

# CSSE 373 - Formal Methods in Spec. and Design

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## Homework 4

**Purpose:** Apply the Alloy modeling knowledge to real world problems.

## Instruction

Download the workspace (Eclipse Project) given to you. Create **./turnins/HW4.pdf** for answering the written part. For each java package, **./src/hw4.setX**, create a corresponding Alloy model in the folder, **./modules/setX** that models the equivalence relation (**equals()** method) in the package. If Alloy reports a counterexample, you will reproduce that counterexample in the **main()** method of the **./src/hw4.setx.ErrorReproducer** class.

There are altogether 6 sets of **equals** methods modeling problems. For each set, you will document the snapshot of the counterexamples produced by Alloy in **./turnins/HW4.pdf**. You will also copy the code snippets from the corresponding **ErrorReproducer.main()** method below each snapshot to show parallels between the counterexamples and actual violations.

**Turn-ins:** Bundle your workspace folder in the **zip** format (**not rar**) and attach it to the Homework4 submission box on Moodle.