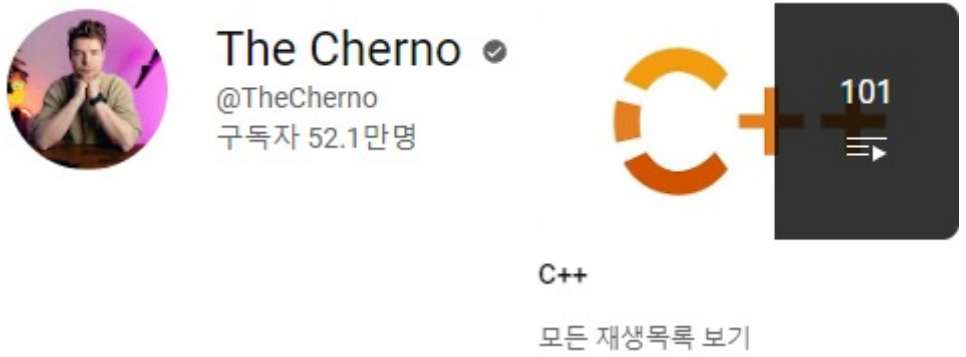
Lab1
Embedded Board and Development Env. Setup

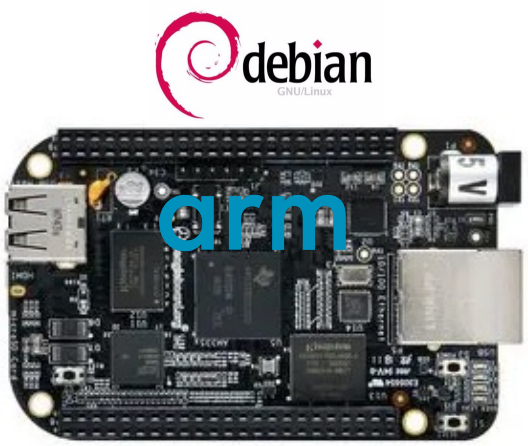
EE405 EE Design Lab [Robot manipulator]
TA Kanghyun Kim (kh11kim@kaist.ac.kr)
23.03.03

Prerequisites

- C++
  (TA's recommended tutorial: The Cherno
  link: https://www.youtube.com/@TheCherno/playlists))

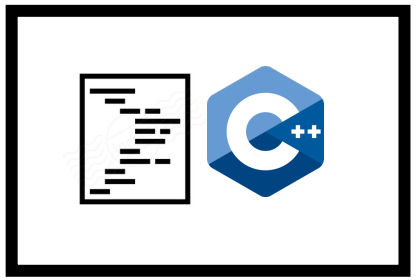


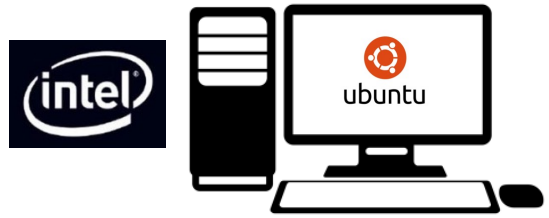
Objectives



Beaglebone Black (BBB)

ssh (secure shell)





