

# CS4102 Ginger Snaps Recipe

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## 1 Inputs

- Wet Ingredients
  - $\frac{3}{4}$  cups of butter (softened)
  - 1 cup of sugar
  - 1 egg
  - 4 Tablespoons of molasses
- Dry Ingredients
  - 2 cups of flour
  - 2 teaspoons of baking soda
  - 1 teaspoon of ground cinnamon
  - 1 teaspoon of ground cloves
  - 1 teaspoon of ground ginger
- Plus additional sugar

## 2 Algorithm

1. Cream butter and sugar together
2. Mix in egg and molasses with butter and sugar
3. Mix together all dry ingredients in a separate bowl (this is parallelizable with the previous two steps)
4. mix dry ingredients into the wet ingredients
5. let rest in refrigerator overnight
6. take dough  $\approx$  1 Tablespoon at a time and roll dough into balls
7. Coat the balls of dough with sugar
8. Bake in the oven at  $350^\circ$  for 10 to 12 minutes for chewy, 13 to 15 for crispy (if you have multiple ovens, this step can also be parallelized)

## 3 Complexity

### 3.1 Time

(note: run time analysis assumes serial execution)

active time:  $\Theta(n)$ , with a constant of  $\approx 30$  minutes

total time:  $\Theta(n)$ , with a constant of  $\approx 8$  hours

### 3.2 Hardware Requirements

- 2 mixing bowls
- whisk
- counter top
- refrigerator
- oven
- cookie sheet
- oven mitts
- spatula
- cooling rack