Take Home Assignment 1

Instructions:
- Choose one of the following topics to prepare an approximately two-page writeup (can be more, not less).
- I would encourage you to search the web extensively to bring insights about the topic.
- It would be in your interest to cite your sources (and their sources) thoroughly. Links to the sources should be provided at the end of the document.
- Please use the word app (accessed through webmail) and use its "references->insert endnote" functionality to cite your sources.
- Submissions should be in docx format (sorry) and need to be uploaded to moodle.

1. Please explain in detail the difference between system call API and system calls. What are the different classes of system calls? How are system calls implemented?

2. What are threads? What is the difference between user level thread and kernel level threads? During execution, how does it benefit to have kernel level threads? Describe in detail how threads, user-level or kernel-level are treated for concurrency.

3. What are advantages to having a layered/modular/monolithic architecture for OS? Describe the key points from the Linus-vs-Tanenbaum debate on monolithic kernels. How does Linux overcome the disadvantage of a monolithic kernel?