Installation and Usage Instructions

Set up your machine to to build and run seL4 and CAmkES:
https://docs.sel4.systems/projects/buildsystem/host-dependencies.html

Browse and download the required git repository available at: https://github.com/ifscamkes

a) *camkes_tutorial_manifest* is the repository for information flow secure CAmkES
b) *original_camkes* is the repository for original CAmkES (camkes-3.5.0)

In the *camkes_tutorial_manifest* repository, all the Information Flow Secure CAmkES examples are available at:
camkes_tutorials_manifest/projects/sel4-tutorials/tutorials

To run a project:

a) Change the example name to hello-camkes-1
b) In camkes_tutorials_manifest directory, run the following commands:
    i) mkdir <*project_name*>
    ii) cd <*project_name*>
    iii) ../init --plat pc99 --tut hello-camkes-1 [--rwfm_set] [--print_labels]
        1) If you want to use rwfm then use *--rwfm_set* flag
        2) If you want to print the rwfm labels use *--print_labels* flag

        Both these flags work only in information flow secure CAmkES.
    iv) ninja
    v) ./simulate

Ids for components and interfaces can be found in <*project_name*>/rwfm_log file as follows:

Format for component:
(component object -> (component name, id, component type))
Example:
(<camkes.ast.objects.Component object at 0x7fe8c8bd2a50> -> ('client2', 2, <class 'camkes.ast.objects.Component'>))

Format for interface:
(interface object -> (interface name, id, interface type, parent))
Example:
(client1.h2 -> ('h2', 6, <class 'camkes.ast.objects.Uses'>, 'client1'))

Here is a brief overview of the examples:

a) **hello-camkes-1-indirect-write:** Demonstrates that RWFM helps in stopping indirect write from Client 1 to Client 2 via Helper.
b) **hello-camkes-1-indirect-read:** Demonstrates that RWFM helps in stopping indirect read by Client 1 from Client 2 via Helper.
c) **hello-camkes-1-bidding:** Demonstrates that RWFM helps in safe bidding i.e. the bidders do not get to know each others bids and result apriori.
d) **hello-camkes-1-paper-leak:** Demonstrates RWFM helps in preventing the paper leak from TA to students.
e) **hello-camkes-1-rpc-call:** Demonstrates RPC Call from Client 1 to Echo to Client 2.
f) **hello-camkes-1-rpc**: Demonstrates RPC from Client 1 to Echo to Client 2.
g) **hello-camkes-1-multiple-rpc-calls:** Demonstrates multiple RPC Calls from Client 1 to Echo to Client 2.
h) **hello-camkes-1-multilple_rpc:** Demonstrates multiple RPC from Client 1 to Echo to Client 2.
i) **hello-camkes-1-timing-rpc:** To calculate the number of RPC in 100 seconds with RWFM. (Use camkes_tutorials_manifest/timing.sh to run it, after changing the example name to hello-camkes-1)
j) **hello-camkes-1-timing-rpc-call:** To calculate the number of RPC Calls in 100 seconds with RWFM. (Use camkes_tutorials_manifest/timing.sh to run it after changing the example name to hello-camkes-1)