

Experiment No – 2

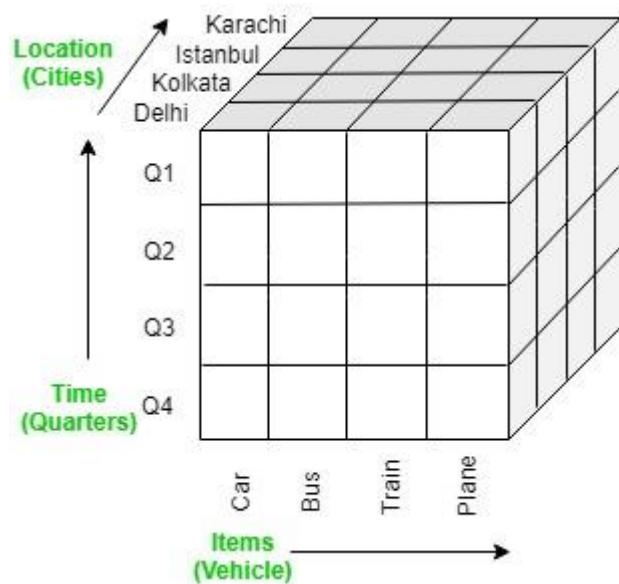
Experiment No: 2

Name: Dhiraj Ravindra Bodake
Roll No: 18141216

Title : Develop an application to implement OLA , roll up , drill down , slice and dice operation using Oracle.

Theory : OLAP stands for Online Analytical Processing System. It is a software technology that allows to analyze information from multiple database systems at the same time it is based on multidimensional data model and allows the users to query on multi-dimensional data (eg. Delhi → 2018 → Sales data).

OLAP databases are divided into one or more cubes and these cubes are known as Hyper-cubes.



1) Roll-up.

Roll-up is also known as "consolidation" or "aggregation". The roll-up operation can be performed in 2 ways.

1. Reducing dimensions

2. Climbing up concept hierarchy. Concept hierarchy

Concept is a system of grouping things based on their order or level.

Example:

| | Diving Penta | | | | U.S.A Australia | | |
|----|--------------|----|-----|-----|-----------------|------|--|
| Q1 | 605 | 24 | 825 | 400 | Q1 | 1000 | |
| Q2 | | | | | Q2 | | |
| Q3 | | | | | Q3 | | |

2) Drill-Down.

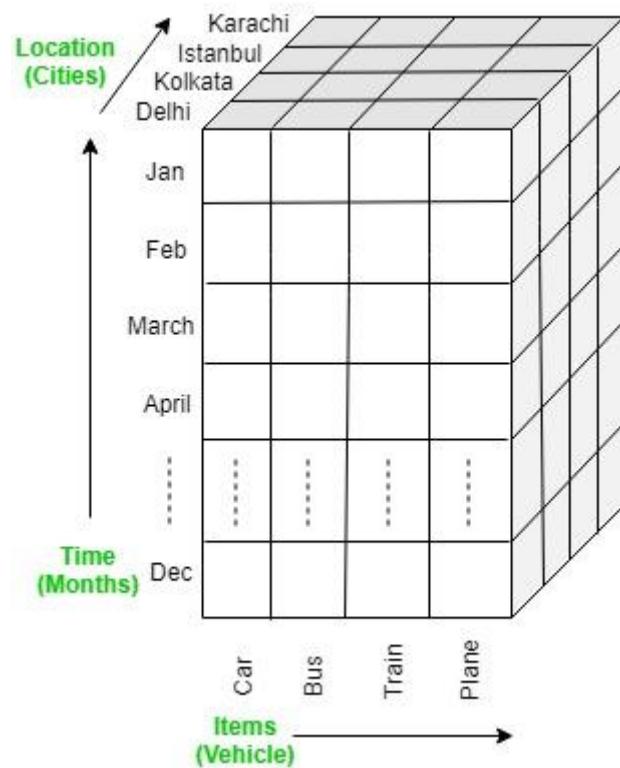
In drill-down data is fragmented into smaller parts. It is the opposite of roll-up process. If done via,

- Moving down the concept hierarchy
- Increasing dimension.

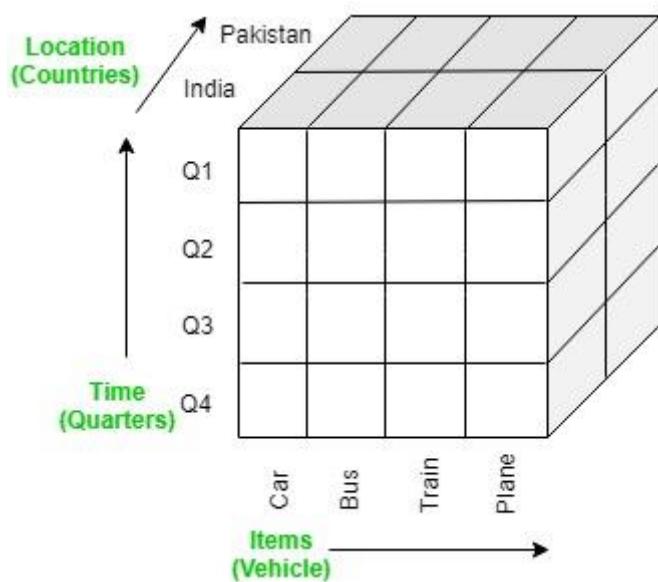
Example:

| | Jersey Penta | | | | ORB CSK NSB | | | |
|----|--------------|-----|----|-----|-------------|-----|-----|-----|
| Q1 | 605 | 825 | 14 | 400 | Q1 | 150 | 100 | 180 |
| Q2 | | | | | Rami | | | |
| Q3 | | | | | ala | | | |

