

## Lab – Adding a new system call

1. Use the kernel in ~/armsystem/kernel/linux-3.10
2. Edit the file arch/arm/kernel/calls.S
3. find an unused system call number (sys\_ni\_syscall) and change it to sys\_myadd – remember the system call number
4. Create a file fs/myadd.c and define the new system call:

```
#include <linux/syscalls.h>
```

```
SYSCALL_DEFINE2(myadd, int, x, int, y)
{
    return x+y;
}
```

5. Add the file (myadd.o) to fs/Makefile
6. Compile the kernel
7. Create a simple application to test your new system call using syscall(2)
8. Create a simple application with user space add function
9. Use time command to test the performance of the above 2 apps and compare the result

### Notes:

- To compile for arm use:
  - arm-none-linux-gnueabi-gcc -o app1 source.c
- To copy the file to the target
  - cp app1 ~/armsystem/outfs