## Assignment 1 recap

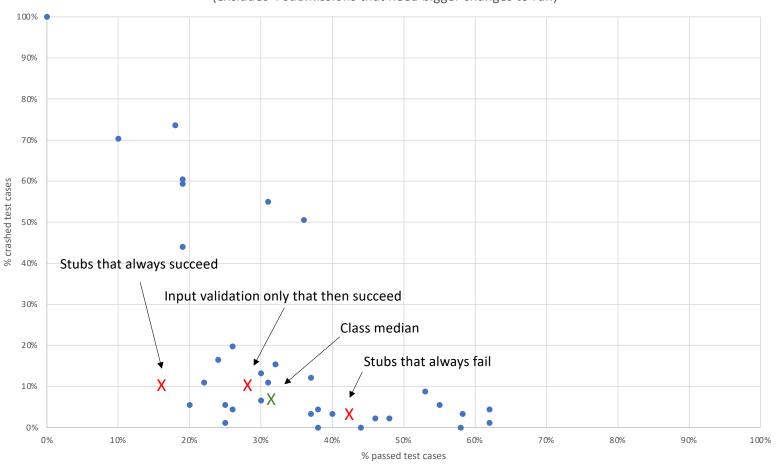
Csci 3901

Winter 2023

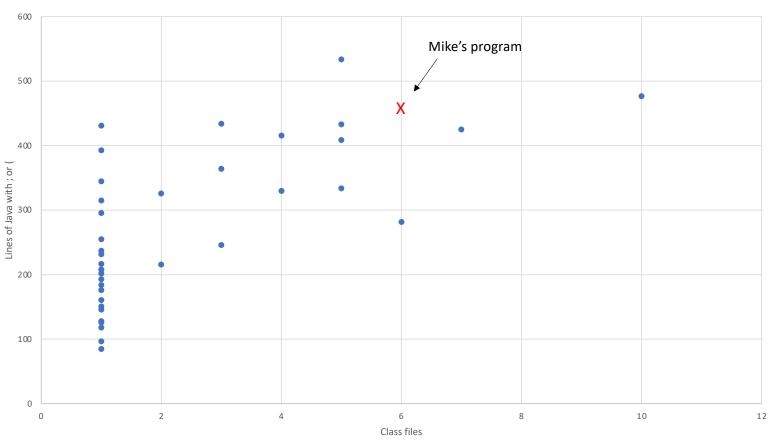
## Assignment 1 observations

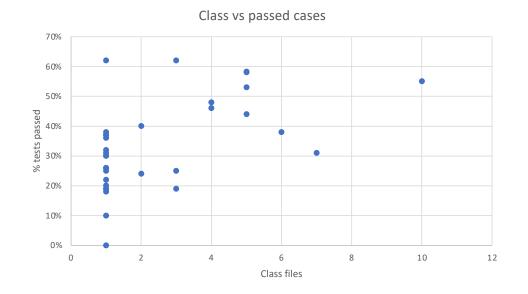
- # submission: 37
- Submissions needing more change than time permits to get working: 4 (11%)
- Submissions changed to compile: 29 (78%)
- Submissions that changed the method signatures (excluding exceptions): 14 (38%)
- Submissions that decided to throw exceptions: 25 (68%)

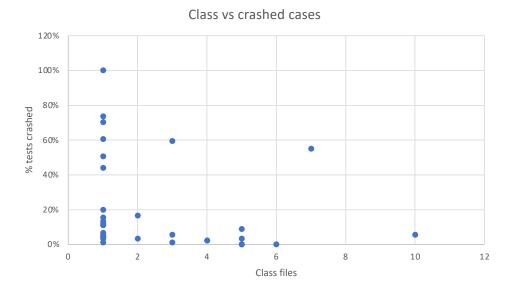
Assignment 1 test case outcomes (excludes 4 submissions that need bigger changes to run)











## Assignment characteristics

- Create a class called RecipeBook
- RecipeBook contains recipes and conversion charts
- A recipe has 3 parts: the title, the ingredients, and the instructions
  - The ingredients have 3 parts: the quantity, the units, and the food
- A conversion is bi-directional
- A conversion contains
  - The pair of units converted (from -> to)
  - One or two rounding rules for each target measurement system
  - Pairs of units to convert and their quantities
- Convert() key steps:
  - Given a recipe and target system, identify the conversion rules
  - Use the conversion rules and a scale factor to modify a recipe
    - · Ingredients main focus
    - · May have instructions to modify

