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## Assignment Sheet #01

Submission deadline: 27.04.2018, 23:59

This is only a short exercise to get your hands dirty. You are not expected to present the results, but it is a good opportunity to explain to a tutor, what you could understand. Some organizational hints and related background are already presented in the lecture and also can be found in the lecture notes (uploaded to Stud.IP). Please send the codes of the hands-on session. Send a location of your solution or solution files in a compressed ZIP archive to "Gen Kawamura <gen.kawamura@cern.ch>".

### Exercise 1 – Posix Thread Basis (4 Points)

First, input the codes written on a document you got. In this exercise, students try basis of Pthread programming, compile and understand them.

### Exercise 2 – Shared Data (4 Points)

Students use global variables with threadable program. A standard Mutex example is given. Simple serial and threadable programs computing dot products are examined.

### Exercise 3 – Signaling and Condition Variables (4 Points)

Students need to understand a basis of signal handler and a code for using pthread condition variables. When a given condition is fulfilled, a thread signals to the other. Check the behavior.

### Exercise 4 – Performance - Bug (3 Points)

A buggy program is given. Find the bug and fix the code. Explain why it has a bug.