CSC4104: *Systèmes d'information et transformation numérique*
Exam 2025
Dr J Paul Gibson

INSTRUCTIONS

<u>**Answer only 1 question**</u> – if you answer more than 1 question then only the first answer will be evaluated and awarded a mark. You may answer in English or French.

You are allowed access to any secondary material (notes/books/web). Please correctly cite/reference any material that you use in your answer that is not your own work. For example,

> In [1] the authors write there is a "need to develop an additional, alternative sociomaterial conceptualization of IS based on a non-dualist, relational ontology "
>
> **Bibliography**
> [1] Boell, Sebastian K., and Dubravka Cecez-Kecmanovic. "What is an information system?." *2015 48th Hawaii International Conference on System Sciences*. IEEE, 2015.

(<u>Plagiarism of secondary material will be punished and may lead to disciplinary action.</u>)

The use of LLMs (like ChatGPT) is not forbidden, but any text generated must be acknowledged accordingly. The (sequence of) prompts that you used – and the version of the AI – must be given in an appendix.

I suggest you spend **90 minutes** to answer your question. However, there is *no strict time limit* and I will permit you extra time if you require it.

The **evaluation criteria** are:
1) **correct use of technological terms and abstract concepts from the module,**
2) **evidence of what you have learned during the module,**
3) **coherent reference to work you have done as part of the project case study.**

Please submit your answer electronically – email paul.gibson@telecom-sudparis.eu - as a .pdf (or plain text). Do **not** leave the exam before Paul has acknowledged reception of the email.

QUESTIONS

Question 1: During the module we discussed the notion of ethics in information systems. What are the 3 main ethical issues that you are most worried about, in general (explain why). Which are relevant to the case study you developed, and how would you manage them?

Questions 2: It has been said that "To work in the development of an information system it is necessary, but not sufficient, to be a good programmer". Based on your experience during the project development of the module, discuss the arguments for an against such a statement.

Question 3: Imagine that you are a consultant for a large international consultancy, with clients of all sizes and types, working in many different domains. The firm is considering adopting BDD (behaviour driven development) practices. You are to provide a short analysis of BDD using gherkin and cucumber, based on your experience with the case study you developed.

Question 4: It has been said that the use of AI, in general, and LLMs, in particular, will change enormously the role of experts in information system development. Based on you experience with the case study you developed, discuss the arguments for an against such a statement. Explicitly address the issue of whether AI can/could help in the writing of a "cahier des charges".

Question 5: Requirements specification is a fundamental part of information system development. A major issue is that different actors in the system may have conflicting requirements. With respect to the actors in the case study you developed, consider the 3 following cases: 1) the clients of the system have conflicting requirements with the users of the system, 2) different types of users of the system have conflicting requirements, and 3) users of the same type have different requirements. Identify examples of such cases, and comment on how such conflicts can be managed. In particular, which members of the IS development team are responsible for this.

Question 6: In the evaluation of the "cahier des charges" in the continual assessment of your case study project, your team may not have submitted material for all the sections. You may choose any one of these and complete the work today (at the end of the CF)

Question 7: It has been said that "The most important components of any information system are the humans." Discuss.