PHYS-4810 Project Proposal:
Double Pendulum on a Cart

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The Physics

1. Consider the problem of planetary motion around

2. Write a C++ code, using Runge-Kutta at fourth order

   - First discuss the
   - Then, turn on the Jupiter-Earth gravitational
   - In both cases, use realistic numbers for the

Algorithmic Considerations

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Obtaining a Solution

1. Establish tolerance criterion of the model (Reaction times, maximum angular displacement, etc.)

2. Free body diagram to obtain system of equations

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The Goal

1. To establish a thorough appreciation of the model.
   Display an understanding of the models:

   - Theoretical derivations.
   - Physical limitations
   - Usefulness in 'real-world' applications.

Make sure your report is self-contained with sufficient details and clear plots. Feel free to add listings of your codes (or use pseudo-code).