Task 1: Download Source Code and get familiar
Login to FRAM: - ssh login@fram.sigma2.no

Download NorESM code from : https://github.com/NorESMhub/NorESM
git clone https://github.com/NorESMhub/NorESM NorESM
cd NorESM
git checkout tags/release-noresm2.0.2 -b noresm
./manage_externals/checkout_externals
It download the code mentioned in *Externals.cfg* and checkout the mentioned tags
Open *Externals.cfg* and get bit familiar with it
Just go through the *NorESM* code and get a bit familiar with it. Use ***query_config,*** for checking a few compsets and grids.

Task 2: Create following experiment
Compset - N1850frc2 **grid** - f19_tn14 ; **project** = nn9560k
use *create_newcase*
Change *env_mach_pes.xml* for total 128 processors counts
ATM=96, CPL=96, OCN=32,WAV=96,GLC=96,ICE=50,ROF=1,LND=45
Decide *ROOTPE* block by yourself

./case.setup
./case.build
Change *env_run.xml* – set it for 1 month
./case.submit

Task 3: bitwise reproducibility
Create the following two different experiments: We will execute first experiment for 2 months and then second one for 1+1 months and check if they are bit-wise reproducible.

Compset - NOINY **grid** - T62_tn14 **project** = nn9560k ; execute it for 2 months;

Change *env_mach_pes.xml* for total 128 processors counts

./case.setup
./case.build
Change env_run.xml – set it for 2 months
./case.submit

Now, the second experiment is exactly the same as the first one. same compset and grid and processors count; clone of previous experiment.
Use *create_clone* to create it
set JOB_WALLCLOCK_TIME = 0:29:00 in *env_batch.xml* in subgroup *case.run*
Build and execute it for 1 month.

once it completed then, execute is again for 1 month by putting *CONTINUE_RUN =TRUE* in *env_run.xml* and submit again

Taks 4: changing namelist parameter

Make change in *user_nl_cam* and check namelist in *run* folder after submitting

Do it in Task-2:

clubb_gamma_coef = 0.26 in user_nl_cam

Task 5: writing intermediate restart files and SAVE in archive

Do it in case 3:

Execute it for 3 more months and save output every months

REST_OPTION=nmonths

REST_N=1

DOUT_S_SAVE_INTERIM_RESTART_FILES=TRUE

Test 6: set a branch run

Take data from :

/cluster/work/users/agu002/archive/N1850frc2_f19_tnx1v4_workshop/rest

Create a clone from *Task 2* and setup *branch* run

And execute it for 1 month

#SBATCH --reservation=nn9560k

In .case.run and case.st_archive