4. All electronics company

- Addition of summary data to the fact table.
- This process would help in retrieving results for queries where aggrega

1.14 Examples on Star Schema and Snowflake Schema

Ex. 1.14.1 : All electronics company have sales department. Sales consider four dimensions namely time, item, branch a location. The schema contains a central fact table sales with two measures dollars_sold and unit_sold. Design star schem snowflake schema and fact constellation for same.

Soln. :

(a) Star Schema

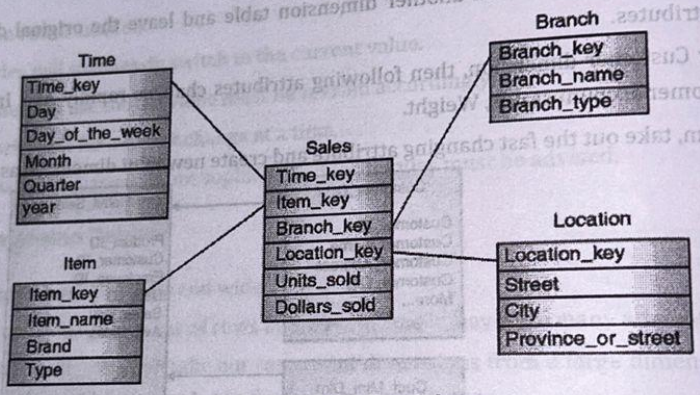


Fig. P. 1.14.1 : Sales Star Schema

(b) Snowflake Schema

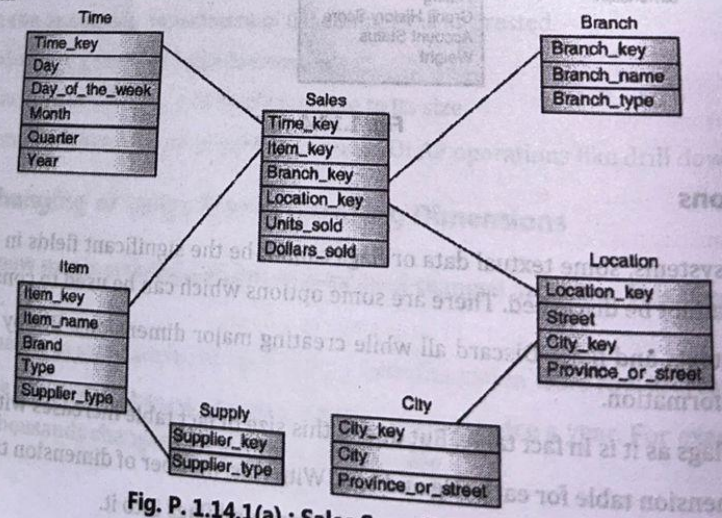


Fig. P. 1.14.1(a) : Sales Snowflake Schema

3. UNIVERSITY

SNOWFLAKE SCHEMA

monitoring, localized analyses and automated exceptions

business conditions.

Ex. 1.14.15 : Suppose that a data warehouse for DB- University consists of the following four dimensions: student, course, semester, and instructor, and two measures count and avg grade. When at the lowest conceptual level (e.g., for a given student, course, semester, and instructor combination), the avg-grade measure stores the actual course grade of the student. At higher conceptual levels, avg-grade stores the average grade for the given combination. **MU - May 19**

(i) Draw a snowflake schema diagram for the data warehouse.

(ii) Starting with the base cuboid [student, course, semester, instructor], what specific OLAP operations (e.g., roll-up from semester to year) should one perform in order to list the average grade of CS courses for each Big University student.

Soln. :

(i) A snowflake schema is as shown as follows :

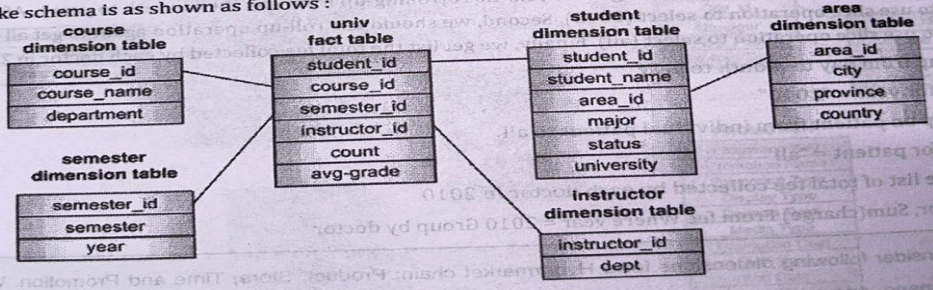


Fig. P.1.14.15

(ii) Starting with the base cuboid [student, course, semester, instructor], what specific OLAP operations (e.g., roll-up from semester to year) should one perform in order to list the average grade of CS courses for each DB-University student. The specific OLAP operations to be performed are :

TechKnowledge Publications

2. DOCTOR, PATIENT

STAR SCHEMA

- Dice on course, student with department = "CS"
- Drill-down on student from university to student name.

