To Do List and Open Issues

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To Do

Build Options

Before development can go fully underway, build and compilation options need to be defines in the makefile. Some options to bear in mind:

- Debug vs Release builds. (Note: If using VSCode, the different builds should be reflected in the JSON option files)

- Warning and error flags (`-Wall`, `-pedantic`, `-std=...`)

- Optimizations, `-Og` for debugging and `-O2,-O3` for release.

Read in simulation metadata

The data files necessary to make the code run are different depending on whether the code is running a 2- or 3-dimensional problem. The common files are:

- SimulationValues.txt

  - Mach number
  - Angle of Attack
  - Reynolds Number

- Sizes.txt

  - \# of domain nodes (including body boundary nodes)
  - \# of body boundary nodes
  - \# of farfield boundary nodes
  - (Only in 3D code) \# of symmetry nodes
  - \# of cloud nodes per domain/body boundary node (for differential quadrature)
  - \# of ghost nodes per body boundary node (for differential quadrature, should equal (cloud-1)/2)
  - \# of extrapolation nodes per farfield boundary node
  - \# of total nodes (= domain + farfield + ghost*body)

  The current task is to write a subroutine to read those files. The subroutine should reside in a separate module, since file I/O is not inherently a SOMA-specific task.