Maps Data structures

Very useful structure, with their variations (read).

Maps are an old form of a data to help with computer languages. (Compiler and interpreter).

O(1) operations for all map operations.

Hash function is mapping the data with the hashcode to an index.

A mapping of a key to a value. Meaning that the method will specify both!

MapEntry – is a class that represents the pair, and is like a row in a table.

MapEntry(k,v) – key and value parameters, which are generic types.

Unique keys are the identifiers

E.g. ArrayListMap

MapEntry inside of ArrayList is basically a collection with the mapping inside the collection.

NOTE: Building on top of the existing java classes/structures by referencing/using them inside a user-defined data type.

Hashing and collissions

Heavy topic of algorithms. Knowing the application can help to determine the efficient choice.

Same map, but introduces the O(1) with the key code.

Compression function ?? – a way of hashing the values???

one possible implementation is with the modulus operator to dividing and getting the remainder

another solution is to concatenate the string entries one on top of the other

Hashing function vs. Compression function??

Since hash codes do not have to be unique, because they can be handled when there arise.

Using randomness helps to make less collisions overall.

Two entries that are equal should have hash of same value.

Fit the size of the hash code solution to the problem. It shouldn’t be too big or too small for the given application.

Properties of a good hash mapping...

Minimizes collission.

Uniform spread