

*FOR EXTERNAL EXAMINER (date of this version: 16/3/2015)*

UNIVERSITY OF EDINBURGH  
COLLEGE OF SCIENCE AND ENGINEERING  
SCHOOL OF INFORMATICS

**INFR10022 PROFESSIONAL ISSUES**

**Tuesday 12<sup>th</sup> May 2015**

**14:30 to 16:30**

**INSTRUCTIONS TO CANDIDATES**

**Answer QUESTION 1 and ONE other question.**

**Question 1 is COMPULSORY.**

**All questions carry equal weight.**

**This is an OPEN BOOK examination.**  
**You may consult any books or other documents during this examination.**  
**The use of Calculators is permitted.**

Year 3 Courses

Convener: S. Viglas

External Examiners: A. Cohn, T. Field

**THIS EXAMINATION WILL BE MARKED ANONYMOUSLY**

1. You MUST answer all five parts of this question.

The Scottish Government has recently consulted on *proposed changes to the NHS central register which would allow certain data, including names, dates of birth, postcodes and gender, to be passed on to public bodies including HMRC.*<sup>1</sup>

*The organisation [seeking information] will provide information on the individual they wish to identify and will receive equivalent information from the NHSCR (National Health Service Central Register) and the principal reference number which is the UCRN (Unique Citizen Reference Number).*

The schedule of “Scottish Public Authorities” with whom this data would be shared, under these proposals has 97 entries, including

- The Drinking Water Quality Regulator for Scotland,
- The Queens Printer for Scotland,
- Edinburgh Leisure,
- Caledonian Maritime Assets Ltd, and
- VisitScotland.

The consultation claims that, *the proposed amendments will:*

- *Improve the quality of the data held within the NHSCR*
- *Assist the tracing of certain persons, for example, children who are missing within the education system and foreign individuals who received NHS treatment in Scotland and left the country with outstanding bills*
- *Enable the approach to secure and easy access to online services (myaccount) to extend beyond services of Scottish local authorities and health boards to a wider range of public services*
- *Enable the identification of Scottish tax payers to ensure the accurate allocation of tax receipts to Scotland associated with the Scottish Rate of Income Tax.*

- (a) What UK legislation governs the holding and sharing of personal data and how is it relevant to this proposal? [5 marks]
- (b) What benefits might the holding and sharing of this personal data bring for the Scottish Public Authorities listed above? [5 marks]

The Informed Rural Passenger (IRP) project, a project in Scotland using crowd-sourcing techniques to allow passengers, through their mobile phones, to contribute and consume public transport information, noted that,

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<sup>1</sup>Text in italics is quoted directly from the consultation.

Given the sensitive nature of the information collected from passengers (e.g. their location) ensuring privacy of contributors and their information is vital. However, in a linked data environment this is more challenging than simply restricting access, or removing clearly identifying features (e.g. names), as the existence of related (and linked) datasets may be used to infer characteristics of the original information source.

- (c) Explain what this means, and give an example scenarios of such inference. [5 marks]
- (d) What risks might the holding and sharing of the NHSCR data detailed above bring? [5 marks]
- (e) What internationally recognised rights and freedoms are relevant to the consultation? Explain your answer. [5 marks]

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2. (a) What factors combine to make a successful team? If a team ceases to work well, how would you expect this to manifest itself? Give examples and say what you as team leader would do to rectify the situation. [10 marks]
- (b) Discuss the changes in team structure and management required as a hypothetical startup grows from an initial team of two founders with complementary, mainly-technical skills, to a software company with 20 employees. [5 marks]
- (c) Explain any assumptions you make about the business and its development. [10 marks]

3. A university regularly sends personal tutors updates of the following form:

Dear Philip,

Marks for course work assignments your students are taking are now available on the TheonPortal at the URLs below:

DMMR assignment 06 and INF2A assignment 1 for S1710172 (Sebastian) at <https://student.inf.ed.ac.uk/student/s1710172/>

DMMR assignment 06 and INF2A assignment 1 for S1725677 (Stratis) at <https://student.inf.ed.ac.uk/student/s1725677/>

DMMR assignment 06 and INF2A assignment 1 for S1777896 (Petros) at <https://student.inf.ed.ac.uk/student/s1777896/>

DMMR assignment 06 and INF2A assignment 1 for S1644907 (Perdita) at <https://student.inf.ed.ac.uk/student/s1644907/>

DMMR assignment 06 and INF2A assignment 1 for S1770491 (Colin) at <https://student.inf.ed.ac.uk/student/s1770491/>

INF2A assignment 1 and DMMR assignment 06 for S1742770 (Elham) at <https://student.inf.ed.ac.uk/student/s1742770/>

INF2A assignment 1 and DMMR assignment 06 for S1751197 (Wenfei) at <https://student.inf.ed.ac.uk/student/s1751197/>

INF2A assignment 1 and DMMR assignment 06 for S1754985 (Kousha) at <https://student.inf.ed.ac.uk/student/s1754985/>

INF2A assignment 1 and DMMR assignment 06 for S1762220 (Rik) at <https://student.inf.ed.ac.uk/student/s1762220/>

INF2A assignment 1 and DMMR assignment 06 for S1767277 (Ajitha) at <https://student.inf.ed.ac.uk/student/s1767277/>

DMMR assignment 06 and INF2A assignment 1 for S1765766 (Rahul) at <https://student.inf.ed.ac.uk/student/s1765766/>

INF2A assignment 1 and DMMR assignment 06 for S1729288 (Leonid) at <https://student.inf.ed.ac.uk/student/s1729288/>

Regards,

Informatics Student Services

Redesign this letter using appropriate principles of information graphics. Sketch the design, and explain its features. Justify your design. List sources for any principles you apply.

[25 marks]