APACHE HIVE

Part 5

by Sumit Mittal

IMPORTANT

Copyright Infringement and Illegal Content Sharing Notice

Trainer Introduction

Mr. Sumit Mittal, CEO & founder of **TrendyTech**. He has a Master's degree in Computer Applications from NIT Trichy & have a total of 7+ years of industry experience. He has worked for top MNC's like **Cisco** & **VMware**.

Consistent 5 star Google rated Bigdata course

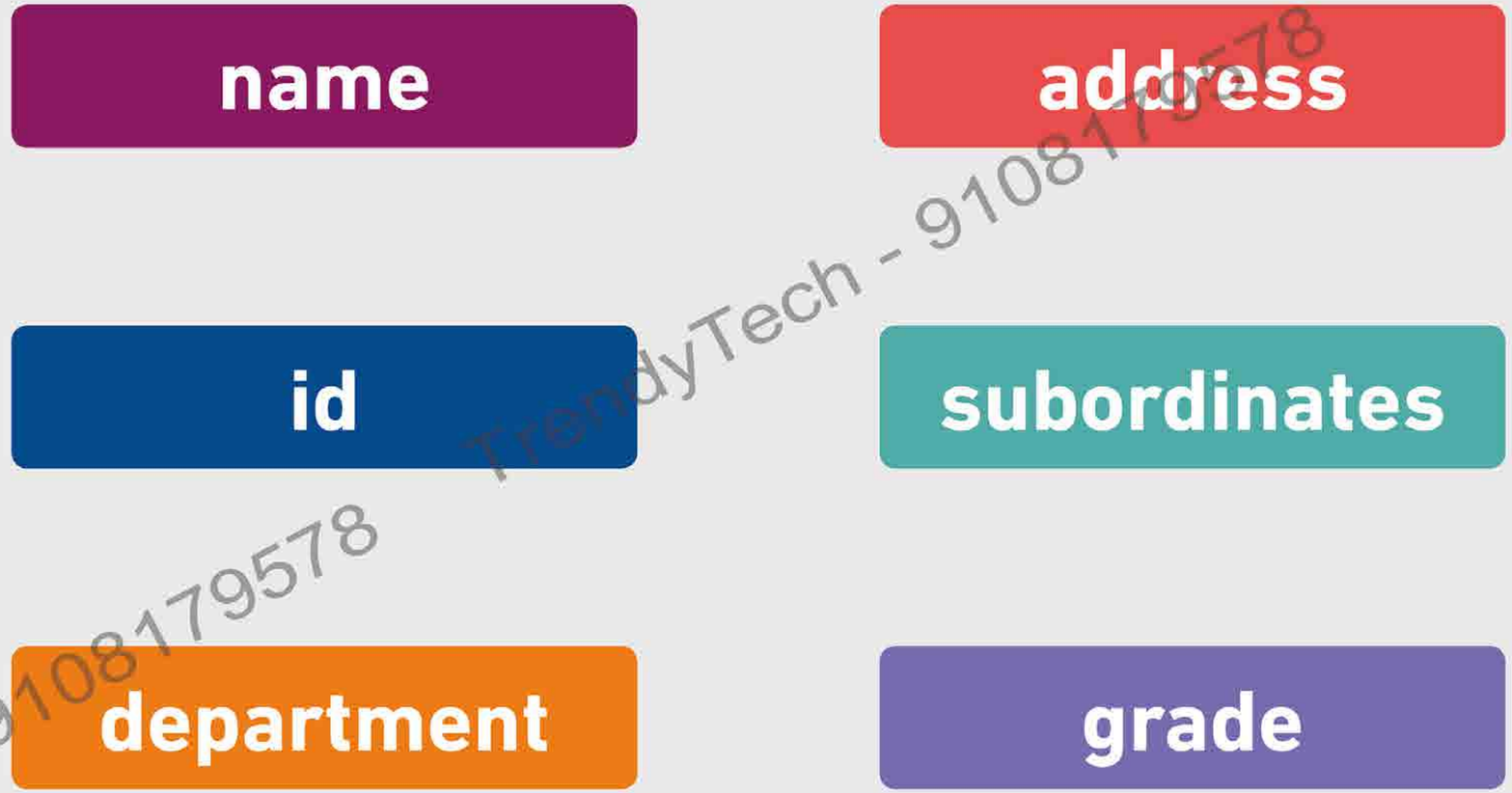
Normalized Storage in Traditional Databases

