

SNS COLLEGE OF ENGINEERING Kurumbapalayam (Po), Coimbatore – 641 107 Accredited by NAAC-UGC with 'A' Grade Approved by AICTE & Affiliated to Anna University, Chennai



WORKBOOK

UNIT I

TOPIC 1: DATA WAREHOUSING COMPONENTS

1. Define the term coined in the picture.



2. Label the terms described in the picture.







3. Mention the other names of Data warehousing.



4. Mention the types of data described here.



5. Pick the words given in the box to make the difference between operational system and informational system

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on-line transactional processing (OLTP)	
daily business transactions	
where the data is put in	
count the new orders	
repeatedly perform the same operational tasks over and over	
integrated repository of company data	
never deal with one row at a time	
On-line analytical processing (OLAP)	
takes orders	
where we get the data out	•

6. Fill the diagram to get the components of data warehouse

TOPIC 2: BUILDING A DATA WAREHOUSE – DESIGN CONSIDERATION

1. Change the given diagram to describe the approaches to build a data warehouse.



2. Identify and label the picture with their respective approaches.



3. Rearrange the steps, to define the steps to be followed for designing the data warehouse.



TOPIC 3: BUILDING A DATA WAREHOUSE – TECHNICAL & IMPLEMENTATION CONSIDERATION

1. Logical steps needed to implement a data warehouse in implementation considerations





2. Write the two options for data placement.

TOPIC 4: MAPPING DATA WAREHOUSE TO MULTIPROCESSOR ARCHITECTURE – RDBMS, DATABASE FOR PARALLEL PROCESSING

1. Define the term described in the picture

Hint: advantages of relational database technology



2. Change the given graph to show the types of parallelism.



Types of DBMS parallelism.

3. Complete the diagrams to get the DBMS software architecture styles for parallel processing and name the three types.







TOPIC 5: MAPPING DATA WAREHOUSE TO MULTIPROCESSOR ARCHITECTURE – ALTERNATIVE TECHNOLOGIES, PARALLEL DBMS VENDORS

	1.	Match the	vendors	with	their	respective	architecture
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S.No	Vendors	Architecture
1	Oracle	Shared memory, shared disk and shared nothing models
2	Informix	Shared nothing models
3	IBM	Shared nothing models
4	SYBASE	shared disk arch

2. Match the vendors with the data partitioning technique adopted by them.

S.No	Vendors	Data partition technique
1	Oracle	hash
2	Informix	round robin, hash, schema, key range and user defined
3	IBM	hash, key range, Schema
4	SYBASE	Key range, hash, round robin

3. Mention the Parallel operations done by Informix vendor.



TOPIC 6:DATA LAYOUT, MULTIDIMENSIONAL DATA MODEL, STAR SCHEMA

1. Fill in the blanks with the help of the displayed words.



- i). A ______ is a collection of related data items, consisting of measures and context data. It typically represents business items or business transactions.
- ii). A ______ is a collection of data that describe one business dimension.
- iii). A ______ is a numeric attribute of a fact, representing the performance or behavior of the business relative to the dimensions.
- 2. Coin the term displayed in the picture.





- 3. A schema which has the following characteristics.
 - one large central table (fact table)
 - set of smaller tables (dimensions)
 - Arranged in a radial pattern around the central table.

4. Which one is the fact tables and dimension tables and what schema is depicted here.

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TOPIC 7: DBMS SCHEMAS FOR DECISION SUPPORT-STAR JOIN AND STAR INDEX,BITMAPPED INDEX, COLUMN LOCAL STORAGE, COMPLEX DATA TYPES

1. What will be the Cartesian product for 2 rows of product table with bolts and nuts & 3 rows of market table with east, west & central? Write the combinations.



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2 tables rows are processed is called as _____

3. Cost of generating Cartesian product is ______ cost of generating intermediate result with fact table.

- i. Less than or equal to
- ii. Less than
- iii. greater than or equal to
- iv. greater than

4. Expand



TOPIC 8:DATA EXTRACTION, CLEANUP AND TRANSFORMATION TOOLS

1. What may come in the center layer? Write about that term.



2. Task of ______ data from ______ data system, ______ and _____ it & then ______ into ______ data system carried out either by separate products or by single integrated solution. Capturing ______ loading ______ cleaning ______ transforming ______ source

Fill the above spaces with the help of the hint shown above.

3. Guess the vendors for data extraction, cleanup and transformation tools





TOPIC 9:METADATA

1. Metadata contains



















2. Benefits of having metadata repository in data warehouse framework



3. Fill the following diagram relevant to metadata

