**THE BASIC MYSQL CODE AND WHAT IS USE FOR**

Our database is **“goodnews”**

The table name is **“hr\_data”**

To remove a table from a database called goodnews and the table name is mysql

DROP TABLE goodnews.mysql

To select a database to be use USE goodnews this will make you not be repeating the ‘ **goodnews.** ’

To view the table SELECT \* FROM goodnews.hr\_data

To get the number of the married from the table of column “Marital Status”

SELECT COUNT(Marital\_Status) FROM goodnews.hr\_data

WHERE Marital\_Status='Married' =>**538**

To get the number of the single from the table

SELECT COUNT(Marital\_Status) FROM goodnews.hr\_data

WHERE Marital\_Status='Single' => **462**

To get the number of male from the gender column in the same

SELECT COUNT(Gender) FROM goodnews.hr\_data

WHERE Gender='Male' =>**511**

To get the total income from “income” column

SELECT SUM(Income) FROM goodnews.hr\_data =>**56m**

The number of married and are also bachelor degree

SELECT COUNT(Marital\_Status) FROM goodnews.hr\_data

WHERE Marital\_Status='Married' AND Education='Bachelors' =>**166**

To get the number that are either married or owned a home

SELECT COUNT(Marital\_Status) FROM goodnews.hr\_data

WHERE (Marital\_Status='Married' OR Home\_Owner='Yes') =>**780**

To get the number that are either married or owned a home but must live in Pacific

SELECT COUNT(Marital\_Status) FROM goodnews.hr\_data

WHERE (Marital\_Status='Married' OR Home\_Owner='Yes') AND Region='Pacific' =>**144**

To get total income of those that have own home

SELECT SUM(Income) FROM goodnews.hr\_data

WHERE Home\_Owner='Yes' =>34m

To get total income of those that have own home but are living in pacific region

SELECT SUM(Income) FROM goodnews.hr\_data

WHERE Home\_Owner='Yes' AND Region='Pacific' =>**8.1m**

To get some information of those that make over 100k and don’t have a car

SELECT Gender, Marital\_Status, Income, Home\_Owner, Cars, Region FROM goodnews.hr\_data

WHERE Income >100000 AND Cars=0 =>**the all have home**

To get total income of those that have own home but are living in pacific region

SELECT Gender, Marital\_Status, Income, Home\_Owner, Cars, Region FROM goodnews.hr\_data

WHERE (Income <100000 AND home\_owner='Yes') AND Cars>=3 AND (Region='Pacific' OR region='Europe')

Get a table of those in the mid Youth that earn above 75k

SELECT Gender, Marital\_Status, Income, Home\_Owner, Cars, Region,Age FROM goodnews.hr\_data

WHERE income>75000 AND Age\_bracket='Mid Youth'

To get all the details of those that have bike but don’t have a car

SELECT \* FROM hr\_data

WHERE purchased\_bike='Yes' AND cars=0

To get least 4 income from the hr\_data by their value

SELECT \* FROM hr\_data

ORDER BY Income LIMIT 4

To get top 2 by the value of their income

S SELECT \* FROM goodnews.hr\_data

ORDER BY Income DESC LIMIT 2

To get top 2 oldest employee

SELECT \* FROM hr\_data

ORDER BY age DESC LIMIT 2

To get the maximum income

SELECT MAX(income) FROM hr\_data

To get only the detail of the person with the 2nd highest income

SELECT MAX(Income), Education, Age\_bracket, Occupation, Home\_Owner,Cars FROM goodnews.hr\_data

WHERE Income < (SELECT MAX(income) FROM hr\_data)

OR

SELECT Income, Education, Age\_bracket, Occupation, Home\_Owner,Cars FROM goodnews.hr\_data

WHERE Income < (SELECT MAX(income) FROM hr\_data)

ORDER BY Income DESC LIMIT 1

To see the tables in the database

USE goodnews;

SHOW tables

To create a table with the name= ’employee’

CREATE TABLE employee

To create a table with the name= ’staff’ and uploading details into it

SELECT Use goodnews;

