**Use Case:** *User compares multiple crankset and cassette combinations*

**Scope:** Gear Ratio Calculator and Graphing application

**Level**: User-goal

**Primary actor:** User

**Stakeholders and Interests:**

* **Sponsor/User**: Wants a tool that will automate the calculations of gear ratios and display them in such a way that will allow for easy comparisons between different crankset and cassette combinations in order to determine the most optimal combination for their needs.
* **Team (Us**): Want to fulfill the needs of the sponsor by creating a useful tool that will seamlessly automate calculations and display the results

**Preconditions**: User knows all the sizes of the cogs and chainrings that make up the cranksets and cassettes

**Main Scenario**

1. User opens up the application
2. SuD prompts user to enter crankset information
3. User enters in all chainring information of a crankset
4. SuD prompts user to enter the accompanying cassette information
5. User enters in all cog information of the cassette
6. User repeats steps 2-5 for each combination (up to three) that they want to compare
7. SuD calculates ratios and displays them all on a graph

**Extensions**

7A. User wishes to change the combinations or view different ones

7A. 1. User “resets” the graph

7A. 2. User changes chainring or sprocket value to desired setting

7B. SuD does not correctly calculate/display gear ratios

7B. 1. User goes back and verifies that the crankset and cassette values are correct

7B. 2. User contacts the team for support