence

Case Study II

“Free and Easy Feedback”

- What you should have considered
 - Data protection law
 - Requires you to take adequate security precautions
 - Requires you to delete data as soon as you no longer need it
 - Stakeholder analysis
 - Six useful tests

Case Study II

“Free and Easy Feedback”

- What you should have done
 - At the time
 - Warned respondents about lack of confidentiality
 - Anonymised the responses
 - Encrypted the data
 - Afterwards
 - Deleted the data once it was no longer needed

Summary

- We have looked at what it means to be a computing professional
 - What a professional is and the role of professional bodies
- We have considered the main branches of law that affect the practise of computing
 - Contracts, Intellectual Property, Data Protection, Computer Misuse and Computer Evidence
- We have examined methods for the resolution of ethical problems
 - Moral systems, stakeholder analysis and the six useful tests
- We have studied some examples of the relationship between computer technology and society
 - Safety Critical Systems, how society affects technological choices