Classmate Date Page

is a organised collection of Aructured data that can be easily accessed, managed, and update.

2. Different types of databases.

- Relational Database (nows and column)

- Non Relational Database (key value)

object oriented database coops concepts

- Distributed Do tabase Edistributed across while

- Cloud database (db hoster) on cloud platerum) datasinose

- Graph Database (Hed to store & among data Structed

as nodes and odges (eg Amazon Neptra

what is relational Daterbase? How it is different from non relational database?

Rolational Database use tables with rows and

Columns

Table we can linked Vic keys (Primary, foregin)
Follows ACID properties

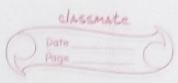
Difference from Non Relational.

Non-relational Stores data in JSON like documents, key Value pairs, or graphs

Relational requires tixed schemas, while non relational allows flexible schemas

4 what is SQL ? Its major Components? Structured Query Language & used to Communicate with and manage relational DDL (Data Detinition Language) Create (alter structures Chables, database) DML (Data Manipulation Language) Insert, update, delete data DCL (Data Contro) Language) Control access (Grant , Revote) Ich (Transaction Control Language) Namage transpictions (Commit , Rollback) What is the role of SQL in a DBMs? Detining database structures Inserting updating and retrieving dates Controlling wer access and managing transactions Its acts as the interfaces between the user) application and the DBMS.

6. How to install and set is al Download Sac from wobsite. Puntue Installer and followup Instructions Solect Sorver type configure user name and root passoord start the Myster Berry Access Via... MySQL Command Line Conysql 4 red p MBSDL workbench Gul for basic managemen 7. Syntax to create a database and tables CREATE DATABASE dotabuso panie: USE dotabuse name; CREATE TABLE Students (Student of INT PRIMARY KEY, NAME VARCHAR (50) Age INT, Grade VARCHAR (10)). 8. Insert a records: INSPRT INTO Students (Student 1), Neume, oge, grade) values (', 'Ali', 14, 18th'); INSERT INTO Students (student id, Name, agg Gade)
Values (2, 1806/15 'gth') (3, 1 chan 1, 16, 10th).

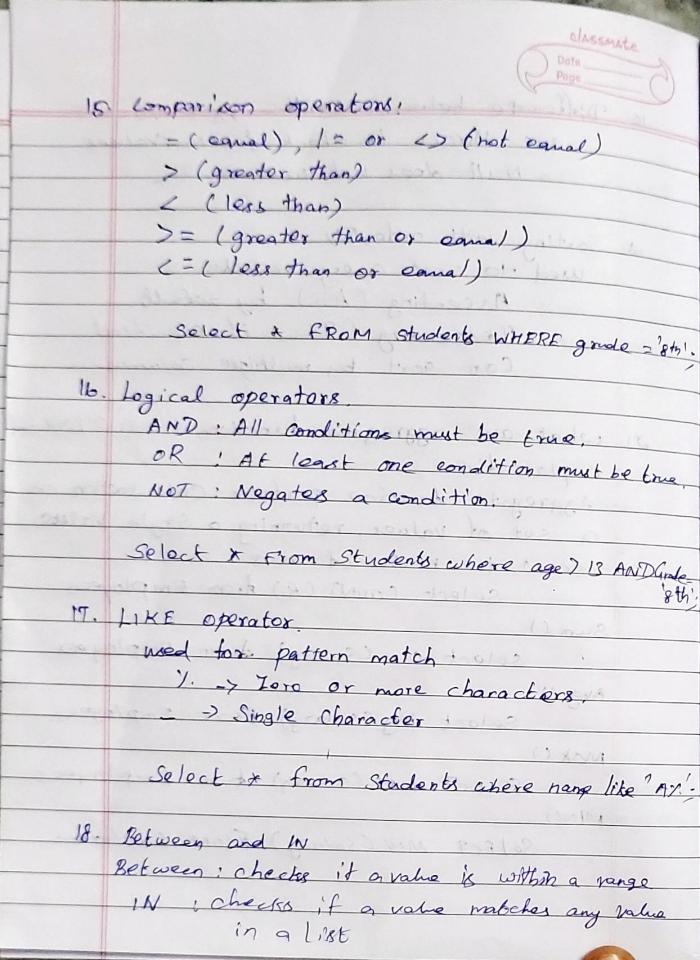


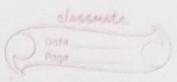
9. Different bletwoon DDL DML DCL, TCL DDL Define DR Anture Create Alter, Drog DML Manage Data Insect, updal, Delape DCL Manage permission grand, Rovoke TCL Manage Transaction Commit, rollbed, Savepoint 10 Common SQL darta trypos! INT, FLOAT, DECIMAL Numer's VARCHAR (n), CHAR (h) strings DATE, TIMP, DATETIME date / time BOOLFAN true/false TEXT, BLOB - long text / binary 11. purpose of SELECT retrive one or more tables in the database D. Retrive specific Columns.

Select Name, Age from Students; 18. DESTINCT Keyword - (remove duplicate rous)

SELECT DISTINCT grade drom students 14 Filter using wHFRE (Hiltors records based on andito)

SECECT & from Students wHERE age 14.





