In this exercise, we will convert kernel that you created in exercise 2 into an NDRange kernel.

Step 1. Convert and Compile the Kernel

____ 1. Reopen the **SimpleOpenCL** project in Eclipse if it is not already open, and change to the C/C++ Eclipse perspective.

____ 2. Open **SimpleKernel.cl** by using **File -> Open File...**

____ 3. Save it as **SimpleKernel_For.cl**

We will come back to the for loop version of the kernel in the next exercise.

____ 4. Reopen **SimpleKernel.cl**

____ 5. Convert the kernel into a ND Range Kernel.

Follow these steps if you need assistance

a. Remove the 4th argument that represented the number of elements

b. Remove the for loop while keeping the statement(s) inside it

c. At the beginning of the kernel, write the line of code that retrieves the current global index in the (0) dimension and assigned it to a variable i of type size_t

d. Use i to dereference the input and output arrays.

e. Save the file.

____ 6. If you closed the terminal

a. Open a terminal

b. cd to the **/home/student/fpga_trn/OpenCL/OCL_17_1/** folder

c. source opencl_init.sh

____ 7. If you didn't close the terminal, make sure the terminal is in the following directory.

```
/home/student/fpga_trn/OpenCL/OCL_17_1/
```

____ 8. In the terminal, type the following command to compile the kernel and verify that it is error free.

```
aoc -march=emulator -board=a10gx SimpleKernel.cl
```