Dev. PC

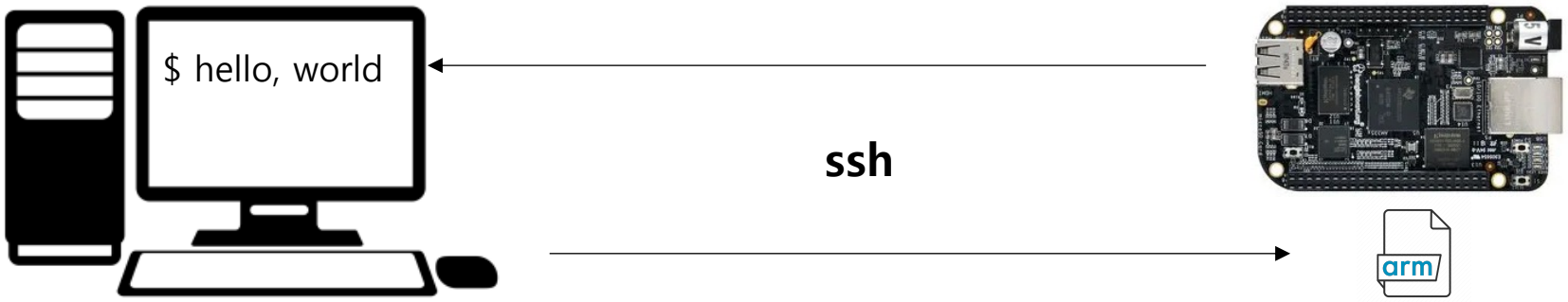
cross-compile

1) scp (secure copy)

2) NFS (network file system)

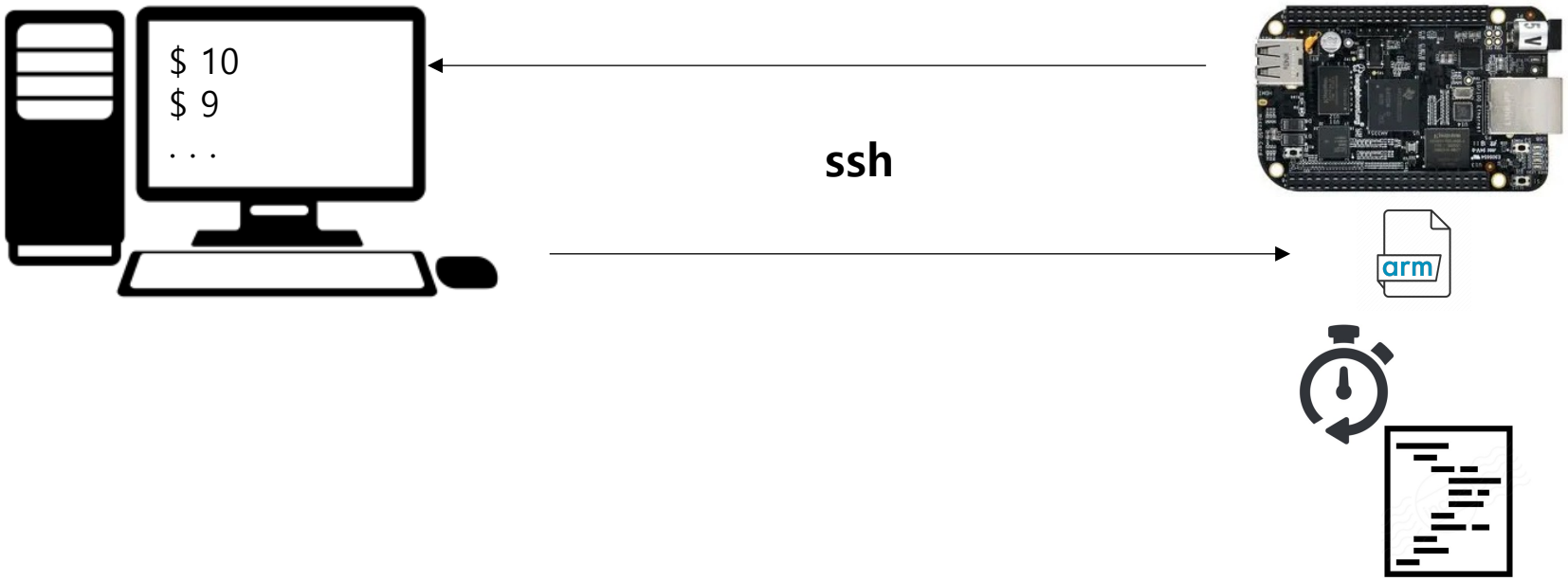
Problems (Week 1)

1. Using **cross-development** system(Linux, NFS, SSH, ...),
   write and execute a simple **"Hello, world" program** for Beaglebone