Ex. 1.14.16 : Suppose that a data warehouse consists of the three dimensions time, doctor and patient, and the two measures count and charge, where charge is the fee that a doctor charges a patient for a visit.

(i) Draw a star schema diagram for the above data warehouse.

(ii) Starting with the base cuboid [day, doctor, patient], what specific OLAP operations should be performed in order to list the total fee collected by each doctor in 2010?

(iii) To obtain the same list, write an SQL query assuming the data are stored in a relational database with the schema fee (day, month, year, doctor, hospital, patient, count, charge). MU - Dec. 19

Soln. :

(i) Star Schema

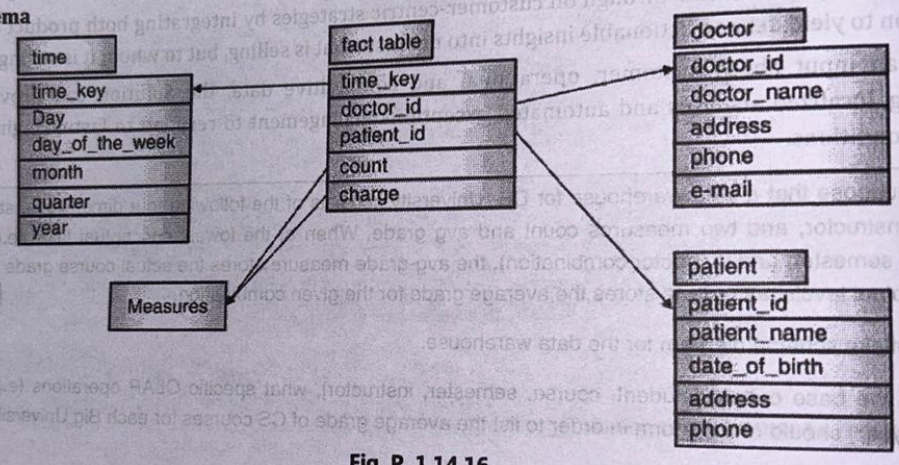
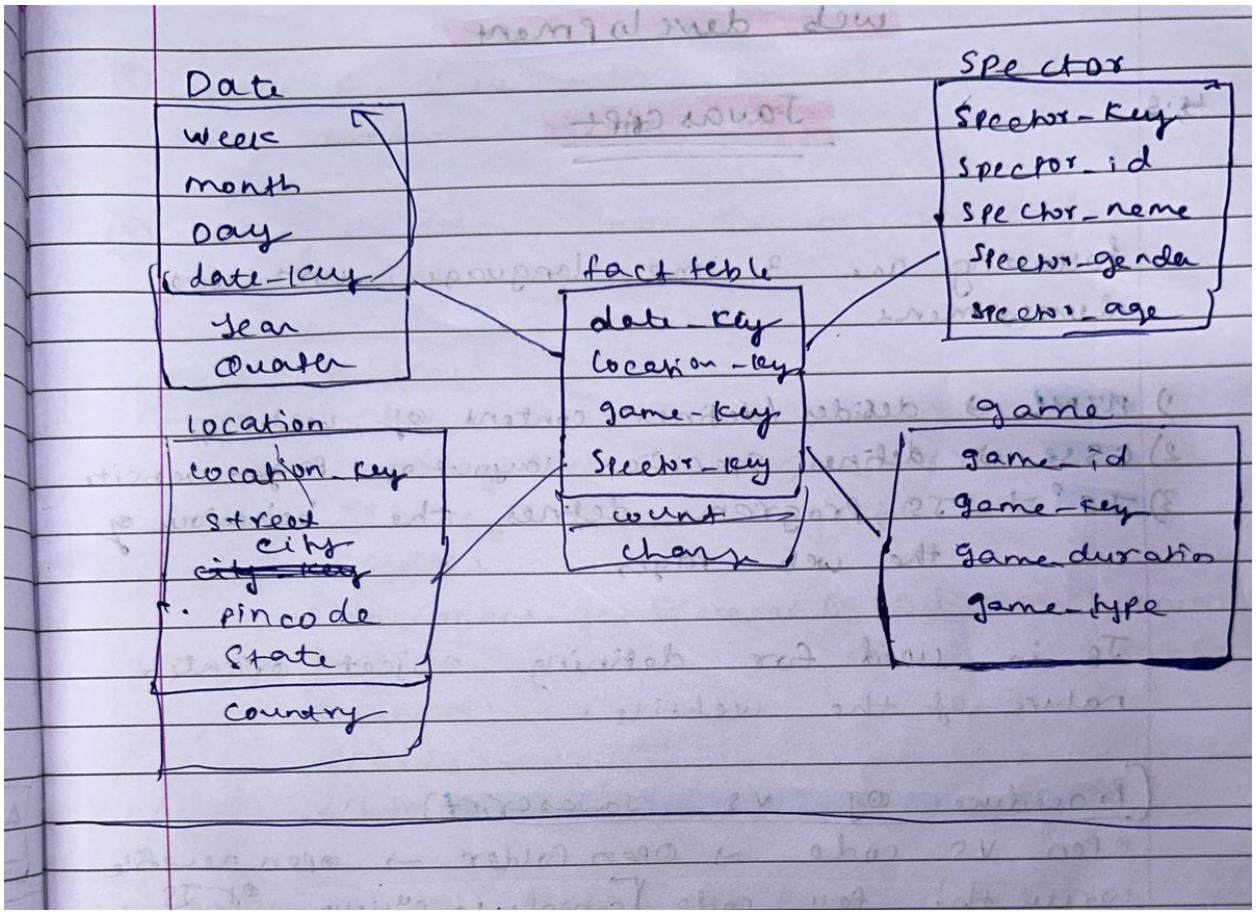


