Dev Hackathon - 3rd edition

April 2018

Plan

I. Welcome to INFOR!

II. Introduction to the Retail Data Model

III. Data Partitioning Challenge

IV. Your Mission

V. Evaluation Criteria

Welcome to INFOR!

THE BIGGEST COMPANY YOU'VE NEVER HEARD OF

Infor's global presence

3rd largest
business applications company

$2.8B
revenue

73,000
customers globally

200+
countries & territories

14,000
employees

1,248+
go lives

$100B
trade in commerce cloud

25,000
suppliers in commerce cloud

4,500+
cloud customers globally

30
banks in commerce cloud

Welcome to INFOR!

- **INFOR RETAIL** provides cloud native, predictive and prescriptive analytics solutions for retail. Our Solutions harness big data and advanced analytics to solve the toughest problems in merchandising and supply chain.

MERCHANDISING PLANNING

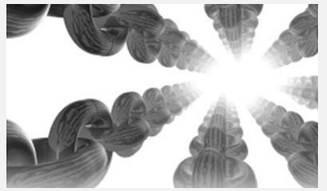
A Seamless & configurable end to end planning suite

ASSORTMENT & CATEGORY MANAGEMENT

Localized, optimized assortments that drive higher sales & margins

DEMAND FORECASTING

Deeper insights into consumer demand driving up to 50% improved forecasts



PRICE OPTIMIZATION

Optimized price, promotion & markdowns linked to merchandising & supply chain

SUPPLY CHAIN OPTIMIZATION

Optimizes all network locations & flows globally – 20% inventory reduction

Welcome to INFOR!

About Infor Retail & Predictix

- Infor has acquired **Predictix** : A ground-breaking provider of cloud-native, predictive, and machine-learning solutions for retailers in 2016.
- Infor CloudSuite Retail is enhanced with Predictix forecasting, merchandise financial planning, lifecycle pricing and assortment planning solutions.
- Predictix delivers robust solutions to **3** of the **top** 10 US and **5** of the **top** 15 global retailers.
- Predictix applications harness **Big Data** and **Advanced Analytics** to solve the toughest problems in the retail industry.

Welcome to INFOR!

Welcome to the **THIRD edition** of Infor Tunisia Hackathon

- A yearly software engineering hackathon that addresses real-world engineering problems.

- This year , we have **2** challenges :
  - A development challenge.
  - A data science challenge.

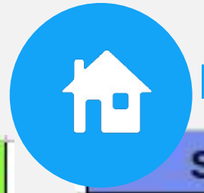
Introduction to the Retail Data Model

Introduction to the Retail Data Model

- Let’s imagine that you landed a job with a big American retailer (sweet!).
- This retailer has many **stores** spread across multiple **cities**.
- Many **items** are sold in each one of those stores.
- Items are grouped into **classes** to facilitate customer browsing and internal bookkeeping.

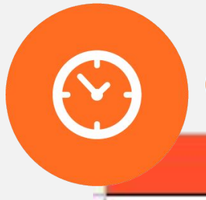
Product

Item	Subclass	Class
iPhone 7	iPhones	Smartphones
iPhone 8	iPhones	Smartphones
Samsung S4	Samsung phones	Smartphones
Samsung S5	Samsung phones	Smartphones
Dell lat 3540	Dell Laptops	Laptops
Acer Aspire E	Acer Laptops	Laptops



Location

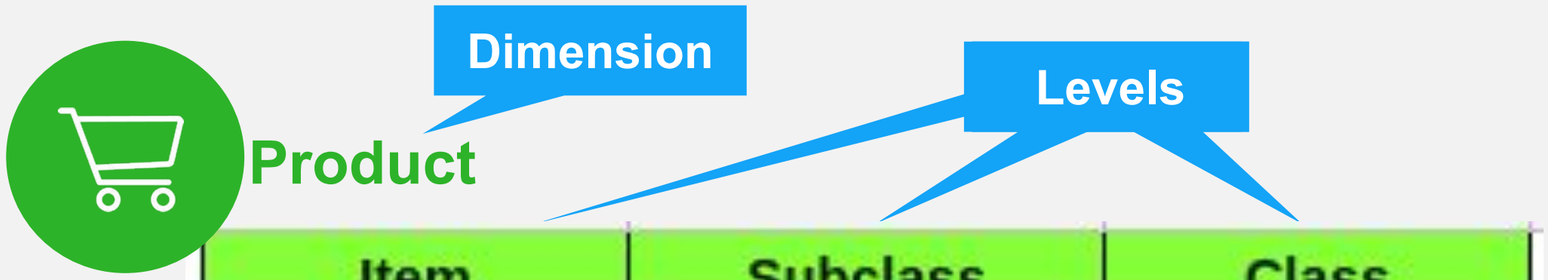
Store	City
ATL_1	Atlanta
ATL_2	Atlanta
LA_1	LA
LA_2	LA