19. Differente bolosson 18 MOLL VS = NULL
use 18 NULL to chock for NUII Values
- Null does not work in SOL

used to sort anery results

Ascerding (ASC) by defoult.

Descending (DEC) it specified

Can gort by multiple columns.

explain tive.

Aggregate transfor perform Calculations on a set of values, returning a single value.

() Select COUNT (*) from Employees

Sum ()

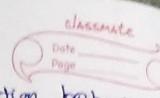
Select som (Salary) dram Employees

Select Aug (salary) From Employees.

Max ()

SELECT MAX (solary) from Employees

Select MIN (Salary) From Employees



the does the count C) trunction behave with NULL Values?

Count (K) count all rows Include NULLS

(ount (column name) Ignores NULL Natures

Sum 1) > adds cup numeric Values in a Column Count() > count the number of Non-null rows in a column

Group By clause groups rows with the same values in specifed columns for aggragation.

WHERE where filters rows before grouping Having filters groups after aggregation

26 can you use aggregate function în the where classe?

in WHERE Since Where filters before aggregation

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thou 5

27. Dury find defortment with more than 5

SFIECT: Depointment, Counts (A) As EmployeeCount FROM Employees GROUP BY Depurtment HAVING Count CAS > 5'

Select max (Salary) as max salary, Min (salary)

as minisalary from employees;

Sclock depositment ang (Salary) of ang Salary and Lepositment, and (Salary) of ang Salary trom elmployees groupby depositment,

To what happens if you use group by without aggregate functions?

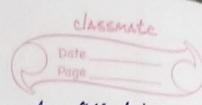
Combinations of the grouped columns

31 what are doing in SQL I why are they used?

Joins combines rows trow two or more tables

based on related columns to retrove meaningful

related data



- 3) Different between Inner Jain and stytest Loft join Inner join > return matching rows from both tables
- B. Left join > Returns all rows from the left table and matching row from the right table. NUCL where no match.
- Right Join and use Case:

 Right Join ', reduces all rows from the right

 bable and matching rows from the left. Nucl

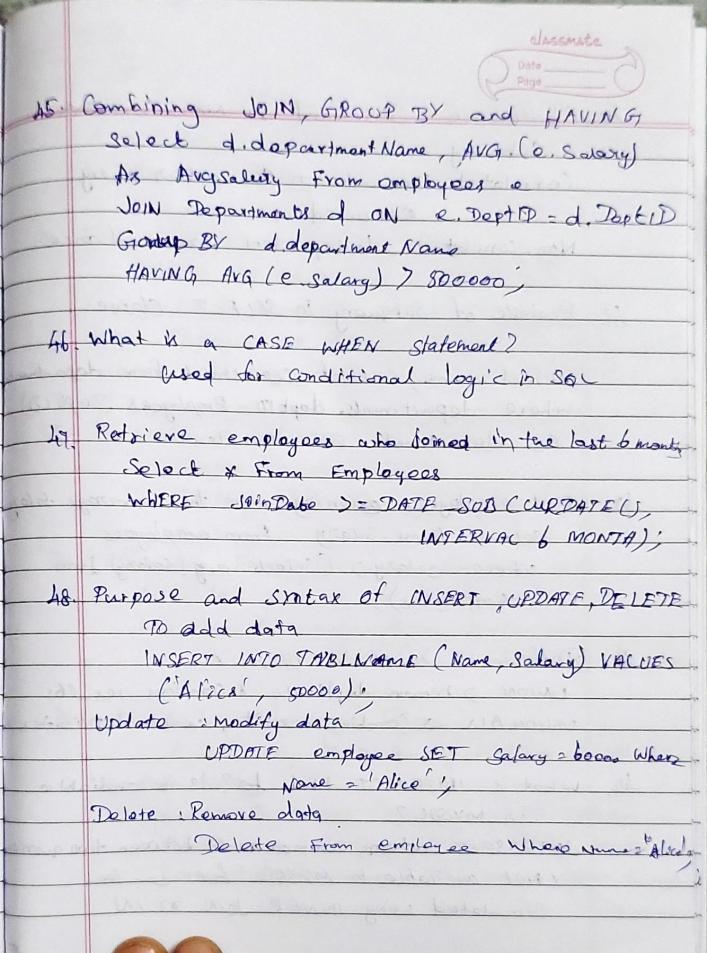
 where no anatch

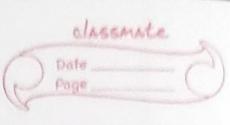
 use when you want all data from the right

 table, even if no match exists in the left
- 34. What is a fall outer som? Is it supported in my Spc?

Combines results of LEFT JOIN and RIGHT DIN Returns all rows from both tables with NULL where no match.

not natively supported in MOSGL, bets can be simulated using UNION of LEFT JOIN and RIGHT JOIN.





Ag Types of constraints in SQL

PRIMARY KEY untamely identifies each row

FORE WIN KEY maintain referential integrity.

UNIQUE: Ensures upcame Values

Not Null: prevent Nucl Values

Check: Ensures Specific Conditions

Default: setx default Value from Columns.

50 what are transactions in SQL operations executed as a single unit, ensuring data integrity mansaction commands.

COMMIT POLIBACE SAVEDOMIT