# HW 2: Research Paper

For this homework assignment, you will write a research paper on a topic that intrigued you in this class.

## Formatting

- Margins: 1 inch on all sides
- Font: Times New Roman, 12 pt, double-spaced
- Header: Create a header at the top right-hand corner of each page with your last name and the page number.
- Title: The title should be centered at the top of the first page, and should be written in title case (capitalizing the first letter of each word except for articles, prepositions, and conjunctions). The title should be concise and accurately reflect the content of the paper.
- Length: 3-4 pages

Paper composition:

1. Introduction
2. Body paragraphs
3. Conclusion

If using outside sources, be sure to cite them properly. Follow the APA citation style specified by your instructor and include a works cited page at the end of the paper.

## Research Topics

Write a research paper on one of the following topics:

- Best practices for securing enterprise networks: This paper could explore common network security threats and the best practices that system administrators can use to prevent or mitigate them. Topics could include network segmentation, access controls, firewalls, intrusion detection and prevention systems, and security information and event management (SIEM) tools.

- Emerging threats and vulnerabilities in cloud computing: As more organizations move their data and applications to the cloud, system administrators need to be aware of the unique threats and vulnerabilities that come with this environment. This paper could explore common cloud security threats, such as data breaches and DDoS attacks, as well as best practices for securing cloud environments, such as encryption and access controls.

- Cybersecurity incident response planning: This paper could explore the importance of incident response planning in cybersecurity, and outline the steps that system administrators can take to prepare for and respond to security incidents. Topics could include incident classification, incident response team roles and responsibilities, and incident recovery and post-incident analysis.

- Best practices for securing mobile devices in the enterprise: With the rise of BYOD (bring your device) policies, system administrators need to be aware of the unique security challenges that mobile devices pose. This paper could explore best practices for securing mobile devices, such as mobile device management (MDM) tools, secure access controls, and encryption.

- Security compliance and regulatory frameworks: This paper could explore the various cybersecurity compliance frameworks that organizations must adhere to, such as HIPAA, PCI DSS, and GDPR. Topics could include the requirements of these frameworks, common challenges that organizations face in achieving compliance, and best practices for implementing and maintaining compliance.

- Other topics could include:

  - Deploying Intrusion Detection and Prevention Systems: Best Practices and Case Studies
  - Firewalls: Understanding Stateful vs. Stateless and Best Practices for Deployment
  - Ensuring Business Continuity with Effective Backup and Restore Solutions
  - Windows Server Technologies: An Overview of AD, DNS, LDAP, DHCP, and SAML

Any other topics must be approved by the professor.