Calendar

Day	Year
19-04-2018	2018
20-04-2018	2018
21-04-2018	2018

Introduction to the Retail Data Model - Dimensions



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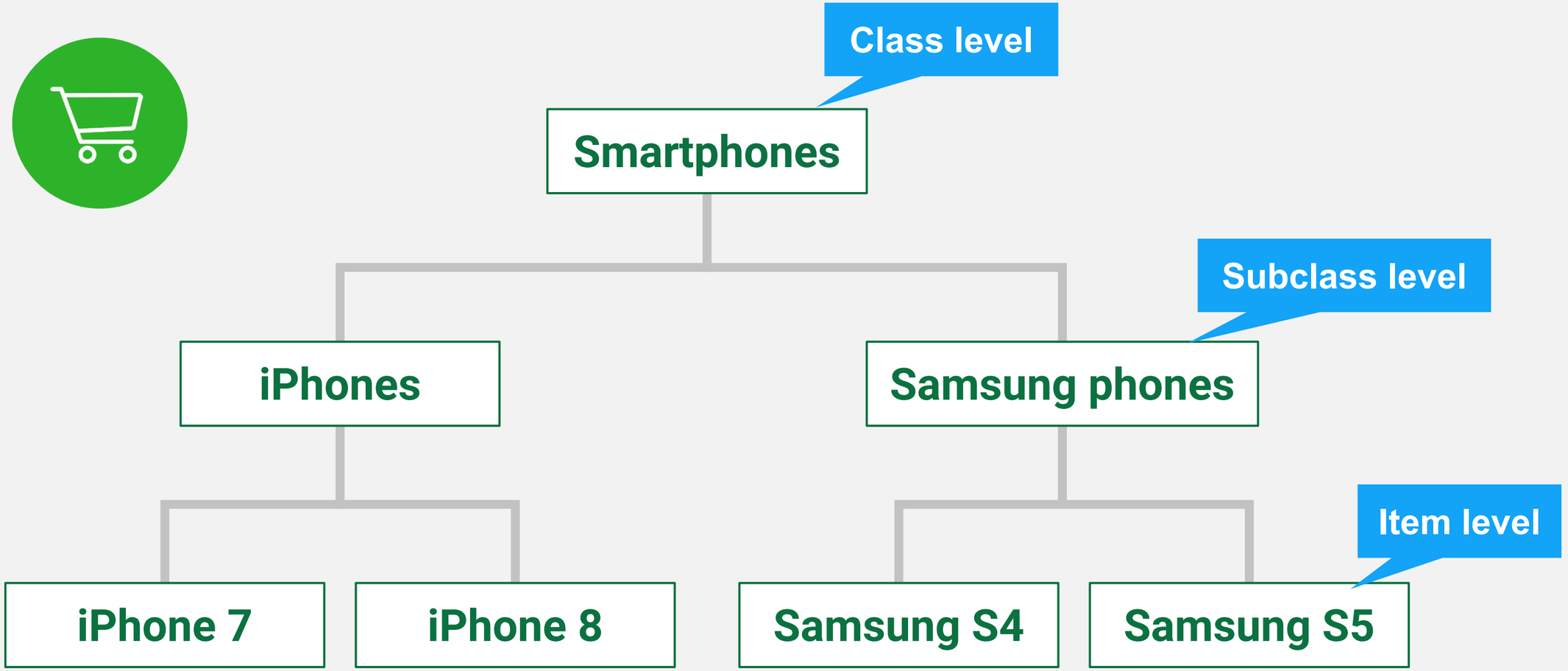
Introduction to the Retail Data Model - Hierarchies



Introduction to the Retail Data Model - Metrics

- Our retailer keeps track of different **metrics** about its business including:
  - The number of units sold of each of the items he sells every day in each store.
    - units [item, store, day] = value
  - The profit generated from selling an item during each day in each store.
    - profit [item, store, day] = value

Introduction to the Retail Data Model - Metrics

Item	Store	Day	Units
iPhone 7	ATL_1	19-04-2018	20
iPhone 8	ATL_1	19-04-2018	10
iPhone 7	ATL_2	19-04-2018	22
iPhone 8	ATL_2	19-04-2018	11
iPhone 7	ATL_1	20-04-2018	15
iPhone 8	ATL_1	20-04-2018	15
iPhone 7	ATL_2	20-04-2018	8
iPhone 8	ATL_2	20-04-2018	20

Metric Name

Metric Keys

Metric Values

Data Partitioning Challenge

Data Partitioning Challenge

- What is partitioning?
  - It's a technique for **physically dividing** the data into smaller pieces according to some predefined rules.

