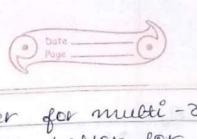
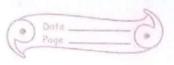
Midhi	Singh Date Page
	Introduction
	to NO SBL P
	Columnar Database
12-01-2	Da Noco To-
4).	Difference Between SSI and NOSSI:
	NOSQL:-
*	140386.
	A non-relational darabase (no tables)
0	stands for NOT ONLY SQL
0	A flexible destabouse used for big older
	p real -time met apps.
1).	
*	Difference between SSL and NOSSL:
~	Difference service
a).	Sgr databases aux relational, NOSGL
	aux mon-relational en nature roes
	they do not consists only tables.
L)	SQL databases have structured query
D)•	language & have a predefined scheng.
	Nosgi databases have dynamic schemas
	for unstructured data.
c).	SQL darabases ave Verettally scalable.
	SQL databases are vortically scalable.
	SQ1 darabases que table bossed, miliele
u) o	NOSBI databases are document, key-value,
	geraph or welde-column stories.
SELECTION OF THE PARTY OF THE P	And the state of t



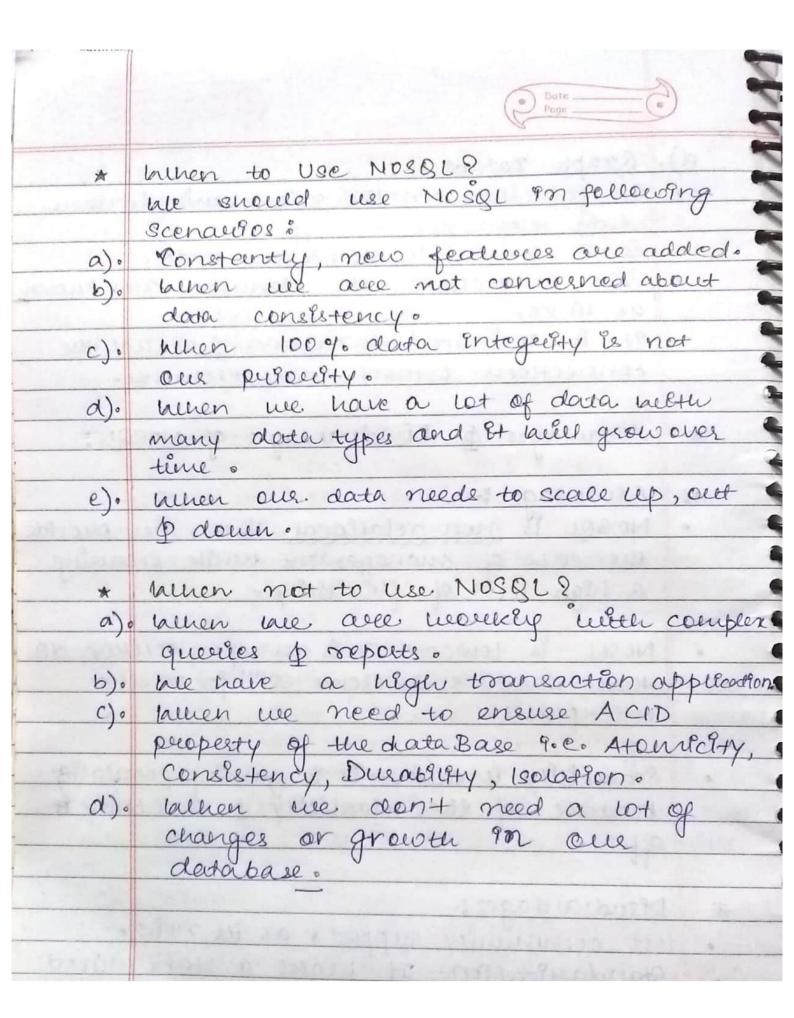
	Date Page
e).	transactions, NOSQ2 and better for
	JSON.
*	Scaling of a Database: Scaling of a database means allowing
	the database to do more never than the database to do more never than the was originally designed to, nithhout taking a huge pereforemance hit.
•	It is the ability of a database design system to handle more block than it
10	typically performs en an efficient ways
*	Different bloys to scale a dotabase: There are two ways to scale a dotabaso: · Horizontal Scaling · Vertical Scaling
33233	Houszontal Scalling: It means that we add scale the database by adding more machines into the pool of resources.
	Vertical Scaling: It means that scaling is done by adding more power (CPU, RAM) to an existing machine.
*	RDBMS are vertically scalable. When load forcuease on RDBMS dotabases then we scale the database by increasing server hordware power.

