## Java basics (Week 1-6)

We will use<https://www.javatpoint.com/> as the main tutorial, and possible other sources for specific topics if not covered here.

This tutorial covers a lot of information, and Java basics time is limited to 6 weeks, so we will guide you on what information to learn first.

If there is information that you don't understand, use the search engine to find additional information on that topic. If you still don't understand, ask on the skype group, or other colleagues.

If you find any issues or inconsistencies with the homework, ask on the Skype group, and we will update/correct the text.

Add your homework classes into this [shared folder](https://drive.google.com/drive/folders/1uc9qmuqiGl-hce_NyVozzn8tFRAA6GGu), in Week[1,2...n], in a subfolder Firstname Lastname

**Week 2 (20-27.09)**

**Reading**

1. [List](https://www.javatpoint.com/java-list)
2. [Map](https://www.javatpoint.com/java-hashmap)
3. [String](https://www.javatpoint.com/java-string)
4. More on collections [here](https://docs.oracle.com/javase/tutorial/collections/interfaces/index.html)

**Homework**

1. Given two strings, check if the strings are equal. After that, concatenate them into one single string
2. Given a one word string, return true if the string is a palindrome (word that reads the same forwards or backwards - e.g. madam, mom, abba )
3. Create an empty string, an empty array of strings, and a list of strings with random upper and lowercase letters
   1. Iterate the list.
      1. If the word starts with a vowel, make it all lowercase and append it to the empty string
      2. If the word starts with a consonant, make it all uppercase and add it to the empty array
      3. If the word contains letter x or X or has less than 3 letters, replace the word with "skipped" and print into the console the current word and the replaced word
4. Create an empty map that will contain Name and Email as key-value pairs
   1. Add a couple of K-V entries
   2. Get the size of the map
   3. Check that map contains a specific name
   4. Get the email that contains a specific name
   5. Remove an entry
   6. Sort the map by key