Project: Fuel Management

Full Authority Digital Engine Control (FADEC) is an engine manage that monitors fuel consumption and optimizes engine performance. The FADEC has to take into consideration the flight envelope of the aircraft, the mode of operation and inform the pilot when bingo fuel is reached.

Goal:
- Write a FADEC using Ada95 for a combat aircraft of your choice. Your software must take into consideration
  - Flight envelope of your aircraft
  - Engine performance over the entire flight envelope
    - Cruise
    - Mach hold
    - Altitude Hold
    - After-burners
  - It should inform the pilot when bingo fuel is reached.
  - It should handle air-air refueling operations and inform the pilot when to break away from the tanker

- The USAF has recently selected the x-35 to be the JSF. Write a two-page memo detailing what they should be looking for in the fuel management system.

- Issues to consider include
  - How do you model the aircraft?
  - How do you model engine fuel consumption?
  - How do you model fuel flow from tanker to fighter?
  - How do you simulate the operation of the aircraft?