

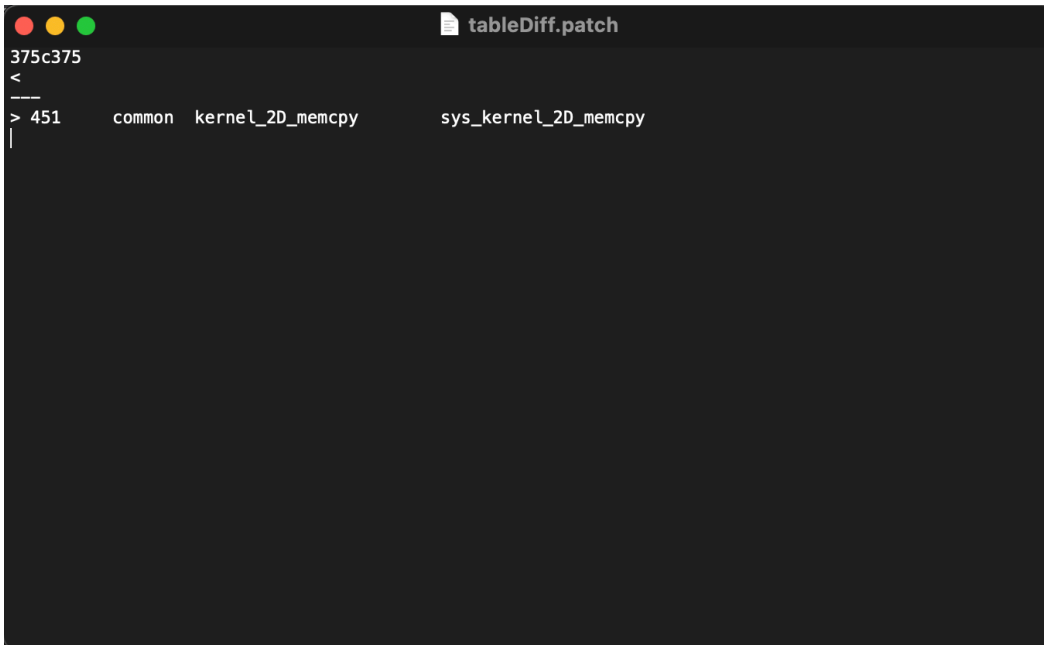
To create a custom system call and add it to the kernel:

The process involved creating a copy of the kernel and extracting it.

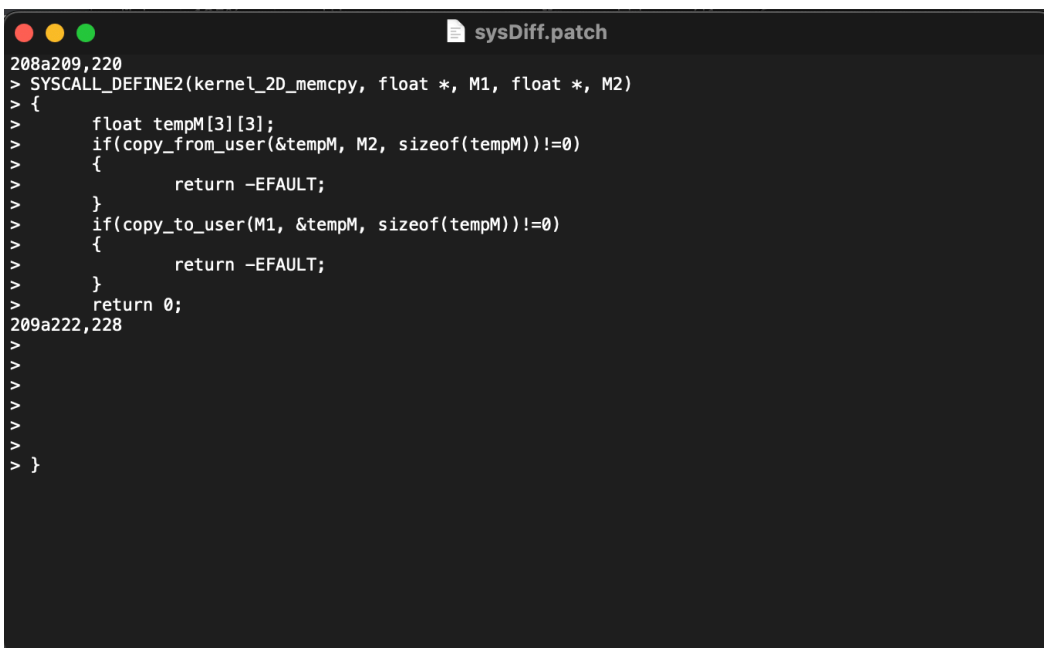
A new entry was added in the table of system calls (syscall_64.b) and the syscall implementation was added to the svcs.c file. Then the kernel was updated and added to the grub.

Our custom syscall, kernel_2D_memcpy, involves using copy_from_user and copy_to_user to copy the contents of a matrix (M1 here) to another matrix (M2).

A test file invoking the above syscall was made to verify the implementation of the syscall.



```
375c375
<
----
> 451      common  kernel_2D_memcpy      sys_kernel_2D_memcpy
|
```



```
208a209,220
> SYSCALL_DEFINE2(kernel_2D_memcpy, float *, M1, float *, M2)
> {
>     float tempM[3][3];
>     if(copy_from_user(&tempM, M2, sizeof(tempM))!=0)
>     {
>         return -EFAULT;
>     }
>     if(copy_to_user(M1, &tempM, sizeof(tempM))!=0)
>     {
>         return -EFAULT;
>     }
>     return 0;
209a222,228
>
>
>
>
>
>
> }
```