Renting Car

Department:	Computer Science
Course:	Data warehousing and Business Intelligence
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Introdution

For Data warehousing and Business Intelligence Course we were proposed to create a project that implements the 3 BI methods such as extracts , transformed and loaded information into Data Warehouses.

In this report the subject choosed was “Renting Car”,it’ll simulate a Rental Car company with all of their features necessaries. Wich informations do the uses has to provide to rent a car, wich methods he can choose, what are the policies are some of the themes that will be reporte here.

As first step in DW life-cycle , it’ll demonstrate the Dimenstions and Facts diagram to support the conceptual modeling phase.

Basicly, **Database Warehouses** (DWs) are databases used by decision makers to *analyze* the status and the development of an organization. DWs are based on large amounts of data integrated from heterogeneous sources into **multidimensional databases**, and they are optimized for accessing data in a way that comes naturally to human analysts.

Objectives of this Datawarehouse Project:

1. Efficient distribution of renting car information via Web
2. Create user-friendly reporting environment
3. Lay the foundation and develop plans for full warehouse development and implementation
4. Provide relevant , accurate, timely information to the business
5.

Rent Auto

Rent Auto is a company that rents automobiles for short periods of time, generally ranging from few hours to a few weeks.It is organized with numerous local branches(wich allow a user to return a vehicle to diferente location),and primarily located in public places such as near airoports , busy city area.

Our goal is serve people who require a temporary vehicle , for example, those who do not own their own car , travelers who are out of town, or owners of damaged or destroyed vehicles who are awaiting repair or insurance.

Facts and Dimensions Diagrams:

Attributes:

Total: 12

Facts: 4

Dimensions: 8

pick-up location:

drop-off location:

pick-up date and time: **fact**

drop-off date and time: **fact**

purpose of rental: **fact**

car company:

car price/hour:

car condition: **dimension**

-driver

-owner account

-payment methods

-orders: **fact**

Dimension and Facts Diagram:

Facts and dimensions form the core of any business intelligence effort.Those diagram define all the information that the system will need to manage this business.

A **fact** is a concept relevant to decision-making processes. It typically models a set of events taking place within a company. Examples of facts in the commercial domain are sales, shipments, purchases, and complaints.

A **dimension** is a property, with a finite domain, that describes an analysis coordinate of the fact. A fact generally has multiple dimensions that define its minimum representation granularity.

This diagram shows the relationship between facts and dimensions related to the renting car business.

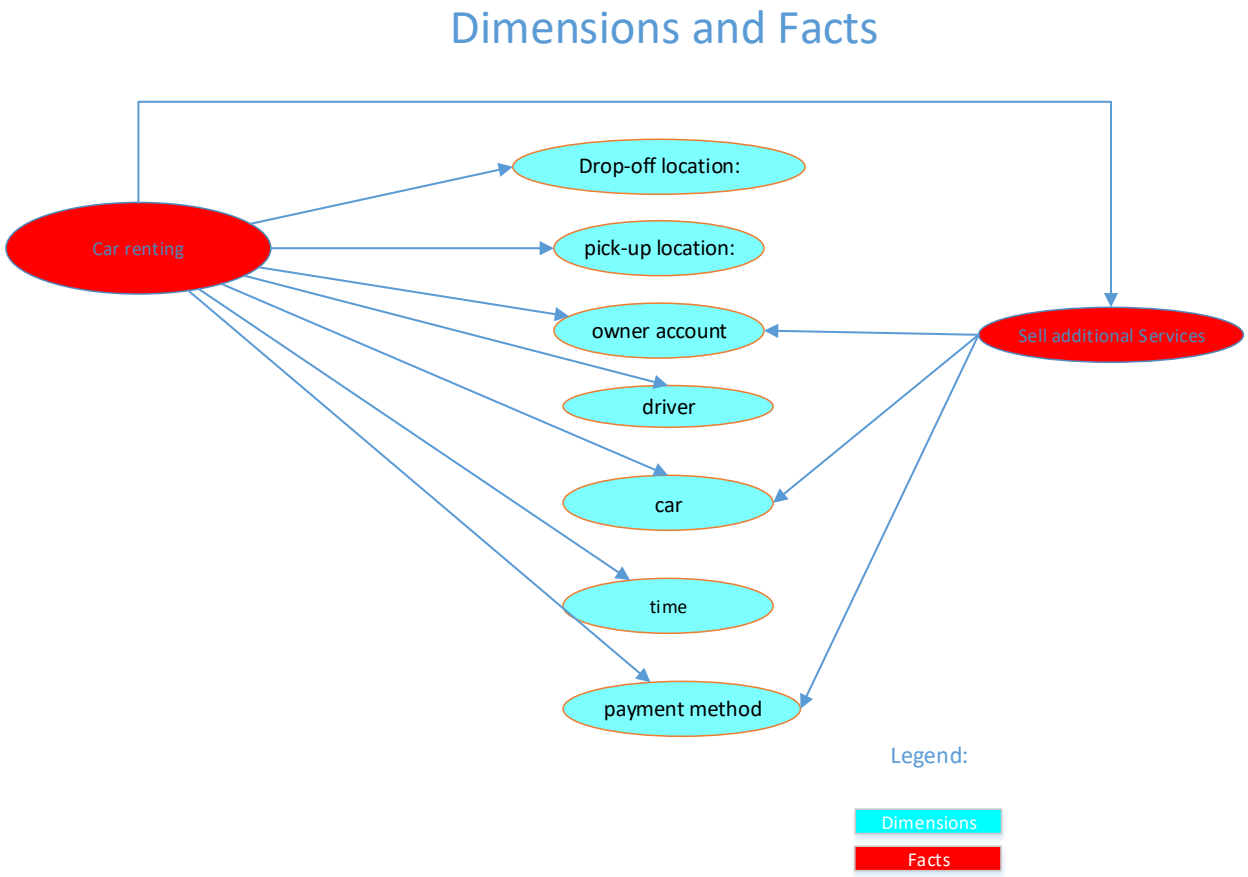

Image 1: Facts and Dimension Diagram with their respective connections

As the **Image 1** shows, this data warehouse's project has 2 facts, **car renting** and **sell additional services**.

The customer cannot have **sell additional services** without having already done a order, which is represented in the line that connect those 2 facts.

That means it will be implemented according to all values that were previously defined in **car renting** .

Concerning to **car renting** fact the the system has know about :

1. the **pick-up location** , such as Country, city and street
2. the **drop off**, such as Country, city street
3. **owner account,** such as
4. **driver** information
5. **car** information
6. **time** , that the car will be taken and delivered
7. **payment method,** wich payment method he choosed

References

https://en.wikipedia.org/wiki/Dimensional_fact_model