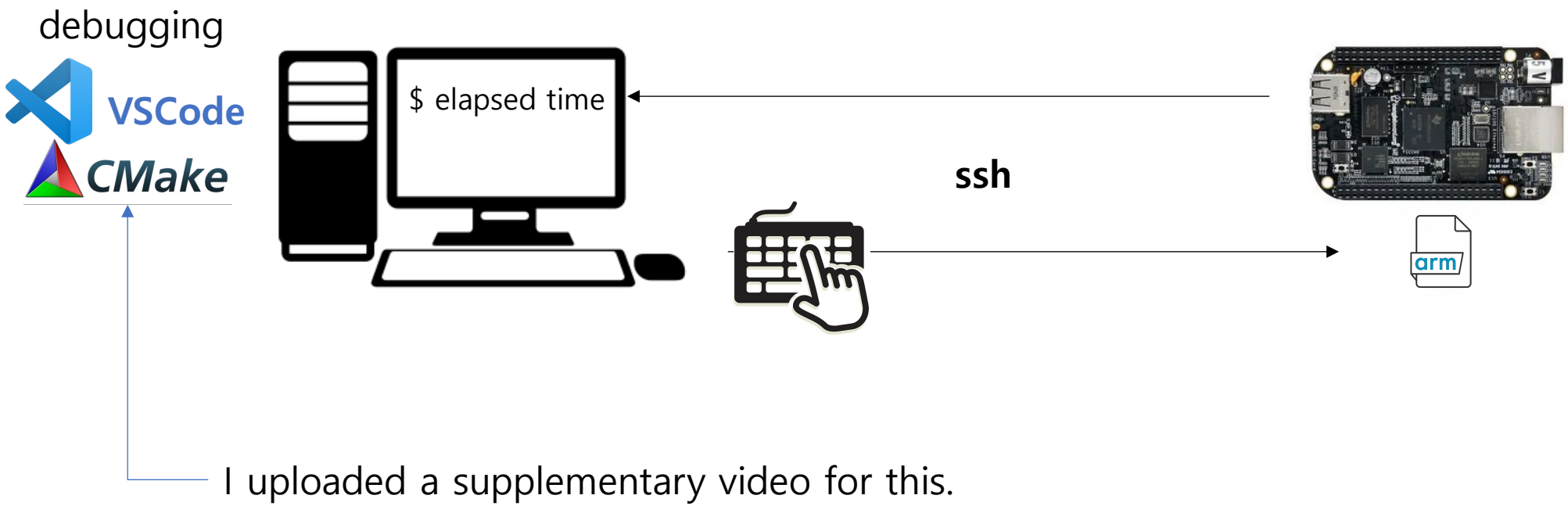
Problems (Week 2)

2. Write and execute a **countdown program**:
   using a **500Hz timed loop** and "**chrono.h**" library



Problems (Week 2)