Drill down -



Drill down –



3) Dice.

It selects a sub-cube from the OLAP cube by selecting two or more dimensions. In the cube given in the overview section, a sub-cube is selected by selecting following dimensions with criteria.

- Location = Delhi to kolkata
- Time = Q_1 to Q_2
- Item = Car or Bus

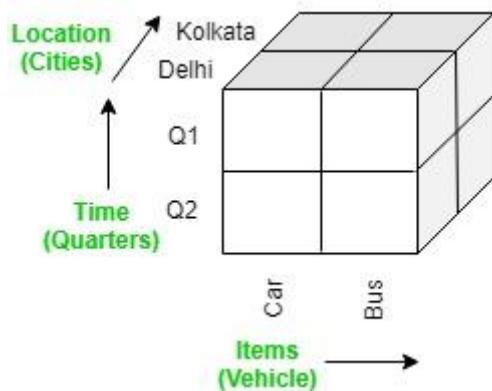
4) Slice.

It selects a single dimension from the OLAP cube which result in a new sub-cube section. IN the cube given in the overview section, slice is performed on the dimension Time = " Q_1 ".

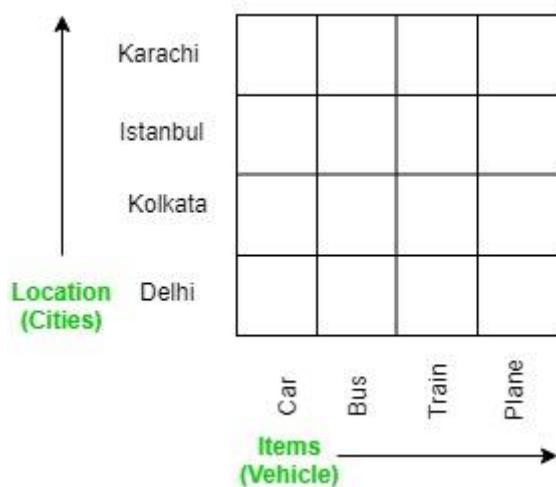
5) Pivot.

It is also known as rotation operation as it rotates the current view to get a new view of the representation. In the sub-cube obtained after the slice operation performing pivot operation gives a new view of it.

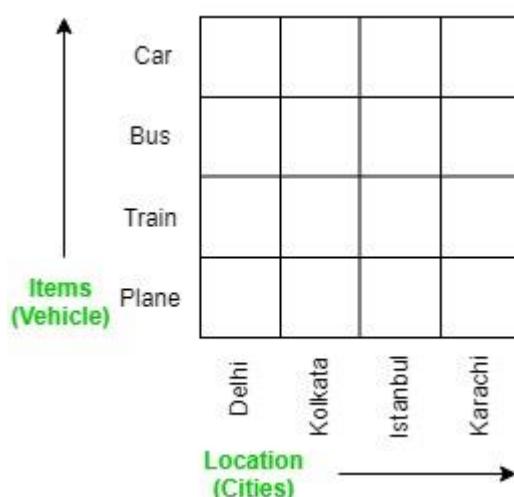
Dice –



Slice –



Pivot –



Practical –



Defining a Database Connection:

The dialog box has a tab labeled "General" which is selected. The instructions say "Enter description and connection information". The "Description:" field contains "rel11g" and the "Connection Information:" field contains "localhost:1521:rel11g". Below these fields is a placeholder "Database TNS Alias or hostname:port:sid".

Opening a Database Connection

To connect to a database:

1. Click the plus icon (+) next to a database connection in the navigation tree.

- Supply your database user name and password in the Connect to Database dialog box.

Installing Plugins

Plugins extend the functionality of Analytic Workspace Manager. Plugins are distributed as JAR files. Any Java developer can create a plugin. The developer should provide information about what the plugin does and how to use it.

If you have one or more plugins, then you must identify their location to Analytic Workspace Manager.

To use plugins:

- Create a local directory for storing the plugins.
- Copy the JAR files to that directory.
- Open Analytic Workspace Manager.
- Choose Configuration from the Tools menu.

The Configuration dialog box opens.

- Select Enable Plugins and identify the plugin directory. Click OK.
- Close and reopen Analytic Workspace Manager.

The functionality provided by the plugins is available in the navigator.

Conclusion:

Thus we successfully installed and performed OLPA operations on oracle.