EME 152 Discussion 10

December 1, 2021

Agenda

- Project FAQ
- Including code in the report
- Open time for questions

FAQ (1/2)

- How should we get started?
  - Open fourbar.h and CFourbar.chf to see how that class is written. Start with that format. You already know the outputs for some of the required functions based on the homework.
- Do we need to check constraints on user input?
  - No, but it would be a nice to have.
- What calculations need to be done by hand?
  - Show your step-by-step derivations for the position, velocity, and acceleration (get it into the form to plug into complexsolve) and the torque (get into matrix form.) Label them in the report (off-line) *and* code (inline).
- How do I draw free body diagrams?
  - I recommend using Google Draw, Paint.NET, or a similar drawing tool.
- Is the slider on the same horizontal as the origin?
  - Yes.

FAQ (2/2)

- How many branches do we need to calculate?
  - Just the first one.
- How do I plot the slider acceleration?
  - Include a `plotSliderAccel()` function using a similar derivation from discussion 9.
- Do I need to include a `getTorque()` function?
  - No, but then you need to calculate the input torque by calculator, MATLAB, etc.
- What is $alpha_2$?
  - If the angular velocity is constant, then $alpha_2$ is 0.
- Which files do we need to turn in?
  - CMechanism.chf, mechanism.h, program.ch, and report.pdf (names can vary).
- Could we get deducted if we include extra functions?
  - No. (As long as it doesn't interfere with the required functions.)

Formatting code in the report

- Google Docs:
  - Download the **Code Blocks** plugin
  - https://workspace.google.com/marketplace/app/code_blocks/100740430168
- MS Word:
  - Copy source code > https://www.resurchify.com/source_code_highlighter.php > paste it here > make sure language is set to C++ > paste into MS Word with HTML formatting
- LaTeX:
  - `\usepackage{listings}`
  - `\lstinputlisting[language=C++]{Path/To/CMechanism.chf}`

Open time for questions