Individual Research Paper Instructions

1. Introduction

You are expected to write a research paper for this course. This paper should be written as a Survey Report. A list of suggested topics is included at the end of this document. You can also choose your own topic, as long as it is related to Information Security.

There should be at minimum 5 authoritative sources used in your paper. Seek out major authoritative journals (IEEE, ACM, etc.) or textbooks. Depending on the topic some additional resources may be accepted where published research is not readily available.

Note: this is not a group assignment and each individual should write and submit their own individual and unique work. Plagiarism is a serious offense and could result in (at minimum) a zero for the assignment. Violators may also receive an F in the course.

2. What is a Survey Report?

Basically, a survey report is a summary of the state-of-the-art research results in your field. The survey report serves two purposes:

(1) It summarizes the research papers you have read; it is also your understanding of the research field that you have chosen;
(2) It is also a study guide for other people who are going to work in this area; for example, if somebody is going to work on RFID security; instead of spending a lot of time to search for papers, read papers, and digest the papers, the reader only needs to read your survey report and then he/she will have a good understanding of the field;

3. Outline of Your Survey Report:

(1) **Abstract**: an outline and summary of your survey report;
(2) **Introduction**: a basic introduction of the background information of your research area;
(3) **State-of-The-Art**: in this section, you should summarize other people’s research results; do not try to copy/paste large portion of the text; instead, you should present a brief summary for each methodology;
(4) **Comparison**: you should compare and summarize other people’s methodologies;
(5) **Future Research Challenges:** this is the most important section; in this section, you need to discuss the open research issues and challenges; in this section, you should be very specific about what the open issues are; your future work will be based on this section;

(6) **Conclusion:** this section concludes your report;

(7) **List of Reference:** the references should be numbered; remember that in your report, when you cite the reference, you should also indicate the reference number;

(We have posted two sample survey reports in the same folder; they do not necessarily follow the above outline, but they give you basic ideas of what a survey report should look like; however, when you write your own survey report, you need to strictly follow the above outline;)

4. **Common Issues in Survey Report Writing**

(1) **No structure:** the whole report is one single paragraph or a few paragraphs; the report is not divided into sections;

(2) **Outline not followed:** the report does not have the necessary components listed in the outline;

(3) **Fails to summarize** the essence of other people’s work; Just copy/paste some paragraphs from other people’s papers;

(4) **No reference list:** the survey report should have a list of references at the end;

5. **Suggested Topics:**

Include but not limited to:

- Private and public cryptography;
- Network security;
- Smartphone security;
- Intrusion detection;
- Security control in cloud computing;
- Security in E-commerce;
- Key management;
- Multimedia information security;
- Digital watermarking
- Digital signature;
- Privacy and Security in Library RFID
- Electronic voting
- Analysis of known/unknown modes of attack
- Detecting and mitigating insider threats
- Medical information security
- Biometric identification
6. Submissions

(1) **Abstract (0.5 page):** What is the problem or topic you wish to investigate? How will you approach this research? Why is this of interest to you and why should we be interested in this topic? Here you say what you will be doing in the remainder of the report so define carefully your interests and the parameters (scope) of your projected work. As you collect material and structure an outline keep referring to this section.

(2) **Draft (8 - 10 pages):** You should have the majority of your paper written at this time with resources properly cited in MLA or APA format.

(3) **Final (8 - 10 pages):** Your final submission should be based on your draft, but it is a modified and improved version.

**Format:** double spaced, 12 pt font.

7. **Resources for Review of Proper citations:**

   MLA: https://owl.english.purdue.edu/owl/resource/747/01/
   APA: https://owl.english.purdue.edu/owl/resource/560/01/

8. **Grading:**

   Abstract:  2 point;
   Draft:     2 points;
   Final:    6 points;
   Overall: 10 points;

9. **Grading Rubrics**

   A Paper: This paper does not just fulfill the assignment, it also has something original and important to say and the points it makes are supported well. It is organized effectively, develops smoothly, and it is written clearly and correctly. It is based on data or a review of the literature clearly related to the points it has to make. The sources cited are authoritative, current, and appropriate in scope and quantity. Findings from the literature are integrated into a readable essay. The conclusion suggests that the writer has synthesized the literature,
reflected on it and arrived at a position, stand or perspective on the topic. It is correct in mechanics and MLA or APA citation style.

**B Paper:** This paper fulfills the assignment well. Its general idea is clear and it is effectively presented. It handles its sources well, with no serious errors of fact or interpretation. It reports on adequate literature, but sources are not as authoritative or current as they should be. Generally, the paper is correct in usage, appropriate in style, and correct in mechanical standards of writing, including bibliographic citation.

**C Paper:** This paper is adequate to fulfill the assignment, but it might be better described as an annotated bibliography. Points may be hard to follow and the paper may be poorly organized (e.g., unbroken narrative with no headings or clear relationships; literature review that summarize sources in sequence instead of synthesizing points supported by references). Sources of information are poorly chosen -- insufficient in number, of inappropriate types, too old, lacking in authority, etc. There may be errors in usage, the style may be inappropriate for the assignment, or there may be errors in mechanics of writing or citation.

**D Paper:** This paper meets only the minimum requirement of the assignment. The paper may lack adequate focus and instead attempt to cover too broad a topic. There may be serious error of fact or interpretation. Cited information comes from no authoritative sources in this field. Citations are incomplete or inaccurate or are formatted incorrectly.

**F Paper:** This paper does not fulfill the assignment. It may omit important material lying within its declared scope or make repeated errors of fact or interpretation.