RecipeBook

RecipeBook contains recipes and conversion charts

## RecipeBook

Set < List < String > > recipe Set < List < String > > convert

RecipeBook contains recipes and conversion charts

A recipe has 3 parts: the title, the ingredients, and the instructions

RecipeBook

Map< String, Recipe > recipe Set <List<String> > convert

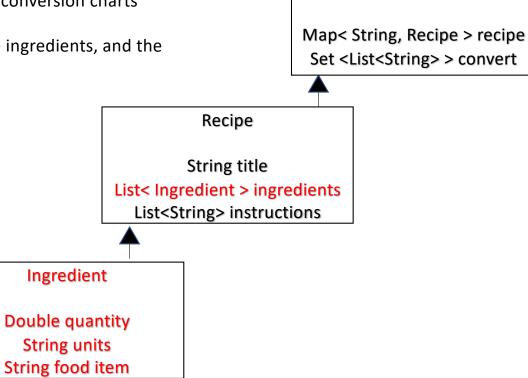
Recipe

String title
List< String > ingredients
List<String> instructions

RecipeBook contains recipes and conversion charts

A recipe has 3 parts: the title, the ingredients, and the instructions

The ingredients have 3 parts: the quantity, the units, and the food



RecipeBook

RecipeBook contains recipes and conversion charts

A recipe has 3 parts: the title, the ingredients, and the instructions

The ingredients have 3 parts: the quantity, the units, and the food

A conversion is bi-directional

-- choose to split to uni-directional, so need 2

RecipeBook

Map< String, Recipe > recipe
Set <UnidirConv> > convert

Recipe

String title
List< Ingredient > ingredients
List<String> instructions

RecipeBook

Map< String, Recipe > recipe
Set <UnidirConv> > convert

Unidirectional Convert

Ingredient

Double quantity String units String food item

Create a class called RecipeBook RecipeBook RecipeBook contains recipes and conversion charts Map< String, Recipe > recipe A recipe has 3 parts: the title, the ingredients, and the Map <String, Map <String, UnidirConv >> convert instructions The ingredients have 3 parts: the Recipe quantity, the units, and the food **Unidirectional Convert** String title Approximation[2] rounder A conversion is bi-directional List< Ingredient > ingredients -- choose to split to uni-directional, so need 2 Map<String, Map<String, Pair>> unitChanges List<String> instructions A conversion contains The pair of units converted Ingredient (from -> to)One or two rounding rules for each target **Double quantity Approximation** Pair measurement system String units Pairs of units to convert and String food item their quantities

Create a class called RecipeBook RecipeBook RecipeBook contains recipes and conversion charts Map< String, Recipe > recipe A recipe has 3 parts: the title, the ingredients, and the instructions Map <String, Map<String, UnidirConv> > convert The ingredients have 3 parts: the quantity, the Recipe units, and the food **Unidirectional Convert** String title A conversion is bi-directional Approximation[2] rounder List< Ingredient > ingredients -- choose to split to uni-directional, so need 2 Map<String, Map<String, Pair>> unitChanges List<String> instructions A conversion contains The pair of units converted (from -> to) Ingredient One or two rounding rules for each target **Double quantity** Approximation Pair measurement system String units Pairs of units to convert and their quantities String food item

Use the conversion rules and a scale factor to modify a recipe

Create a class called RecipeBook RecipeBook RecipeBook contains recipes and conversion charts Map< String, Recipe > recipe A recipe has 3 parts: the title, the ingredients, and the instructions ConversionSet convert The ingredients have 3 parts: the quantity, the ConversionSet Recipe units, and the food Map <String, Map<String, UnidirConv> > conv String title A conversion is bi-directional List< Ingredient > ingredients -- choose to split to uni-directional, so need 2 List<String> instructions A conversion contains **Unidirectional Convert** The pair of units converted (from -> to) Ingredient One or two rounding rules Approximation[2] rounder for each target Map<String, Map<String, Pair>> unitChanges **Double quantity** measurement system String units Pairs of units to convert and their quantities String food item Use the conversion rules and a scale factor to modify a recipe Approximation Pair Clean up the high level Map-Map bit