3. Write and execute a **reaction timer program**:
   using given files "getche.cpp", "getche.h".



About lab session

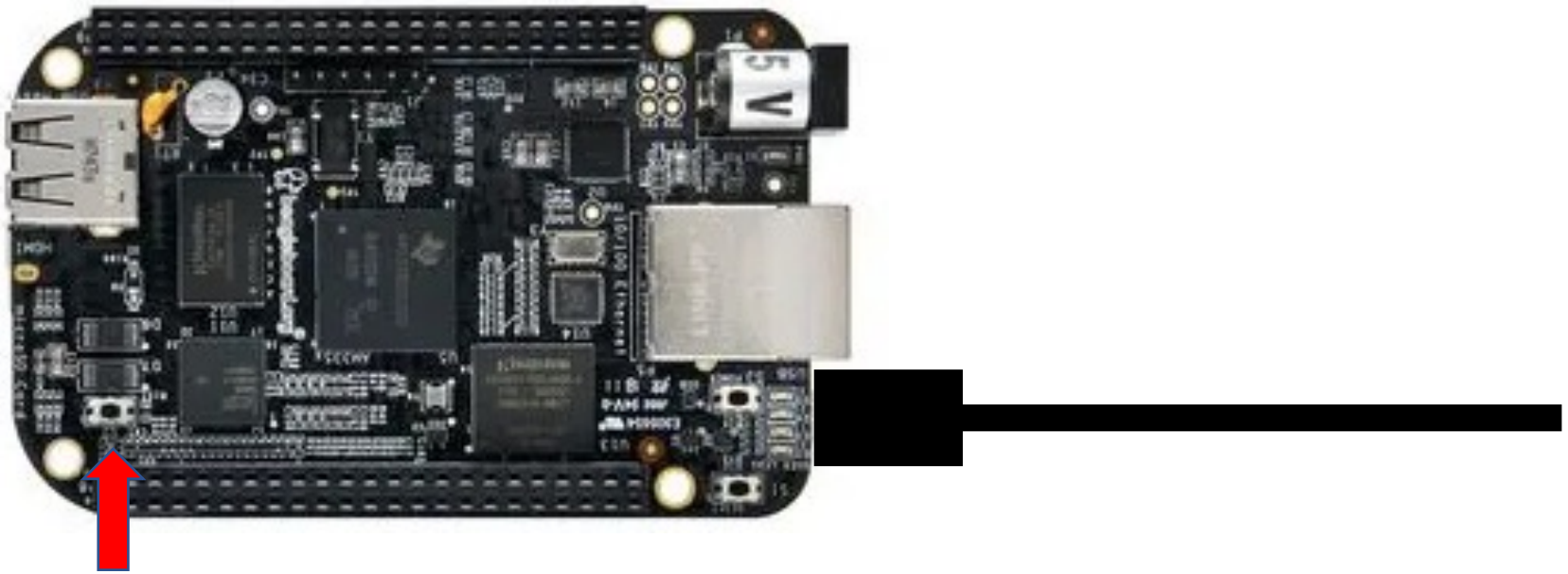
- **Location: N5, 2355 (3rd floor)**
- **About 20 seats** per lab session (Mon, Tue, Fri)
- Experiment resources are **shared** with students on other sessions
  (Please use with caution !)
- A micro SD card will be provided to each person (Linux OS is already installed)
  → You don't need to do the OS installation part of the lab guide.

