Software/Tools on Your PC

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First of All …

- **Please make sure that:**
  - **the OS of your PC is the most updated version**
  - **proper anti-virus software with the most updated version is installed to your PC**
  - ~~the most recent version of Zoom is installed~~

- **You need to know Unix/Linux and Editors (e.g. vi, emacs), if you want to use "Supercomputers"**
  - **List of Unix/Linux Commands (Wikipedia)**
    - **https://en.wikipedia.org/wiki/List_of_Unix_commands**
  - **Onlie Manual for Emacs (Screen Editor for Linux/Unix)**
    - **https://www.gnu.org/software/emacs/manual/**

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Software to be installed

	C	Fortran
Windows	Cygwin/WSL Paraview FVM-in-C, FVMpcg	Cygwin/WSL Paraview FVM-in-F, FVMpcg
Mac	Paraview FVM-in-C, FVMpcg	Paraview FVM-in-F, FVMpcg
Linux		

- Cygwin   https://www.cygwin.com/
- Paraview   http://www.paraview.org
- Target Application by Finite Volume Method (FVM)
  - FVMpcg (Fortran & C) http://nkl.cc.u-tokyo.ac.jp/files/fvm.tar
  - FVM-in-F (Fortran) http://nkl.cc.u-tokyo.ac.jp/files/multicore-f.tar
  - FVM-in-C (C)   http://nkl.cc.u-tokyo.ac.jp/files/multicore-c.tar
  - **Default compilers in Makefile's are "cc (FVM-in-C, C)" and "gfortran (FVM-in-F, Fortran)". Please modify Makefile's according to compilers on your PC**

Environments for Windows Users

- **WSL (Windows Subsystem for Linux)**
  – Easy (much better than before !), recommended
  – Windows 10 or later
  – "Administrator Privileges" needed
- **Cygwin**
  – My favorite for a long time
  – A little bit complicated procedures for installation, which takes a long time
  – More memory and storage needed
  – NO "Administrator Privileges" needed
  – https://www.cygwin.com/

WSL（1/2）
Windows-Subsystem-for-Linux

- Windows 10 Ver.2004 (build 19041) or later, Widows 11
    - Win+r > type [winver] > click [OK]

- Launch "Win. PowerShell" or "Win. Command Prompt" with administrator privileges, and type as follows:
    - Essential software/tools (e.g. ssh-keygen, cc, gcc nano etc.) are installed by this command

```
$ wsl --install
```

WSL（2/2）
Windows-Subsystem-for-Linux

- Once in the WSL environment, please install necessary tools (e.g. gfortran, make) by yourself. WSL also provides instructions for installation. "make" must be installed manually.

```
$> sudo apt install gfortran
$> sudo apt install make
```

- emacs

```
$> sudo add-apt-repository ppa:kelleyk/emacs
$> sudo apt update
$> sudo apt install emacs26
```

- Please update/upgrade frequently

```
$> sudo apt update
$> sudo apt upgrade
```

Please install ALL environments before starting on February 14 (Tue), 2023

- **Please make sure that the following items are installed**
  - **Editor: vi, vim, emacs, nano**
  - **Compiler: c, gcc, gfortran**
  - **Makefile: make**
  - **OpenSSH: ssh, ssh-keygen**