Cüneyt EREM, Sec-1, 21202398, homework1

1) To do the instructions that described in the question, I googled all of them and download as question said. To learn C programming better, I watched the tutorial videos also.

2) My kernel version is : 3.19.0-25-generic

3) The kernel folder is /usr/src/linux-headers-3.9.0-25$

4) I wrote the code as asked. To execute the program, in the linuc command line, you have to write "make", after that, diff.c will be created. To run it, file1 and file2 need to be at the same place. Then, write "./diff file1 file2 output" and program runs.

5) Strace output =

20:19:13.504565 execve("./diff", ["./diff", "file1.txt", "file2.txt", "output.txt"], [/* 69 vars */]) = 0 <0.000121>

20:19:13.504770 brk(NULL)   = 0x118a000 <0.000005>

20:19:13.504793 access("/etc/ld.so.nohwcap", F_OK) = -1 ENOENT (No such file or directory) <0.000014>

20:19:13.504827 mmap(NULL, 8192, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_ANONYMOUS, -1, 0) = 0x7f34d57ec000 <0.000007>

20:19:13.504860 access("/etc/ld.so.preload", R_OK) = -1 ENOENT (No such file or directory) <0.000006>

20:19:13.504881 open("/etc/ld.so.cache", O_RDONLY|O_CLOEXEC) = 3 <0.000007>

20:19:13.504899 fstat(3, {st_mode=S_IFREG|0644, st_size=88087, ...}) = 0 <0.000004>

20:19:13.504916 mmap(NULL, 88087, PROT_READ, MAP_PRIVATE, 3, 0) = 0x7f34d57d6000 <0.000006>

20:19:13.504931 close(3)   = 0 <0.000005>

20:19:13.504946 access("/etc/ld.so.nohwcap", F_OK) = -1 ENOENT (No such file or directory) <0.000005>

20:19:13.504964 open("/lib/x86_64-linux-gnu/libc.so.6", O_RDONLY|O_CLOEXEC) = 3 <0.000006>

20:19:13.504980 read(3, "\177ELF\2\1\1\3\0\0\0\0\0\0\0\0\3\0>\0\1\0\0\0P\t\2\0\0\0\0\0"..., 832) = 832 <0.000004>

20:19:13.504995 fstat(3, {st_mode=S_IFREG|0755, st_size=1864888, ...}) = 0 <0.000004>

20:19:13.505010 mmap(NULL, 3967488, PROT_READ|PROT_EXEC, MAP_PRIVATE|MAP_DENYWRITE, 3, 0) = 0x7f34d5200000 <0.000007>

20:19:13.505027 mprotect(0x7f34d53c0000, 2093056, PROT_NONE) = 0 <0.000008>

20:19:13.505044 mmap(0x7f34d55bf000, 24576, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_FIXED|MAP_DENYWRITE, 3, 0x1bf000) = 0x7f34d55bf000 <0.000008>

20:19:13.505076 mmap(0x7f34d55c5000, 14848, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_FIXED|MAP_ANONYMOUS, -1, 0) = 0x7f34d55c5000 <0.000005>

20:19:13.505095 close(3)   = 0 <0.000006>

20:19:13.505119 mmap(NULL, 4096, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_ANONYMOUS, -1, 0) = 0x7f34d57d5000 <0.000006>

20:19:13.505136 mmap(NULL, 4096, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_ANONYMOUS, -1, 0) = 0x7f34d57d4000 <0.000005>

20:19:13.505151 mmap(NULL, 4096, PROT_READ|PROT_WRITE, MAP_PRIVATE|MAP_ANONYMOUS, -1, 0) = 0x7f34d57d3000 <0.000004>

20:19:13.505166 arch_prctl(ARCH_SET_FS, 0x7f34d57d4700) = 0 <0.000005>

20:19:13.505209 mprotect(0x7f34d55bf000, 16384, PROT_READ) = 0 <0.000008>

20:19:13.505226 mprotect(0x601000, 4096, PROT_READ) = 0 <0.000006>

20:19:13.505242 mprotect(0x7f34d57ee000, 4096, PROT_READ) = 0 <0.000007>

20:19:13.505257 munmap(0x7f34d57d6000, 88087) = 0 <0.000011>

20:19:13.505321 brk(NULL)   = 0x118a000 <0.000004>

20:19:13.505335 brk(0x11ab000)   = 0x11ab000 <0.000005>

20:19:13.505351 open("file1.txt", O_RDONLY) = 3 <0.000007>

20:19:13.505369 fstat(3, {st_mode=S_IFREG|0664, st_size=64, ...}) = 0 <0.000005>

20:19:13.505385 read(3, "word1\r\nunique\r\nadd\r\ntestword\r\nwo"..., 4096) = 64 <0.000009>

20:19:13.505405 read(3, "", 4096)   = 0 <0.000004>

20:19:13.505418 close(3)   = 0 <0.000005>

20:19:13.505435 fstat(1, {st_mode=S_IFCHR|0620, st_rdev=makedev(136, 21), ...}) = 0 <0.000004>

20:19:13.505450 write(1, "Reading file1.txt finished\n", 27Reading file1.txt finished

) = 27 <0.000006>

20:19:13.505466 open("file2.txt", O_RDONLY) = 3 <0.000005>

20:19:13.505481 fstat(3, {st_mode=S_IFREG|0664, st_size=17, ...}) = 0 <0.000004>

20:19:13.505496 read(3, "veli\r\n49\r\nword1\r\n", 4096) = 17 <0.000006>

20:19:13.505511 read(3, "", 4096)   = 0 <0.000004>

20:19:13.505525 close(3)   = 0 <0.000005>

20:19:13.505538 write(1, "Reading file2.txt finished\n", 27Reading file2.txt finished

) = 27 <0.000007>

20:19:13.505558 open("output.txt", O_WRONLY|O_CREAT|O_TRUNC, 0666) = 3 <0.000027>

20:19:13.505596 fstat(3, {st_mode=S_IFREG|0664, st_size=0, ...}) = 0 <0.000004>

20:19:13.505611 write(3, "213wda\r\n59\r\nadd\r\nali\r\ntestword\r\n"..., 47) = 47 <0.000043>

20:19:13.505667 close(3)   = 0 <0.000039>

20:19:13.505718 write(1, "Writing output.txt finished\n", 28Writing output.txt finished

) = 28 <0.000006>

20:19:13.505739 exit_group(0)   = ?

20:19:13.505926 +++ exited with 0 +++