Name: Mohammad jawad khan

Roll No: p19-0053

Section: BSCS(5A)

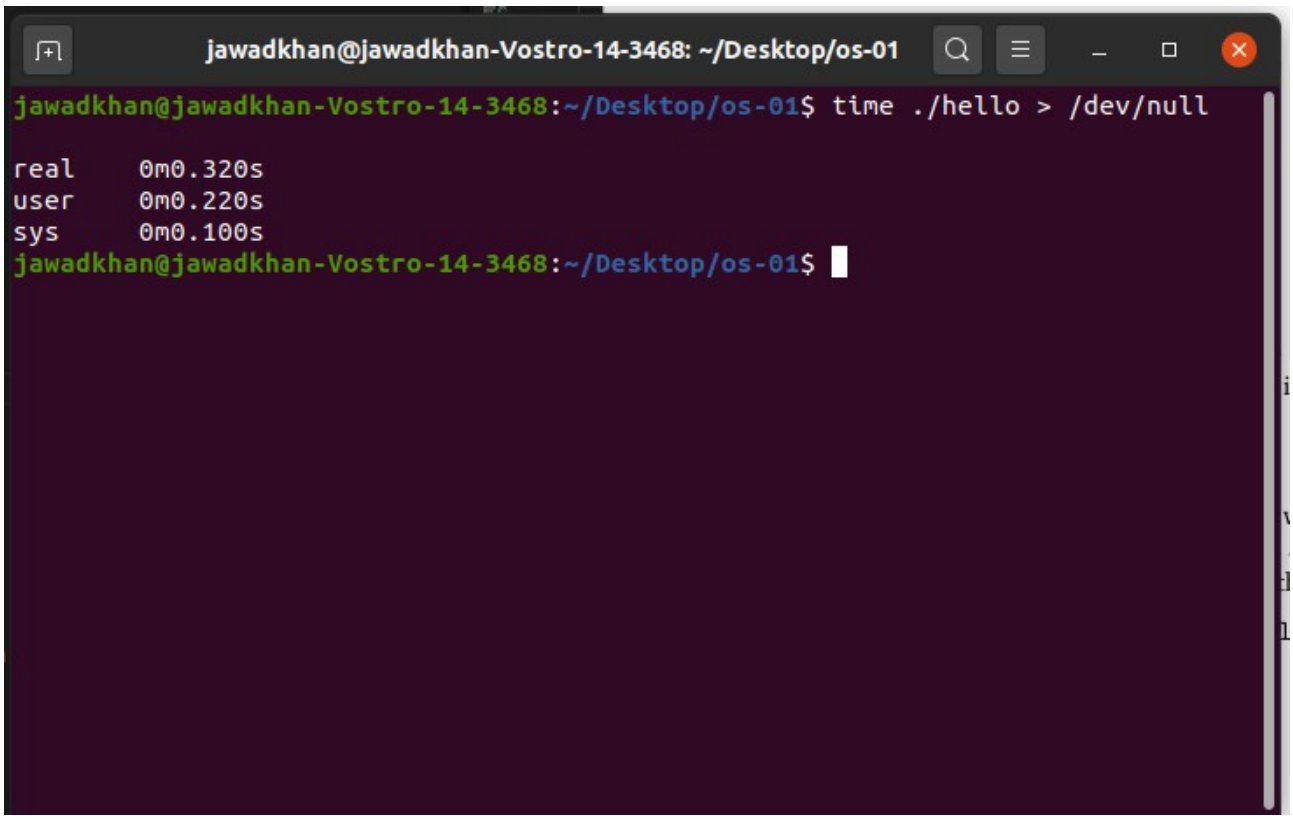
Number of experiments run: **N = 50**

