DATA WAREHOUSING AND MINING

T.E.DS, Sem V
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Data Warehousing Fundamentals: ER vs Dimensional Modelling, IPD

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Dimension Analysis

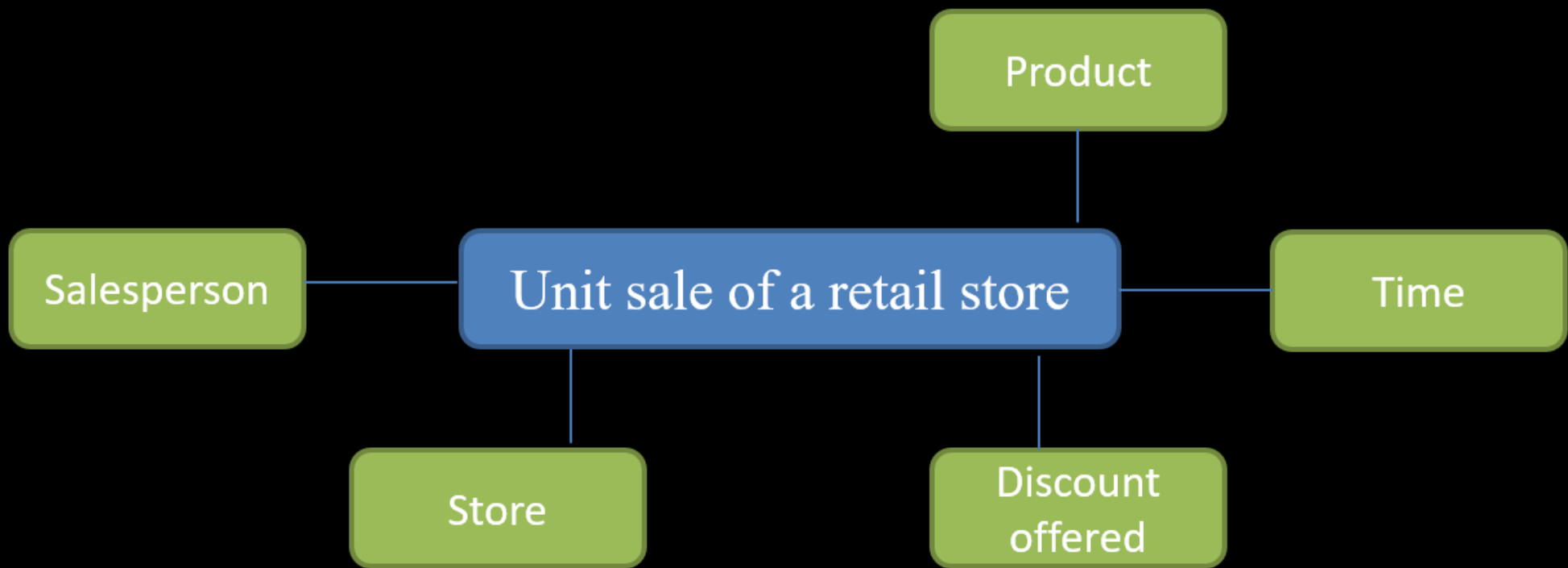Requirement Gathering team will collect information about

1. Business Dimensions
2. Facts
3. Categories / Hierarchy

Business Dimensions

What is a Dimension Business dimensions are the keys to define requirements of a DW

1. The marketing manager is interested in the revenue generated by the new **product** in **different regions every month** by **customer demographics**, **product brand** or by **timely sales** etc.

2. Business dimensions vary from one industry to another and depends on the subject for analysis

How many shirts of Louis Philippe were sold in January 2021 in Mumbai and the income level of the customers who bought those shirts.

