

## Requirements

Every simulation folder should contain an assembly file (`med.txt`), a runtime file containing the values of the input parameters (`runtime.txt`), and the executable `cdem2d`. In addition for the case of an irregular fault, a file with the information of the fault's vertices is needed (`faultdefinition.txt`).

*med.txt:*

- The first line of the `med.txt` file contains: `number_of_elements x_left x_right y_base y_top` . These last four are in unit lengths
- The other lines of the `med.txt` file contain the body elements: `x_coord y_coord radius` . These three are in unit lengths

*runtime.txt:*

- The different parameters in the `runtime.txt` file are explained in the `runtime_parameters.pdf` file.

*faultdefinition.txt:*

- The first line of the `faultdefinition.txt` file is the number of vertices defining the fault
- The other lines of the `faultdefinition.txt` file are the `x_coord y_coord` of the vertices. These two are in meters.

## Running `cdem2d`:

. Copy the `cdem2d` executable to one of the examples' folders, e.g., `someinversion`

. Open a Terminal Window

. `cd` to the folder, e.g., `someinversion`

. Type:

```
nohup ./cdem2d testrun &
```

and press Enter

. The program will run and write increments to the folder, e.g., `someinversion`

. Wait for the program to finish. To stop the run, read the following section

## Stopping `cdem2d`:

If you want to stop an ongoing run do the following:

. In a Terminal Window type `top` and then Enter

- . In the list of jobs, find the id number of the cdem2d job
- . Press `q` to quit the list of running processes
- . Type `kill -9 #id_of_job` and then Enter

### **Importing the increments to cdem:**

- . Open the macOS application cdem
- . Use the File -> Import cdem2D simulation menu
- . Navigate to the folder where the increments are (e.g., someinversion) and click Open. The increments will be imported and displayed in cdem.
- . Once in cdem, you can explore and play the model, and color it by different properties such as displacement and strain.

**Enjoy!**