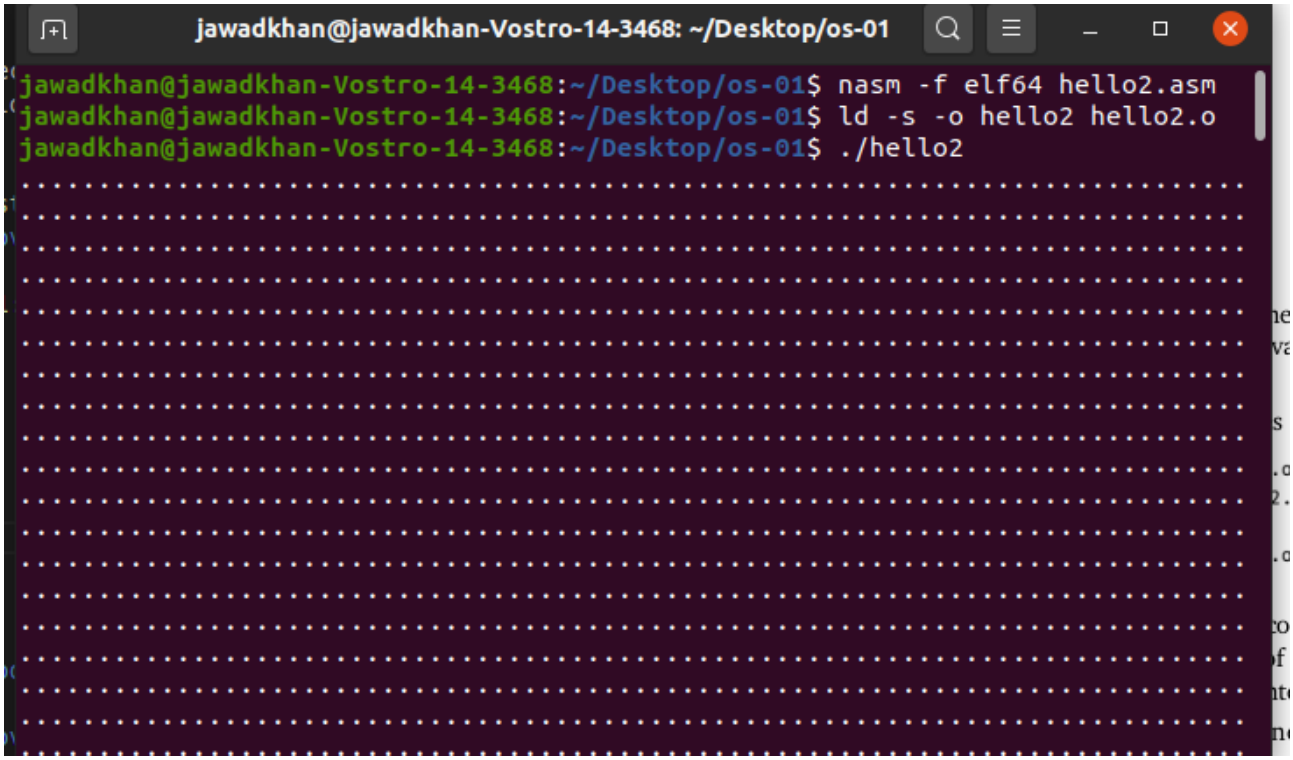
Average ‘user time’ for hello (int-based calls): I = `0.19673333333333326`