CREATE TABLE staff AS

SELECT \* FROM hr\_data

WHERE Marital\_Status='Single'

WHERE

To create a view with the name= “customer”

CREATE VIEW customer

To create view with information

CREATE VIEW customer AS

SELECT \* FROM hr\_data

WHERE Gender='Male'

Function in sql is called procedure. To create procedure, we use this formula

DELIMITER &&

CREATE PROCEDURE old\_age()

BEGIN

The argument or the codes;

END &&

DELIMITER;

Creating the procedure where age is above 60 yrs

DELIMITER &&

CREATE PROCEDURE old\_age()

BEGIN

SELECT Gender, Marital\_Status, Income, Home\_Owner, Cars, Region,Age FROM employee WHERE age >60;

END &&

DELIMITER;

To call the procedure

CALL old\_age()

To create a delimiter and var is “int” because we are passing integers

DELIMITER //

CREATE PROCEDURE top\_income\_earners(IN var int)

BEGIN

SELECT Gender, Marital\_Status, Income, Home\_Owner, Cars, Region,Age FROM hr\_data

ORDER BY income DESC LIMIT var;

END //

DELIMITER;

To call the procedure; with the number of outcomes, you want

CALL top\_income\_earners(5)

Creating a procedure that will take two arguments

SELECT DELIMITER //

CREATE PROCEDURE region\_top\_earners(IN var1 int,IN var2 VARCHAR(20))

BEGIN

SELECT Gender, Marital\_Status, Income, Home\_Owner, Cars, Region,Age FROM hr\_data

WHERE region=var2

ORDER BY income DESC LIMIT var1;

END //

DELIMITER;

Calling the procedure; remember the first is limit and 2nd is the region name

CALL region\_top\_earners(5,'Pacific')

To create an update of details in precedure

DELIMITER //

CREATE PROCEDURE update\_details(IN inc int, IN yr int, IN reg VARCHAR(14))

BEGIN

UPDATE employee

SET Income= inc, Age= yr

WHERE Region= reg;

END //

DELIMITER

We have to set it to safe update, unless it the call will not update

SET SQL\_SAFE\_UPDATES=0

To update the procedures of the database

CALL update\_details(200000,47,'Europe')

The update will be done in the view or table where the table mentioned is. To check the update.

SELECT \* FROM goodnews.employee

To print employee that earn between 75k and 100k and they within the Mid youth

SELECT Gender, Marital\_Status, Income, Home\_Owner, Cars, Region,Age FROM hr\_data

WHERE (income BETWEEN 75000 AND 100000) AND Age\_bracket='Mid Youth'

To list all the employee that their age starts with **4** and it can be any number of digits.

SELECT Gender, Marital\_Status, Income, Home\_Owner, Cars, Region,Age FROM hr\_data

WHERE age LIKE '4%'

-- this will include 40, 400, 4000, 45867,43,42,495 etc

To get employee that their income start with 1 but must have 4 digit after the one

SELECT Gender, Marital\_Status, Income, Home\_Owner, Cars, Region,Age FROM hr\_data

WHERE income LIKE '1\_\_\_\_'

-- the code is this 1 \_ \_ \_ \_

To get the employee with new 2 columns create where family with children get 10% of their salary for each child

SELECT Marital\_Status, Income, income\*children\*0.1 AS 'Extra Income', Income + (income\*children\*0.1) AS "Gross Income"

FROM hr\_data

To get the next 2 after the top 3

SELECT Marital\_Status, Income

FROM hr\_data

ORDER BY income DESC LIMIT 3,2

To group the employee by their age (young, elder and old) into a column is called as Age\_group.

SELECT Marital\_Status,Income, age, 'Young' AS Age\_group

FROM hr\_data

WHERE age <26

UNION

SELECT Marital\_Status,Income, age, 'Elder' AS Age\_group

FROM hr\_data

WHERE age BETWEEN 26 AND 50

UNION

SELECT Marital\_Status,Income, age, 'Old' AS Age\_group

FROM hr\_data

WHERE age >50

-- Arrange the table by Income in ascending order

ORDER BY income

NOTE the above can only work where the SELECTed columns are the same in all the three condition

To create view with some columns and two created columns.

