

## **Apache Spark**

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## Exercise 1

Complete the bank account exercise

- Consider a new query Q4
  - Print all accounts in descending order of balance

## Exercise 2

- Write a program that takes in input a csv file with the friendship relation in a social network
  - Two fields (user, friend)

• Write an iterative program that computes the transitive closure of the relation

## Exercise 3

- Change the event enrichment program
  - Use the rate source to define the input stream

• Change the query to count the number of products of each class appearing in the input stream within a window of 30 seconds sliding every 5 seconds