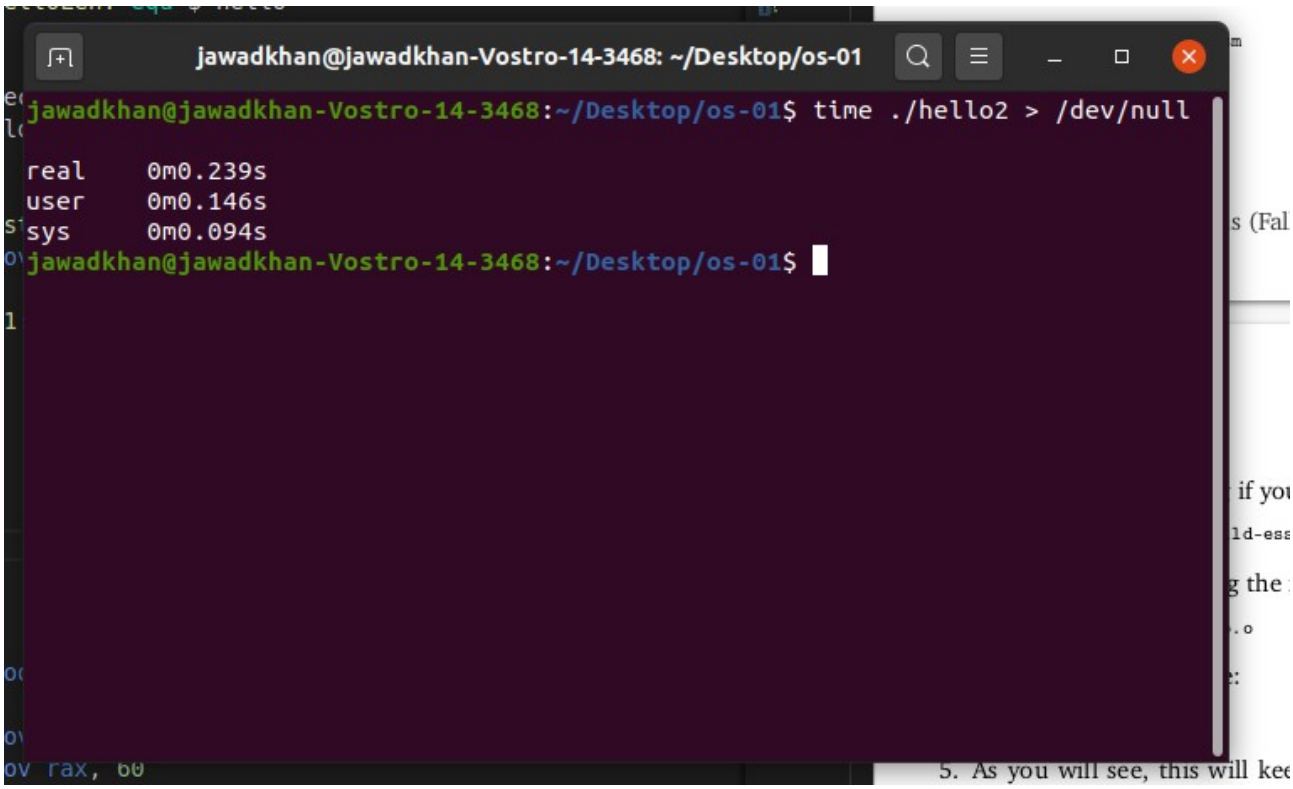
Average ‘user time’ for hello2 (syscall-based calls): S = `0.19673333333333326`

