Wrestling season simulator

Design Plan

1. What are objects?
2. What are their attributes?
3. What are their behaviors?
4. What are their collections? Or how are they grouped?
5. How do they interact?
6. What is the development schedule

Notes:

1. Objects?
   1. Wrestlers
   2. Teams
   3. Tournaments (consisting of 14 bouts)
   4. Conference
   5. Match (12 bouts between 2 teams)
   6. Bout, (2 wrestlers, a winner and a loser)
   7. Scores and records
   8. Schedule
2. Attributes?
   1. Of a wrestler?
      1. Wt class
      2. Id number (can actually be stored as one int with team number)
      3. Ability score or strength
   2. Of a team
      1. Has 12 wrestlers, 1 per wt class (mean of 10, stdiv of 1)
      2. Id number for team
      3. Record
      4. Conf or nonconf
      5. schedule
   3. Tournaments
      1. Conference or nonconference
      2. Teams
      3. Results (team results to be determined later)
   4. Conference
      1. Teams
   5. Match (twelve bouts between 2 teams)
   6. Bout
      1. 2 wrestlers
      2. Results
   7. Scores and records
      1. Individual wrestler records
         1. Wins/losses
         2. head to head results in seeding
      2. Team records
         1. Wins/losses
      3. Dual meet records
         1. Record of individual results
      4. Tournament results
   8. Schedule,
      1. Conference match ups for teams
      2. Team participation in tournaments
      3. Conference tournament
3. Behaviors
   1. Wrestlers
      1. wrestle
   2. Teams
      1. Go to dual meets
      2. Go to tournaments
   3. Tournaments
      1. Seeding
      2. Brackets and results
      3. Individual medalists
      4. Team medals/trophies
   4. Conference
      1. Required team match ups
   5. Match & bout
      1. Compute results
      2. Apply team pts for dual meet
      3. Apply team pts for tournament
   6. Scores and records
      1. Update
      2. Retrieve for seeding
   7. Schedule
      1. Generate all conference match ups
      2. Generate all non-conference match ups
      3. Generate all non-conference tournaments
      4. Generate conference tournament
4. Development schedule
   1. Wrestler
      1. Testing: ability scores… 0<= Score < infinity
      2. Scores mean of 100 and std div of 15
      3. display
   2. Team
      1. (has) A vector of 12 wrestlers
      2. test the id of a team and the membership of a team
   3. Two teams and dual meet/results
      1. Run 12 match ups by wt class
      2. Compute individual match results
      3. Compute team results
   4. Schedule for dual meets
      1. All conference teams must have a match up
   5. Tournament for 8 teams
   6. 3 tournaments in all non-dual meet weeks
   7. Seeding for Tournaments
   8. Run the entire simulation/ 15 dual meets per team, 2 tournaments per team, and conference tournament