Assignment 1 – Understanding System Calls and OS architectures

This is the **introductory level** assignment. This means it has low impact on your grade. You are however required to submit it.

Assignment Statement:

You have discussed System calls briefly during your class lecture. It is time now to understand the relationship between library and system calls. Let us see how expensive a system call is and how can this expense be reduced using library functions.

Your Tasks:

You are required to complete the following tasks:

1. Print the characters "Hello <your name>!" on the screen 100 times using `printf()` library function. Also, measure the time it takes to print the character 100 times.
2. Print the same characters in point 1 using the system call of `write.` Measure time for this procedure as well.
3. Repeat the same procedure in point 2 using the system call of `syscall.`
4. Compare the time taken by all three. And find reason why one method is faster than the other. Hint: Understand the definition of `printf()` library call.
5. Read, understand and summarize section 2.7 – "Operating-System Structure" of your textbook(9th edition).

Submission:

Submit on google classroom.