Week 11 - Collections part 2 / Working wih date objects

Topics covered in this week

- Maps
- Representation of other data structures
    - trees, queues, graphs
- Java 8 Date features

Reading material

- https://beginnersbook.com/java-collections-tutorials/
- https://www.journaldev.com/1260/collections-in-java-tutorial
- https://www.vogella.com/tutorials/JavaCollections/article.html

Homework

Difficulty	Problem	Notes
HARD	Create a class Train containing the following attributes: train number, train type and no of wagons. Make sure to override equals() in this class. Create a HashMap that holds Train objects as keys and a List with days in which the trains run as values (running days should be simple integer values: 1, 2, 3 … 365). Do the following steps: 1. Populate your HashMap with 10000 records (use an algorithm that randomly generates 10 000 trains and the corresponding list of running days for each of them) 2. Override hashCode() method in Train class such that it always returns a constant value (e.g.: 3) 3. Test the performance of the HashMap (by retrieving the list of running days for some of the added trains) 4. Rewrite Train hashCode() such that it does not always return a constant value 5. Test again the performance of the HashMap Compare results from step3 with results from step5. No unit tests are required here.	