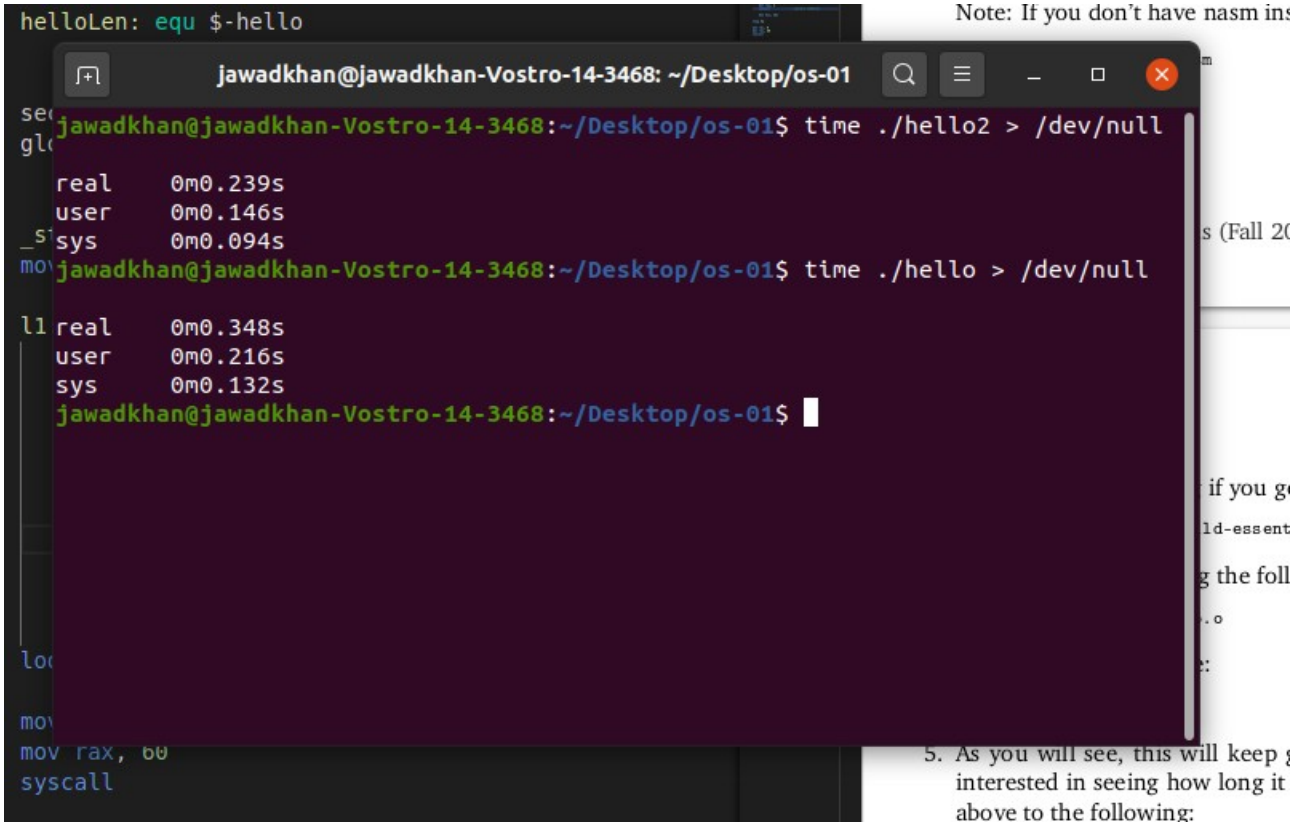
Percentage speedup: (I – S) * 100 / I =

Task 1


jawadkhan@jawadkhan-Vostro-14-3468: ~/Desktop/os-01
jawadkhan@jawadkhan-Vostro-14-3468:~/Desktop/os-01$ time ./hello > /dev/null
real 0m0.320s
user 0m0.220s
sys 0m0.100s
jawadkhan@jawadkhan-Vostro-14-3468:~/Desktop/os-01$


jawadkhan@jawadkhan-Vostro-14-3468: ~/Desktop/os-01
jawadkhan@jawadkhan-Vostro-14-3468:~/Desktop/os-01$ nasm -f elf64 hello2.asm
jawadkhan@jawadkhan-Vostro-14-3468:~/Desktop/os-01$ ld -s -o hello2 hello2.o
jawadkhan@jawadkhan-Vostro-14-3468:~/Desktop/os-01$ ./hello2


jawadkhan@jawadkhan-Vostro-14-3468: ~/Desktop/os-01
jawadkhan@jawadkhan-Vostro-14-3468:~/Desktop/os-01$ time ./hello2 > /dev/null
real 0m0.239s
user 0m0.146s
sys 0m0.094s
jawadkhan@jawadkhan-Vostro-14-3468:~/Desktop/os-01$


helloLen: equ $-hello
jawadkhan@jawadkhan-Vostro-14-3468: ~/Desktop/os-01
jawadkhan@jawadkhan-Vostro-14-3468:~/Desktop/os-01$ time ./hello2 > /dev/null
real 0m0.239s
user 0m0.146s
sys 0m0.094s
jawadkhan@jawadkhan-Vostro-14-3468:~/Desktop/os-01$ time ./hello > /dev/null
real 0m0.348s
user 0m0.216s
sys 0m0.132s
jawadkhan@jawadkhan-Vostro-14-3468:~/Desktop/os-01$
mov rax, 60
syscall

Runner file execute