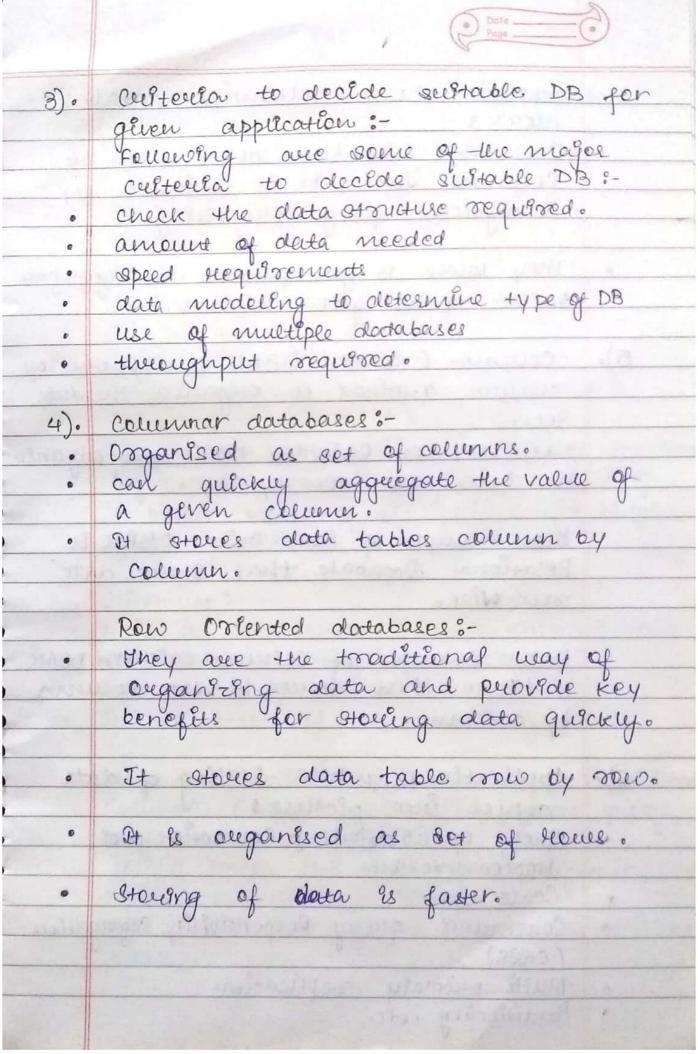
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Rev	View C
E.A.	Dote Page
2).	Different types of Nosal destabases: There are 4 main types of Nosal
*	Defferent types of NOSQL
710 AVE	There are 4 main 1970
77.1	databases:- Document databases
	· Document address
and the second	· Key Value Stories · Column - Orlented databases
THE STATE OF	o Collina Sager des
a realistic de	· Graph Databases
	Document Databases: In a document
a) •	database, documents are stored in JSON,
	BSON or XML documents. In this database:
	BSON OF XIVE WORLD
•	particular elements can be endexed for
•	partificular elements (at a
	faster querying.
. \	Key Value Hoves:
b) •	It is the elemplest type of NOSQL database.
•	Every data element on the dB is choused
•	as a key value pail consisting of an
	attobute name & a value.
	It is like a relational dB with only two
	columns: key er attribute name pralue
-	Carrier 6 120 y
2)	Column Organited Databases:
C)°	It is organised as set of columns.
	It can quickly aggregate the value
	of a given collumn.
	It makes reading faster missout consuming
	memory with unwanted daga.
	werry were crucined and

