**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.

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 they want to compare
7. SuD calculates ratios and displays them all on a graph

**Extensions**

3A. User selects a previously saved crankset

3B. User creates a new crankset

3B. 1. User enters in new crankset information

5A. User selects a previously saved cassette

5B. User creates a new cassette

5B. 1. User enters in new cassette information

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

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