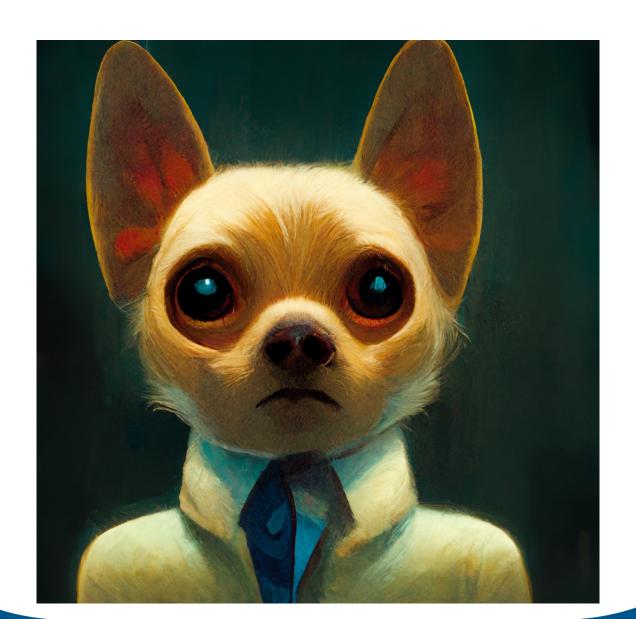
CS210 Discussion

Week 2



Attendance





Today

- Object Oriented Programming
- Rational (exercise 5)
- Finish through exercise 6
 - Show us passing Gradescope tests to leave early



Object Oriented Programming

- Every program in Java is a class
- Create ADTs/Classes to encapsulate what it means to be something
 - A Dog class may have a name and age
 - Rational has numerator and denominator, add and subtract
- Classes often defined in their own file and use in others
 - Rational and Harmonic
- Example



Rational

- Note the notation used in the writeup and comments
 - 'a/b' means a Rational object with 'a' as the numerator and 'b' as the denominator
- Rationals encapsulate a fraction basically
 - Have their own way of doing addition, subtraction, etc.
- Rational objects are used in Harmonic
 - Despite how the instructions look, you need to use the methods on Rational objects
- Let's look



Questions?





Exercise Hints

- Use this keyword to set an instance variable when it shares a name with a method parameter
 - Ex. this.x = x;
- Creating a new object (make sure to use new keyword):
 - Rational total = new Rational(0);
- Casting a value from one type to another:
 - Rational otherRational = (Rational) other;
- In the writeup, if it says the Rational a/b it means the object created by (may use different var names):
 - new Rational(a, b);
- Arrays are reference types (objects) and are declared with brackets:
 - int[] someValues = new int[5];
 - 5 is arbitrary here.



Questions?