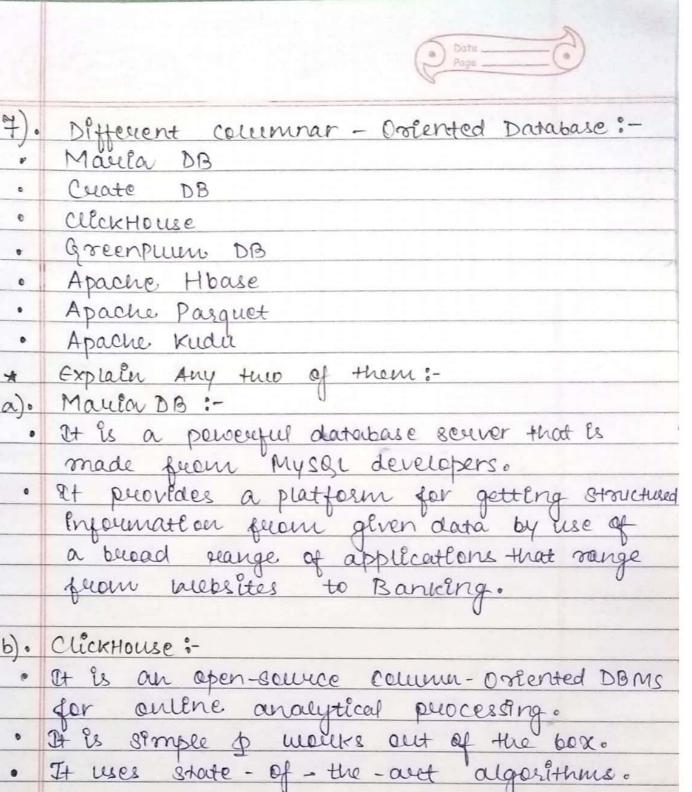


	V rage
d).	Graph Databases:
0	It focuses on the relationship between
	data elements.
	Each element is stored as a node.
	The connection of welcoments are known
	as links.
•	It & optimized to capture & search the
	connections between data elements.
14 444	
A	Advantages & Disadvantages of NOSGL:
*	Advantages:
0	Nosgi is non-relational. Theis, they provide
	the ease of management welle ensuring
	a high level of flexibility.
	Nosge & lowcost. It & an open-source dB
and the	that priorides ouverance solu for smaller
	enterprises.
of the	HOME OF THE RESIDENCE OF THE SECURITION OF THE S
	Scalablity & easter. It is gaining popularity
	Scalablilty & easier. It is gaining popularity because of the elasticity & scalability it
	affers.
*	Desadvantages:-
	less community support, as its new.
•	Standauszation - It lacks a standauszed
	platjourn like SQL menten preciente les feether
	expanding.
	Interfaces & Interoperability: It is
	another concern that is faced by NOSBI, menich needs pering immediately.





	O Dorn
24	Explain now columnar database
	Columnar database stores data by
	The second secon
	analytical quely processing
	They work to get provide, the aggregate value of the given column.
- 21	walte of the given column.
5).	column- Ordented DBMs use column by
0).	column method to organise the data
	0.013
	Housever, Row-Owended DBMs the organise
	Pts data sets vous by vero.
	Best Example of Row-Ordent DBMs ls
	Relational Darabase that stones data
	rew-Wise.
	- London to the curio backlet are
	Berst Example of Column-Oriented DBMS
18.131	is HBase that stores Ets data column
e auto	by column.
T. Oliva	
6).	Applications mulle scaling of data
	comes into picture:
	1
	emplementation.
•	Scale Up
•	Command query Responsibility Segregation
	(CORS)
0	Multi primary replication. Poutitioning, etc.
•	routed total of reac.
2000	



It is	an open-source collina- Oriented DBMs
for	online analytical processing.
Dr Es	online analytical puocessing. simple & montes out of the box. ses state - of - the - over algorithms.
It u	ses state - of - the - arct algorithms.
hlhy	Column Oriented DB faster than Row Oriente
Colu	un Oriented DB have faster queux
pery	ormance based DB have faster query
dest	gm, keeps the data closer together.
nento	gn, keeps the data closer together, in reduces seek time.
Thus	., they are faster than row-oriented
dada	tase.

Create DB

ClickHouse

Greenpuun DB

Apache Hbase

Apache Parquet

Apache Kudu

a). Maria DB:-

b). ClickHouse: