CMPS 303 Data structures
Case study: An implementation of hash tables using lists

The fact that Java has a *HashMap* class means that no Java programmer has to write an implementation of hash tables from scratch -- unless, of course, you are a computer science student.

Write an implementation of hash tables from scratch. Every cell of the table is a list (remember the collision avoidance using separate chaining). Define the following methods: *get(key)*, *put(key,value)*, *remove(key), containsKey(key)*, and *size()*. Do not use *any* of Java's generic data structures. Assume that both keys and values are of type *Object*, just as for *HashMaps*. Every Object has a hash code, so at least you don't have to define your own hash functions. Also, you do *not* have to worry about increasing the size of the table when it becomes too full.

You should also write a short program to test your solution.