PHPM 631 Assignment 6: Security & Privacy Worksheet and Information (tutorial) Sheet
Due date: Submit on E-campus by 11:59pm Sunday 3/29

Submission. Submit on E-campus by 11:59pm the day before the class they are due.
- One zipped file of the following files
   - [Group work: share a gdocs link] Team worksheet answering the questions below in a google docs
   - [Individual Task: submitted individually on E-Campus] One page security & privacy information sheets (both word & pdf)

Late Assignments: Each student will be allowed one late assignment, due 7 days from the due date. NO other late assignments or make up will be accepted.

Plagiarism: If you consult any outside sources when doing your work, you are expected to further document these sources. Give credit where credit is due. Plagiarism will not be tolerated.

Guideline for assignment grading (4%)
- 70% (70 points): Bad (√ --) Did NOT follow all instructions
- 80% (80 points): Reasonable (√) Followed all instructions
- 90% (90 points): Good (√) Followed all instructions, and did good work
- 100% (100 points): Great (√ +) Followed all instructions and did great work

Objective
By the end of this assignment, you should be able to
- Distinguish among privacy, confidentiality, security, and accountability as they relate to health information
- Identify threats to health care information and information systems, both negligent and malicious
- Describe mitigation options.

Team Project
You must work in a team of 3 or more for this assignment. All of you will receive the same grade for this part of the assignment. Submit one assignment for the whole team.

Privacy note: I may share good submissions in class as well as post online.

Co-editing and collaborating remotely requirements considering current situation
Working effectively as a group online remotely is becoming an important skill in the modern workplace. Learning to communicate well in writing (email, chatrooms, comments etc) is key (frequency, content, when etc are all important judgement calls you have to learn), and you will get practice. Here are the requirements that you MUST follow
- Use google docs
- You must work remotely and not physically be located in the same room
- You may work synchronously (at the same time while on a call) or asynchronously (each add into the document parts at different times)
- Submission is by sharing the google docs when the assignment is completed with
   - Hye-Chung Kum kum@tamu.edu
   - Michelle Mellers mmellers@tamu.edu
   - Do not edit AFTER submission date. If the time stamp changes after submission date, you will lose some points
- We will look at the google doc history and who contributed what part by clicking on "All changes saved in Drive"

Required Reading for this Assignment
See the readings assigned for the next two weeks covering Privacy and Security (i.e., Chapter 9 and articles and online materials).

Articles & online materials for this assignment (repeated from the class website for your convenience)

1. [A] Goth G. Running on EMPI. Health information exchanges and the ONC keep trying to find the secret sauce of patient matching. Health data management. February 2014;22(2):52-52, 54, 56 passim.
2. [L] Tutorial on Privacy Preserving Interactive Record Linkage.
    a. https://pinformatics.org/ppirl/faq/faq.htm
    b. http://mindfil4.herokuapp.com/introduction
3. https://www.healthcareitnews.com/news/hhs-publishes-final-regs-info-blocking-interoperability
4. [A] Weitzner DJ, Abelson H, Berners-Lee T, Feigenbaum J, Hendler J, Sussman GJ. Information accountability. Communications of the ACM. 2008 Jun 1;51(6):82-7
5. [A] S. Fienberg, Confidentiality, Privacy and Disclosure Limitation, Encyclopedia of Social Measurement, Academic Press, 2005, pp. 463–469.
6. [A] Arvind Narayanan and Vitaly Shmatikov. Myths and fallacies of personally identifiable information. Communications of the ACM, 53(6):24–26, 2010.
7. [A/L] Institute of Medicine (US) Committee on Health Research and the Privacy of Health Information: The HIPAA Privacy Rule Summary; Nass SJ, Levit LA, Gostin LO, editors. Beyond the HIPAA Privacy Rule: Enhancing Privacy, Improving Health Through Research. Washington (DC): National Academies Press (US); 2009. Summary. Available from: https://www.ncbi.nlm.nih.gov/books/NBK9581/
8. [L] Zero-day attacks are meaner, more rampant than we ever thought. https://arstechnica.com/information-technology/2012/10/zero-day-attacks-are-meaner-and-more-plentiful-than-thought/

Assignment:
    I. Header
- Team members name:
- Work mode: describe briefly how you worked together for this assignment
    i. Example 1: we met synchronously on zoom three times (include time and date) to complete the assignment.
    ii. Example 2: we mostly worked asynchronously after we split up the work on a call on (include time and date), then agreed over email.
    iii. This is called "co-editing". For each team member
        1. What is your co-editing experience?
            a. I have never co-edited gdocs
            b. I have some experience co-editing gdocs
            c. I often co-edit gdocs
        2. Have you ever looked at gdocs history (Y/N)?

    II. Worksheet: Answer the following questions in a word document and submit (single space).
- Q1: Basics
    1. Define the following terms and discuss how they are different as well as how they relate to each other: Information Privacy, Information Security, Confidentiality. Information accountability.

- Q2: HIPAA
    1. Summarize the HIPAA Security Rule in one paragraph (no more than 300 words)
    2. Summarize the HIPAA Privacy Rule in one paragraph (no more than 300 words)
    3. Summarize the different HIPAA safeguards in one paragraph (no more than 300 words)
    4. List three circumstances when a covered entity may release PHI without patient informed consent.
- Q3: Medical Identity Theft - Use the internet to answer the following questions
    1. What is Medical Identity Theft ? (reference the source of your answer)
    2. [**Individual Task**: each person must to do this. So 2* number of team members] Find videos of real people who are victims of medical identity theft on youtube and watch at least two. Summarize what happened (remember to include the link)
    3. List one hospital policy that can mitigate medical identity theft?
- Q4: Malware & IT Security
    1. What is ransomware ?
    2. List three other types of malware and what it is
    3. List three hospital policies that can mitigate risk from malware ?
- Q5: Privacy, PHI and patient matching. Make sure to read article 1 (Goth 2014), and tutorial 2 above (Tutorial on Privacy Preserving Interactive Record Linkage)
    1. What is a patient matching?
    2. List three reasons why patient matching is difficult.
    3. List at least one harm that may result from the patient matching process when there is too much emphasis on privacy protection
    4. List at least two ways that privacy can be enhanced while still keeping data quality high.

III.   [**Individual Task**: each person must create one.] **One page Information Sheet (tutorial) for Hospital Staff**

- Synthesize everything you learned to create an information sheet to print as handouts to distribute widely among hospital staff for training.
    - You will be graded on the content of the tutorial. **That is what the information sheet teaches hospital staff about relevant things related to privacy and security.**
    - This is NOT a flyer to come to some workshop. But MUST have information to teach hospital staff about privacy and security on the one pager.
    - Format it as a handout, with the front page being an information sheet for security, and the back being an information sheet for privacy.
    - Remember to submit both the word version and the pdf version.
    - Name the file with the last name of the author.
    - **Each person will submit separately on E-Campus**