About experimental resources

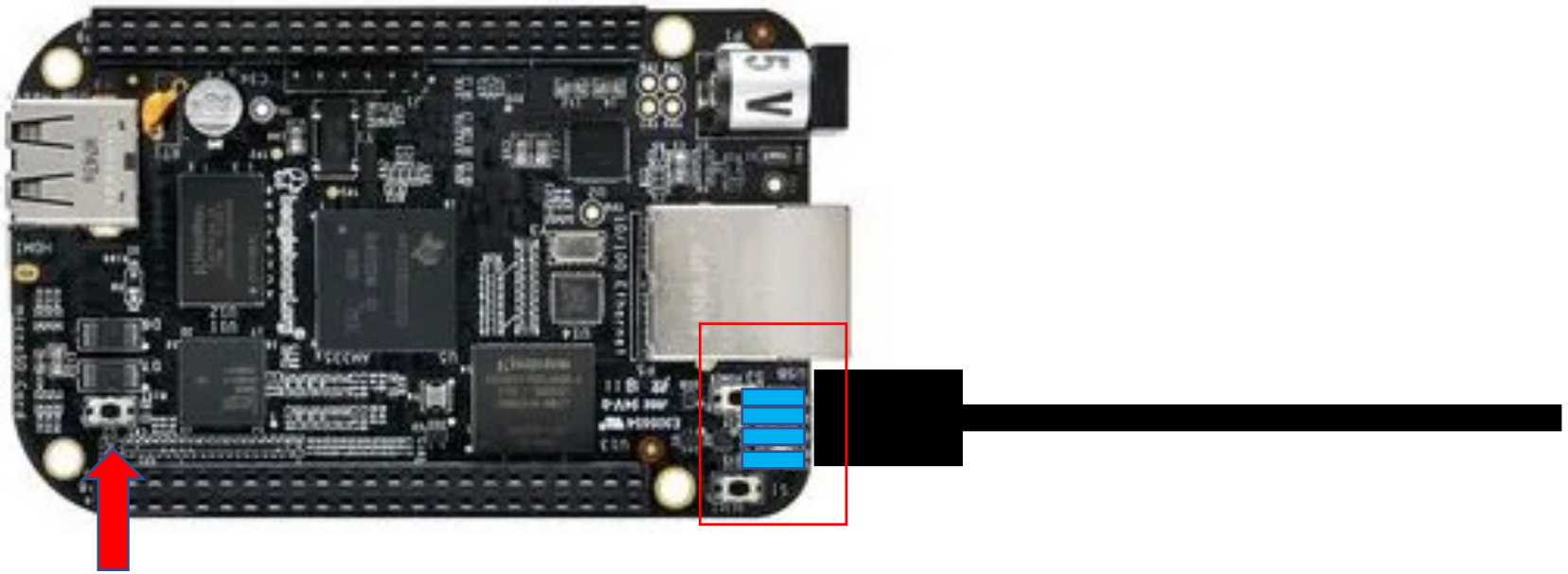
How to boot from your SD card

About experimental resources

About experimental resources

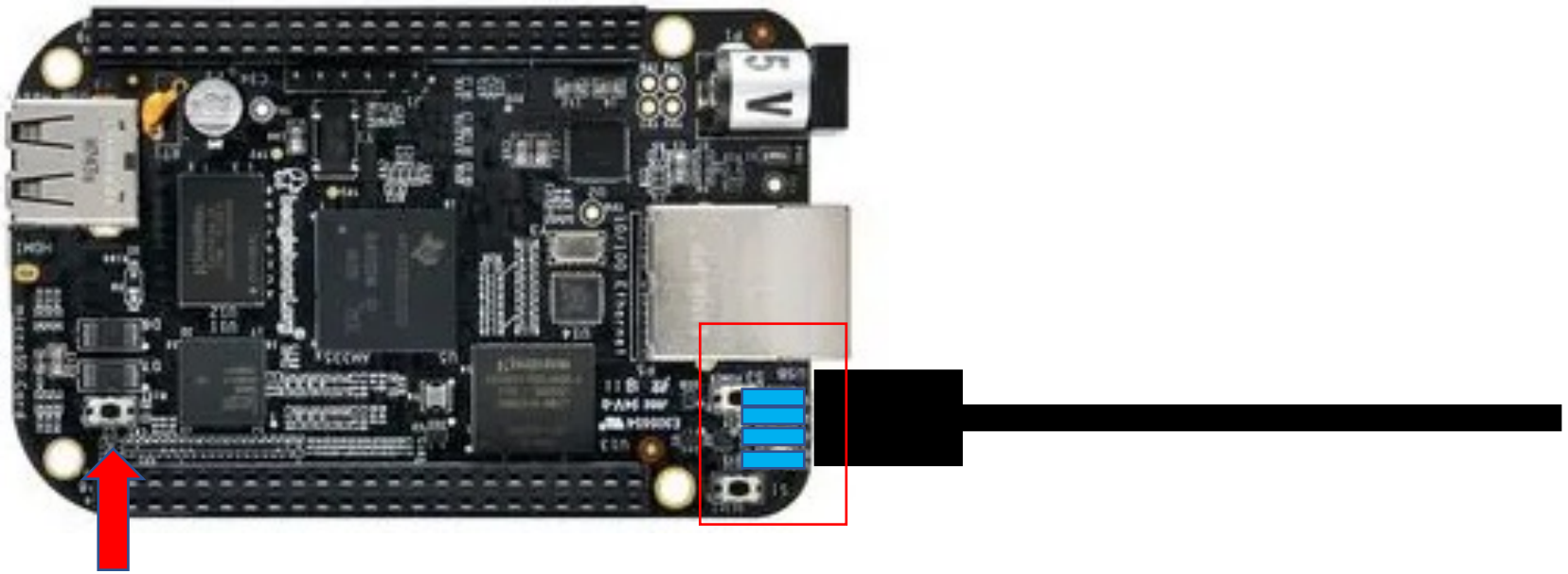


About experimental resources



About experimental resources

Wait about ~30s,



About lab report

- **No pre-report**
  One post-report for each of the six lab sessions

- The lab report **must** include
  - a description of successfully performing the lab procedures
    (**You must include your own screenshots or photos with explanations**).

  - your own answers to discussion questions