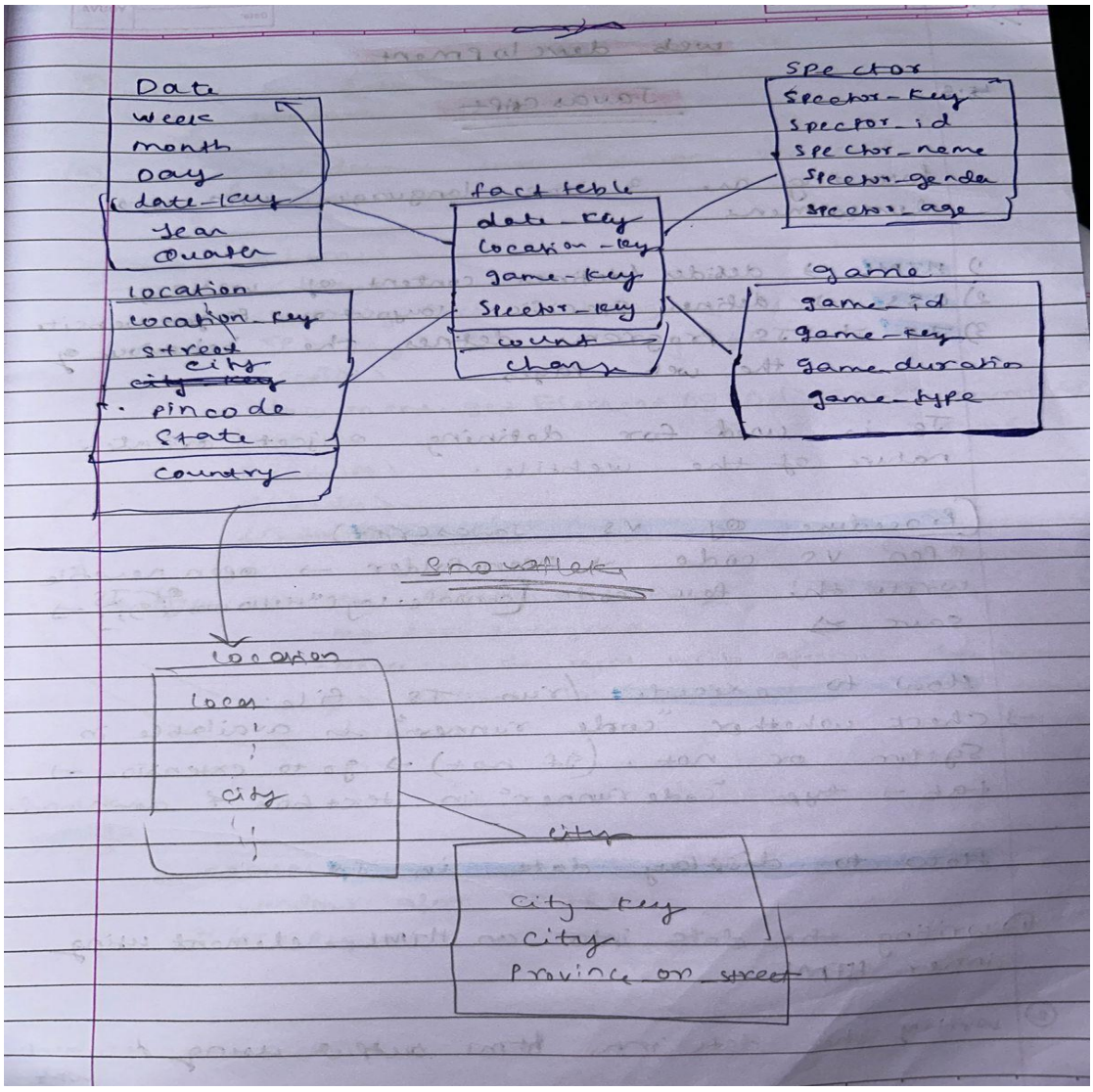
Fig. P. 1.14.16

1. DATE, SPECTOR, LOCATION, AND GAME

Star schema



Snowflake



(In city dimension) you can also add country.