

Requirements for Caloricount

Caloricount is a simple program that allows a user to calculate the way she/he allocates calories across meals and snacks.

1. User Interaction Requirements – Data Entry

- 1.1. The user must be able to enter a goal.
- 1.2. The user must be able to enter the number of calories consumed as breakfast.
- 1.3. The user must be able to enter the number of calories consumed as lunch.
- 1.4. The user must be able to enter the number of calories consumed as dinner.
- 1.5. The user must be able to enter the number of calories consumed as snacks.
- 1.6. The user must be able to reset all of the numbers of calories consumed to 0 by clicking on the **Clear** button.

2. User Interaction Requirements – Reporting

- 2.1. The product must (calculate and) report whenever the user changes an input value.
- 2.2. The product must report the total number of calories consumed.
- 2.3. The product must report the number of calories available to consume.
- 2.4. The product must report the percentage of the goal consumed as breakfast.
- 2.5. The product must report the percentage of the total consumed as breakfast.
- 2.6. The product must report the percentage of the goal consumed as lunch.
- 2.7. The product must report the percentage of the total consumed as lunch.
- 2.8. The product must report the percentage of the goal consumed as dinner.
- 2.9. The product must report the percentage of the total consumed as dinner.
- 2.10. The product must report the percentage of the goal consumed as snacks.
- 2.11. The product must report the percentage of the total consumed as snacks.

3. User Interaction Requirements – Appearance of the GUI

- 3.1. The overall appearance of the GUI must be (essentially) as follows:

Caloricount		Consumed	Available
CS531, James Madison University		2000	1400 600

	Calories	Percent Of Consumed	Goal
Breakfast	200	14%	10%
Lunch	400	29%	20%
Dinner	500	36%	25%
Snacks	300	21%	15%

Clear

- 3.2. The `input` elements that are used for entering calorie information must have a `type` of `number`.
- 3.3. The `input` element that has the focus must have a yellow background.

4. Startup Requirements
 - 4.1. The product must start with a goal of 2000 calories.
 - 4.2. The product must start with 0 calories consumed as breakfast.
 - 4.3. The product must start with 0 calories consumed as lunch.
 - 4.4. The product must start with 0 calories consumed as dinner.
 - 4.5. The product must start with 0 calories consumed as snacks.
5. Input Processing Requirements
 - 5.1. If a user-supplied value is not a number then it must be treated as 0.
6. Calculation Requirements
 - 6.1. The product must calculate the total number of calories consumed.
 - 6.1.1. The total number of calories consumed is the sum of the calories consumed for breakfast, lunch, dinner, and snacks.
 - 6.2. The product must calculate the number of calories available to consume.
 - 6.2.1. The number of calories available to consume is the goal minus the total number of calories consumed.
 - 6.3. The product must calculate the percentage of the goal consumed as breakfast.
 - 6.4. The product must calculate the percentage of the total consumed as breakfast.
 - 6.5. The product must calculate the percentage of the goal consumed as lunch.
 - 6.6. The product must calculate the percentage of the total consumed as lunch.
 - 6.7. The product must calculate the percentage of the goal consumed as dinner.
 - 6.8. The product must calculate the percentage of the total consumed as dinner.
 - 6.9. The product must calculate the percentage of the goal consumed as snacks.
 - 6.10. The product must calculate the percentage of the total consumed as snacks.
7. Output Processing Requirements
 - 7.1. Calculated Percentages
 - 7.1.1. If a calculated percentage is not a number then it must not be reported (i.e., it must be reported as the empty string).
 - 7.1.2. If a calculated percentage is a number then it must be reported as a whole number followed immediately by the literal "%".
 - 7.2. Calculated Values
 - 7.2.1. Calculated values must be reported as whole numbers.