

## Project #2

# Assignment #1 – Data Processing with Hadoop MapReduce

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## Advanced Infrastructures for Data Science

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Master in Data Science and Engineering (MDSE) Course

# Task #1 – Average Number of Friends by Age

## Assignment #1

**Context:** Social Network dataset



**Dataset**








ID	Name	Age	Friends
0	Will	33	385
1	Jean-Luc	33	2
2	Hugh	55	221
3	Deanna	40	465
4	Quark	68	21

**Objective:** What is the average number of friends by age?

# Task #2 – Minimum Temperature Per Capital

## Assignment #1

**Context:** Daily weather data for year 1800 dataset

Today	THU	FRI	SAT	SUN	MON	TUE
						
Sunny	Sunny	More sun than clouds	Passing clouds	More sun than clouds	Scattered clouds	Scattered clouds
66° 43°	69° 39°	72° 44°	78° 47°	78° 53°	77° 52°	75° 55°

**Dataset**



	weather station	year month day	observation type	temperature*10
day 1	ITE00100554	18000101	TMAX	-75,,E,
	ITE00100554	18000101	TMIN	-148,,E,
	GM000010962	18000101	PRCP	0,,E,
day 2	EZE00100082	18000101	TMAX	-86,,E,
	EZE00100082	18000101	TMIN	-135,,E,
	ITE00100554	18000102	TMAX	-60,,I,E,
	ITE00100554	18000102	TMIN	-125,,E,
	GM000010962	18000102	PRCP	0,,E,
	EZE00100082	18000102	TMAX	-44,,E,
	EZE00100082	18000102	TMIN	-130,,E,
	ITE00100554	18000103	TMAX	-23,,E,
	ITE00100554	18000103	TMIN	-46,,I,E,
	GM000010962	18000103	PRCP	4,,E,
	EZE00100082	18000103	TMAX	-10,,E,
	EZE00100082	18000103	TMIN	-73,,E,

Paris

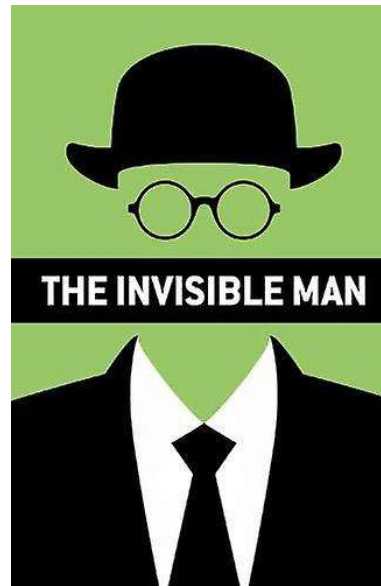
Prague

**Objective:** What is the minimum temperature for each capital?

# Task #3 – Sort the Word Frequency in a Book

## Assignment #1

**Context:** Book dataset

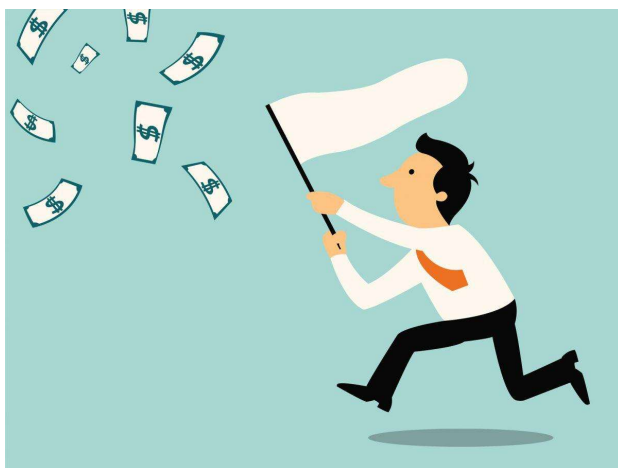


**Objective:** What is the (sorted) word frequency in the book?

# Task #4 – Sort the Total Amount Spent by Customer

## Assignment #1

**Context:** Shopping Store Dataset



**Dataset**



Customer_ID	Product_ID	Amount
344	983	45.1
99	574	7.08
344	24	102.2
43	241	37.08
99	230	61.89

**Objective:** What is the (sorted) total amount spent by each customer?



**Good  
Work**