# Thing class

Goal: Can represent an object in Java

## Problem Description

You will be writing programs to manage collections of "things" where you get to choose the "thing" in the collection. Since you will be reusing your “Thing” class across more than one program, please choose something that interests you.

You can be creative about your thing. **However, it is prohibited to use any of the following:**

book
point
line
circle
grocery item
student
person
bank account
menu item
car
pet
song

## UML

Create a uml for your Thing. Review the directions below so that you know what items to include in the uml.

## Thing Class

Create a thing class. The name is not Thing!!! The name is whatever your thing is. Your Thing class must have the following characteristics:

1. Include at least 3 instance variables such that:
    - the first instance variable must be of type String and this variable will be used as a **search key**
    - the second instance variable must be integer (i.e., int) and this variable will be used to find aggregate information about Things that are stored in a collection class as will be explained later
    - the third variable can be of any type

2. Implement a three-arguments constructor for your Thing class.

3. Implement getters and setters for all the attributes of your Thing. (Note that Eclipse will automagically create them for you with Source | Generate Getters and Setters)

4. Implement a toString() method that returns a String representation of your Thing where all the instance variables are in one line and separated by tabs (Eclipse will automagically create a toString() method for you with Source | Generate toString(). **However, the format will not be correct.**)

5. Implement the equals() method for your Thing where two Things are considered equal when they have the same search key. Note that, the equality of String attributes should be case insensitive. For example, “MATH”, “math” and “Math” match each other. In order to compare strings in Java use the String's equalsIgnoreCase() method. For example, the following code should print true:

```
String str1 = "Hello";

String str2 = "hello";

System.out.println(str1.equalsIgnoreCase(str2));
```

(Again, Eclipse will automagically create an equals() method for you with Source | Generate hashcode() and equals(). **However, you may have to make changes to it to meet this program specification.)**