Operating Systems – 2: CS3523
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Report- Assignment 5: Syscall Implementation

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Syscall:

- Syscall is type of instruction that allows a user level program to run in kernel mode.
- By this assignment, we learnt that there is a set of certain syscalls.
- Each syscall has a unique identifier called the syscall number.
- The user level program specifies the desired syscall by calling the appropriate syscall number.
- Once the operating system has performed the requested service, it returns control to the user-level program by transferring execution back to user mode.
- The “Makefile” has the list of all the syscalls the kernel can execute.
- “syscall.h” is the header file where all the sycall numbers are stored.
- “sysproc.c” has all the instructions what a syscall does in form of functions.
- “user.h” contains all the declarations of the system calls present.
- Overall, the process of making a system call involves a transition from user mode to kernel mode.
- The execution of the requested service by the operating system.
- A return value is returned to user mode with the result of the system call.

Observations for part 3:

- For the global array, the virtual address was the same throughout even after multiple excutions.
- Also, the physical address kept on changing with the executions.
- For the local array, the virtual address was the same throughout even after multiple excutions.
- Also, the physical address kept on changing with the executions.