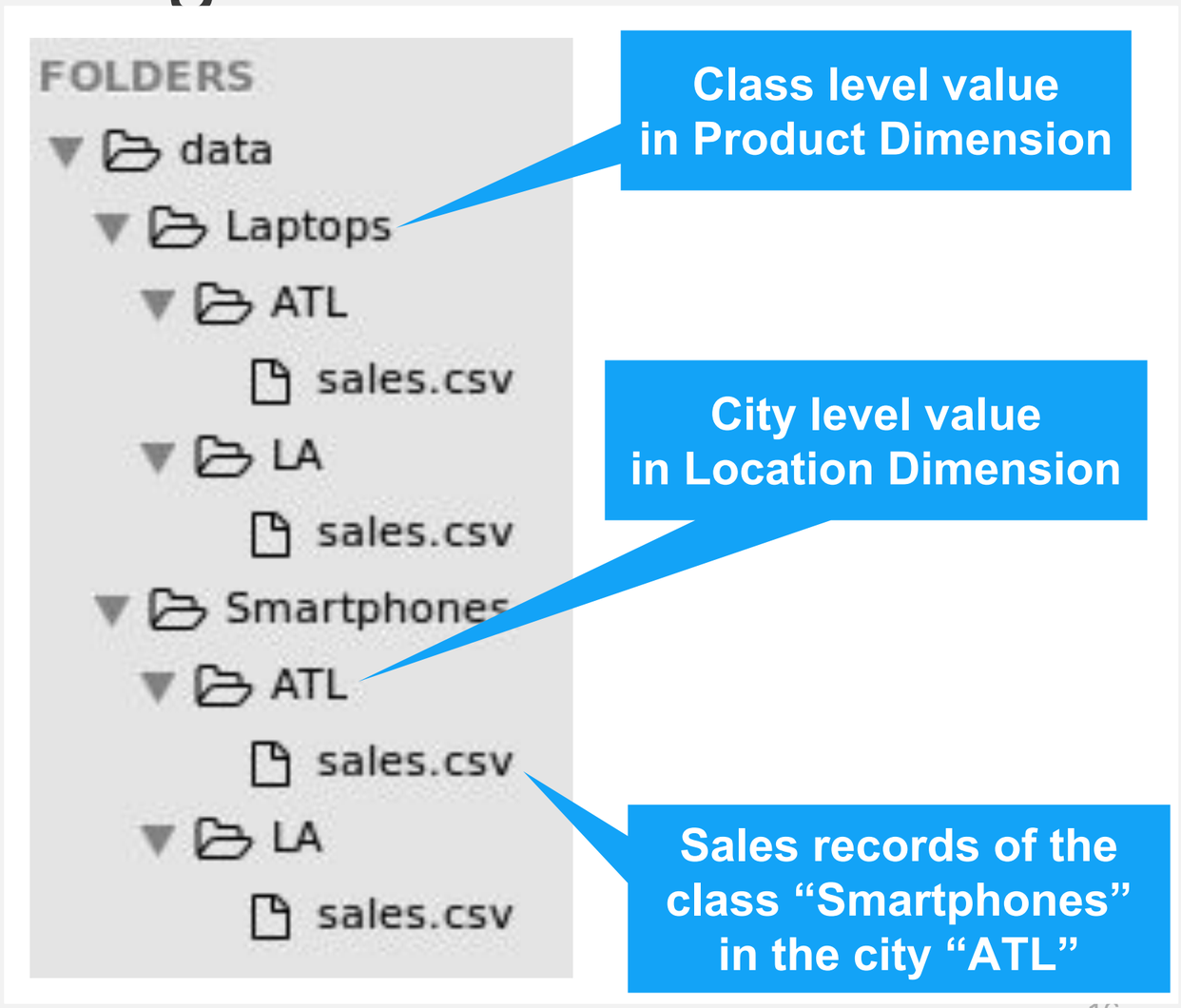
- Why partitioning?
  - Processing of large amounts of data (BIG Data)
  - Parallelizing data analysis
  - Improving maintenance, performance of our systems

Data Partitioning Challenge

HUGE Sales File

Partition by:

1. **Class level of the Product Dimension**
2. **City level of the Location Dimension**



Your Mission

Evaluation Criteria

Evaluation Criteria

- Solution correctness
- Passed levels
- Performance
- Code quality

Designed for progress™