

Name: _____

USC ID: _____

INF 529 Midterm Exam

Spring 2019

IMPORTANT: FOR REMOTE PROCTORS

Please Scan Both Sides of all Pages
Students have been instructed to answer
some questions on the back of the page.

Instructions:

Show all work. This exam is open book and open note. You may use electronic devices to consult materials stored on the devices, but you may not use them to access material through the net, or for communication in any manner. Electronic devices must be placed in “airplane mode” with wifi and other communications capabilities disabled. You have **120 minutes** to complete the exam.

Please prepare your answers on separate sheets of paper. You may write your answers on the sheet of paper with the question (front and back). If you need more space, please attach a separate sheet of paper to the page with the particular question. **Do NOT extend your answer on the back of the sheet for a different question, and do NOT use the same extra sheet of paper to answer more than one question.** The exam will be split apart for grading by different people, and if part of your answer for one question appears on a page given to a different grade because the sheet contains parts of the answer to more than one question, then you will NOT receive credit for that part of the answer not seen by the grader. In particular, **each numbered question must appear on separate pieces of paper so that the exam can be split for grading.**

Be sure to include your **name on each page.**

There are **100 points** in all and **3 questions.**

	Q1	Q2	Q3	Q4	Total Score
Score					

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1) How did they get my data? (30 points)

Privacy breaches involve inappropriate access to or use of personally identifiable information. Such inappropriate access typically takes one of two forms. Either data held legitimately is disclosed through the actions of criminals that breach the security of a system, or alternatively, the holder of the information gives the data to someone that should not have access or uses the data in ways that are not authorized or collects data they shouldn't be collecting to begin with.

- a) List the three primary ways that adversaries can get hold of your personally identifiable data in the systems that you use. (10 points) [Hint, of the three different ways, two of them are probably your own fault]

- b) Explain the role that malware, malicious apps, or apps that exceed their legitimate authority play in mis-use or release of our PII. (10 points) [Hint, it can play a role in any of the three ways covered in 1a, but you must explain how it does so] (answer on back of page)

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- c) If you were designing a system that used PII, what are some of the steps you would take to minimize the risk of inappropriate disclosure of PII to others. (10 points)

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- 2) Much of the information collected about us has been collected and stored for many years. The first photograph was taken around 1827, the first video (movies) were recorded in 1888. The earliest transaction receipts (records of goods traded) go back at least as far as the Mesopotamian civilizations. Given that such data has been recorded for years, what has changed about our technology that makes things different in terms of its impact on our privacy? (10 points)

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- 3) The primary focus in class for our discussion on expectations of privacy was on access to our private data by our government (e.g. search and seizure, wiretaps, our encrypted data, messages, email, as well as transaction records, information from security cameras, and even D.N.A.). The discussion was very much focused on the expectations of individuals within the United States. There are equally legitimate arguments on both sides of the issue regarding what kind of access is to be permitted and what should be the conditions under which the data may be used. These arguments attempt to balance potential rights of privacy with the need of government to stop crime and protect its citizens. These arguments have been made for and against proposals in the United States, and they have been made in other countries as well, sometimes resulting in different outcomes in terms of the laws that apply.

In this question you are to make arguments in favor of the rights of individual privacy over the need for governments to have access to significant private information for the purpose of public safety. You are ALSO to make arguments in favor of the need for government to have access to private information, even at the cost of diminishing individual privacy. I want you to make equally compelling arguments on each side of this issue, and you should provide example scenarios or real world examples that support each of the opposing arguments.

You do not need to tell me where your personal beliefs fall in terms of these arguments. I am not grading your viewpoint. If, however, you object to arguing the opposing side as your own, then you may cast those arguments as "Others agree that", or with similar wording. (30 points)

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- 4) You have been hired by a joint commission comprising the FTC in the United States, and investigators from the E.U. to analyze the security and privacy practices of Facebook, Google, Apple, and similar data brokers. In particular, you are asked to check whether the practices of these organizations are consistent with the terms and conditions / privacy policies of the organizations, and with applicable law in Europe and the U.S.
 - a) List some of the actions (and inaction) by these three organizations that have come under fire by regulators for demonstrating a lack of concern for the privacy of individuals. [hint, most of these items were the subject of multiple current event discussions] (10 points)

- b) Discuss policy, technical, and procedural recommendations that you have for these three organizations, and other organizations that process this kind of PII, that will help them to address these concerns. (10 points)

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- c) Discuss your recommendations for elements that you feel should be part of a comprehensive U.S. privacy law in order to address the potential misuse of our PII by these and other private organizations. (10 points)