Business Dimensions

Business Dimensions are syntactical categories that allow the users to specify multiple ways to look at the same information.
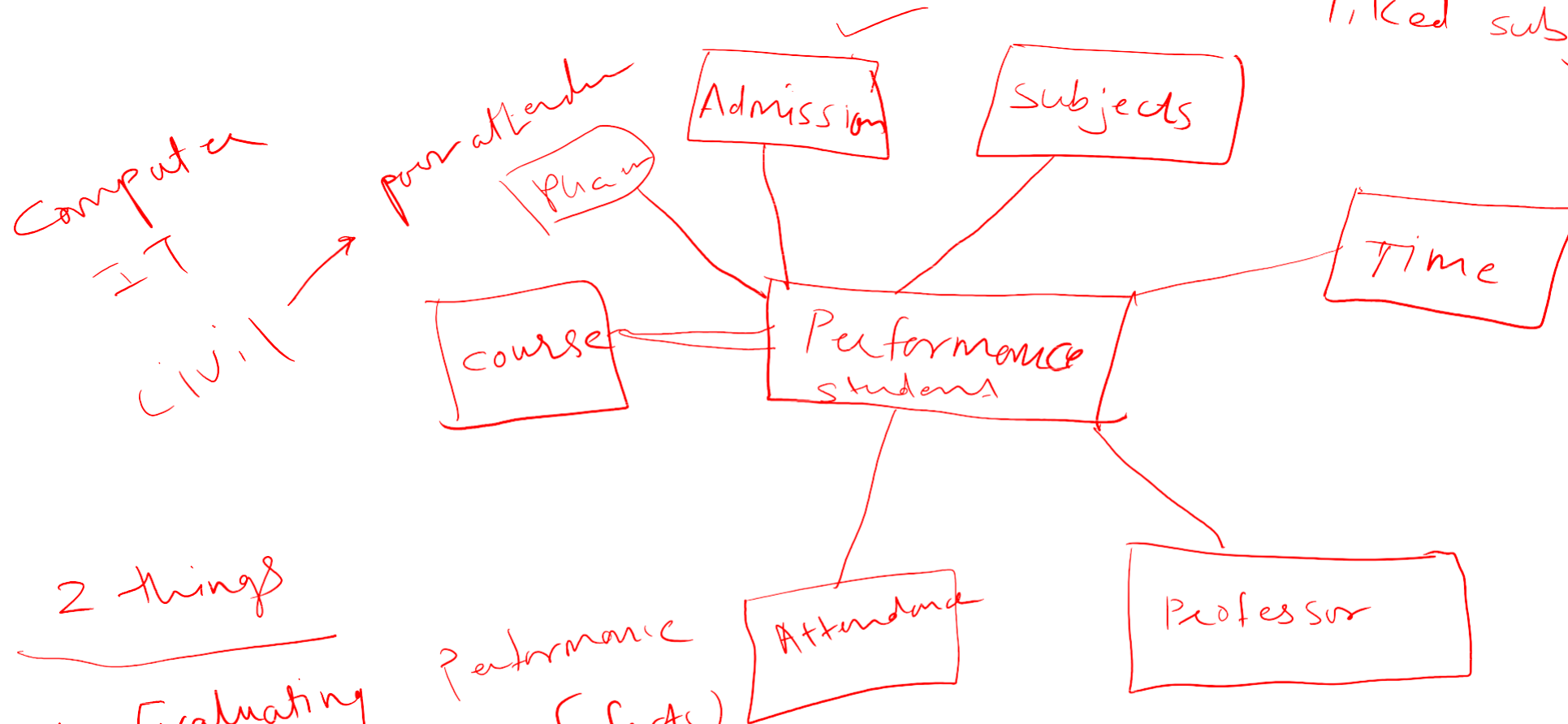
Business dimensions in various industries

Exercise:

Identify key dimensions for following business analysis

- Retail Chain
- Educational Institute
- Airline Business

Weekly best / worst

Tue – Thursdays at best

which best / most
liked subj of students

Computer
IT
Civil → poor attendn

Plan

Admission ✓

Subjects

Time

Performance
students

course

Attendance

Professor

faculty
1 better

3 worst
1, 2, 3
maths

2 things
1. Evaluating Performance of a business (facts)
2. Evaluating performance along / through some valid perspective (dimension)

Data Granularity

business spread accross the world

1. Data granularity in DW refers to the level of detail. The lower the level of detail, the finer is the data granularity.

Highest Level

Roll up

2. Granular data can be aggregated and disaggregated to meet the needs of different situations.

Lowest level

3. If data is not granulated, then it is very difficult for analysts to mine and analyze data because they are in large chunks.

Country	State	City
India	MH	Mumbai
India	IN	Chennai → xyz
UK		
UAE		

Customer

Name	Country
xyz	India
Pqr	UK
xyz	USA

| 123 | Au |
| 5627 | UAE |

Dimensional Hierarchy

- Granularity allows traversing the hierarchical levels of business dimensions for details at various levels.

- It is efficient to keep summarized data at different levels in a DW

- Business dimensions hierarchies are nothing but the paths for drilling down or rolling up while analysing the data different levels

Dimension Hierarchy