Traditional Database Design

Normalized data

Data is stored in a granular form to minimize redundancy

Employee Information



id grade name department

id subordinates

id address

Employee Details

Id	Name	Department	Grade
1	Emily	Finance	6

Employee Details

Id	Subordinate Id
1	2
1	3

Employee Address

Id	City	Zip Code
1	Palo Alto	94305
2	Seattle	98101

Id	Name	Department	Grade
1	Emily	Finance	6

Id	Subordinate Id
1	2
1	3

Id	City	Zip Code
1	Palo Alto	94305
2	Seattle	98101

Normalization

Id	Name	Department	Grade
1	Emily	Finance	6

join

Id	Subordinate Id
1	2
1	3

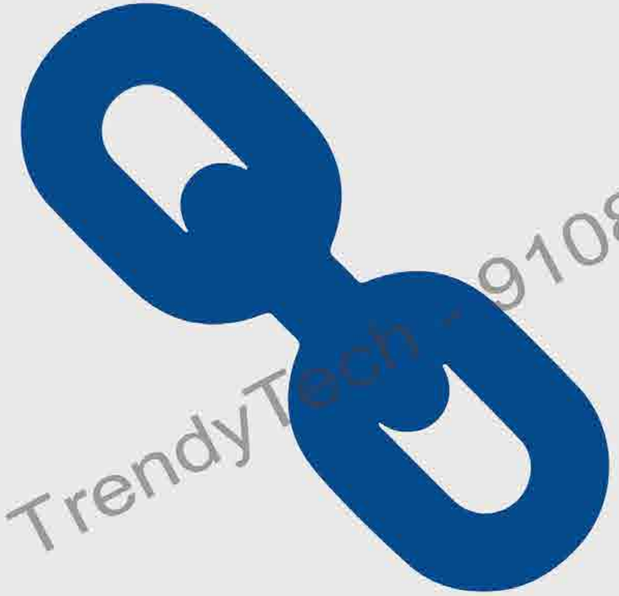
Query for Emily's department and her subordinates

Normalization

- Minimizes redundancy, optimizes storage
- Foreign keys to ensure valid joins
- Updates in one location, no duplication of data

Denormalized Storage in Hive

Denormalized Storage



Denormalized data

Data is compressed into one table to be read in a single operation

Denormalized Storage

Disk space is very cheap

No foreign key constraints

Read operations, no data updates

Denormalized Storage

Optimize the number of disk seeks

Store data for an entity in one location

Ignore redundancy, minimize joins

Denormalized Storage

Id	Name	Function	Grade
1	Emily	Finance	6
2	John	Finance	3
3	Ben	Finance	4

Id	Subordinate Id
1	2
1	3

Id	Name	Function	Grade	Subordinates
1	Emily	Finance	6	2, 3
2	John	Finance	3	
3	Ben	Finance	4	

Denormalized Storage

Id	Name	Function	Grade
1	Emily	Finance	6
2	John	Finance	3
3	Ben	Finance	4

Id	City	Zip Code
1	Palo Alto	94305
2	Seattle	94305

Id	Name	Function	Grade	Subordinates	Address
1	Emily	Finance	6	**2, 3**	**Palo Alto, 94305**
2	John	Finance	3		
3	Ben	Finance	4		

Denormalized Storage

Id	Name	Function	Grade	Subordinates	Address
1	Emily	Finance	6	**2, 3**	**Palo Alto, 94305**
2	John	Finance	3		
3	Ben	Finance	4		

Store everything related to an employee in the same table

Denormalized Storage

Id	Name	Function	Grade	Subordinates	Address
1	Emily	Finance	6	**2, 3**	**Palo Alto, 94305**
2	John	Finance	3		
3	Ben	Finance	4		

Get all details about an employee in one read operation

Google REVIEWS

5 Star Google Rated Big Data Course

LEARN FROM THE EXPERT

9 1 0 8 1 7 9 5 7 8

Call for more details

Follow US

Trainer	Mr. Sumit Mittal
Phone	9108179578
Email	trendytech.sumit@gmail.com
Website	https://trendytech.in/courses/big-data-online-training/
Linked In	https://www.linkedin.com/in/bigdatabysumit/
Twitter	@BigdataBySumit
Instagram	bigdatabysumit
Facebook	https://www.facebook.com/trendytech.in/
Youtube	TrendyTech