SELECT CREATE VIEW total\_income AS (

SELECT Marital\_Status,Gender,Education,Income, Children, + (income\*children\*0.1) AS "Gross Income", age, 'Young' AS Age\_group

FROM hr\_data

WHERE age <26

UNION

SELECT Marital\_Status,Gender,Education,Income, Children, Income + (income\*children\*0.1) AS "Gross Income", age, 'Elder' AS Age\_group

FROM hr\_data

WHERE age BETWEEN 26 AND 50

UNION

SELECT Marital\_Status,Gender,Education,Income, Children, Income + (income\*children\*0.1) AS "Gross Income", age, 'Old' AS Age\_group

FROM hr\_data

WHERE age >50

ORDER BY income

)

To see the table in the view

SELECT \* FROM goodnews.total\_income

To get total income of those that have own home

DELIMITER //

CREATE PROCEDURE sum\_incomes (OUT totals int)

BEGIN

SELECT SUM(Income)

FROM employee

WHERE Income BETWEEN 80000 AND 100000

INTO totals;

END //

CALL sum\_incomes(@totals);

To get the return back from the fn

SELECT @totals AS count

To drop the procedure function where the goodnews is the database and sum\_incomes is the fn of procedure

DROP PROCEDURE `goodnews`.`sum\_incomes`

To get total income of those that have own home

DELIMITER //

CREATE PROCEDURE sum\_incomes\_region(IN var varchar(25), OUT totalIncome int)

BEGIN

SELECT SUM(Income)

FROM employee

WHERE (Income BETWEEN 80000 AND 100000) AND Region= var

INTO totalIncome;

END //

CALL sum\_incomes\_region('north america',@totalIncome);

SELECT @totalIncome AS region\_income

To get only distinct names in the occupation, which is 5 names

SELECT DISTINCT Occupation FROM hr\_data

To get the total income of each distinct occupation

SELECT Occupation, SUM(income) AS "Total Income" FROM hr\_data

GROUP BY occupation

Using the window operation to get the distinct total of occupation

SELECT a.Occupation, SUM(a.income) AS "Total Income" FROM hr\_data a

GROUP BY a.occupation

OR

SELECT a.\*,a.Occupation, SUM(a.income) OVER (PARTITION BY a.occupation)AS "Total Income" FROM hr\_data a

GROUP BY occupation

To create partition, column added to the table

SELECT a.\*, SUM(a.income) OVER (PARTITION BY a.occupation)AS "Total Income" FROM hr\_data a

Creating number row using the income and showing columns like num\_row,education and income

SELECT ROW\_NUMBER() OVER(ORDER BY Income) AS num\_row, Education,Income FROM hr\_data

To rank the whole row using the ID for unique ranking

SELECT \*, RANK() OVER (ORDER BY ID) AS rank\_order FROM hr\_data

Creating a table with one row for the rank() function

CREATE TABLE demo(col int);

INSERT INTO demo VALUES (200),(240),(210),(305),(417),(371),(390),(400),(405),(417),(438),(305),(492),(554)

The rank will be like school postion, you will see 1,2,3,4,4,6… without 5

SELECT RANK() OVER (ORDER BY col) AS rank\_order, col FROM demo

Using the window function to create a column that fill the row with education name that has the highest income

SELECT gender, occupation, education, income, FIRST\_VALUE(education) OVER (ORDER BY Income DESC) AS 'highest Income' FROM hr\_data

To partition the education of the highest income by the occupation

SELECT gender, occupation, education, income, FIRST\_VALUE(education) OVER (PARTITION BY occupation ORDER BY Income DESC) AS 'highest Income' FROM hr\_data

To get the average income from the table

SELECT AVG(Income) AS 'Av. Income' FROM hr\_data

To get average income and approximated average of the children, cars and ages

SELECT AVG(Income) AS 'Av. Income',

ROUND(AVG(Children)) AS 'Av, Children',

ROUND(AVG(Cars)) AS 'Av. Cars',

ROUND(AVG(Age)) AS 'Av. Age'

FROM goodnews.hr\_data