

Big Data Management and Analytics
WS 2016/17

Tutorial 8: Apache Flink

Assignment 8-1 *Flink*

In this assignment you are going to become more familiar with Apache Flink.

- (a) Compare and highlight the differences between Spark and Flink.
- (b) In how far is Flink more suitable for streaming tasks?

Assignment 8-2 *Installing Flink and first steps*

- (a) First make sure that Java (≥ 1.7) is installed. Download Flink from <https://flink.apache.org/downloads.html> and install it on your local machine.
- (b) Implement the word count example using Java.

Assignment 8-3 *Matrix-Matrix multiplication with Flink*

- (a) Download the code template `mm.flink.template.java` and become familiar with it.
- (b) Implement the method `map` in the `MapToProduct` class and implement the ellipses ... with your code.
- (c) Test your implementation by checking the result for multiplying the matrices

$$A := \begin{pmatrix} 1 & 2 & 3 \\ 4 & 5 & 6 \end{pmatrix} \text{ and } B := \begin{pmatrix} 7 & 8 \\ 9 & 10 \\ 11 & 12 \end{pmatrix}$$