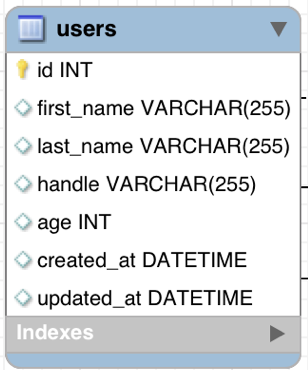
**MySQL Worksheet (please complete and turn this in before you leave on Friday)**

Your Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Understanding how to write basic SQL queries is extremely important. Please find someone else in your cohort to work on the following challenges. Please write down the appropriate SQL query on this worksheet and turn this in (before the end of the day).



**1. Basic 4 Queries**

For the ERD on the left, how would you:

1. Get all users whose age is greater than 35?

SELECT \* FROM mydb.users where age > 35;

2. Insert a new user whose first name is ‘Jonathan’ and last name is ‘Smith’? Have created\_at be the current time.

INSERT INTO mydb.users (first\_name, last\_name,handle,age, updated\_at) VALUES ("Joannathan", "smith","sales",40, now());

3. Delete all users whose user records were created after August 1st 2010?

DELETE FROM mydb.users WHERE date\_and\_time < NOW() - INTERVAL 10 YEAR

4. Update user record (id: 3) so that first\_name is ‘Coding’ and last name ‘Dojo’. Also update it so that the age is set as 7. Have updated\_at automatically update to the current time.

update mydb.users set first\_name = "coding", last\_name="coder", age=7, updated\_at=now(), created\_at=now() where id=3;

*Once you do the four queries above, please check with at least one or two other groups before working on the following assignments.*

**2. MySQL Countries**

1. What query would you run to get all the countries that speak Slovene? Your query should return the name of the country, language and language percentage. Your query should arrange the result by language percentage in descending order. (1)

select name, language, percentage

from world.languages

join world.countries on languages.country\_id = countries.id

order by languages.percentage desc;

2. What query would you run to display the total number of cities for each country? Your query should return the name of the country and the total number of cities. Your query should arrange the result by the number of cities in descending order. (3)

SELECT countries.name, COUNT(cities.id)

FROM world.countries

JOIN world.cities ON countries.code = cities.county\_code

GROUP BY countries.code

ORDER BY COUNT(cities.id) desc

3. What query would you run to get all the cities in Mexico with a population of greater than 500,000? Your query should arrange the result by population in descending order. (1)

select cities.name, cities.population

from world.cities

join world.countries on cities.country\_id = countries.id

where countries.name = 'Mexico' and cities.population > 500000

order by cities.population desc;

4. What query would you run to get all languages in each country with a percentage greater than 89%? Your query should arrange the result by percentage in descending order. (1)

select languages.percentage, countries.name

from world.countries

join world.languages on languages.country\_id = countries.id

where languages.percentage > 89

order by languages.percentage desc;

5. What query would you run to get all the countries with Surface Area below 501 and Population greater than 100,000? (2)

SELECT surface\_area, population

FROM world.countries

WHERE surface\_area < 501 and population > 100000;

6. What query would you run to get countries with only Constitutional Monarchy with a capital greater than 200 and a life expectancy greater than 75 years? (1)

SELECT capital, government\_form, life\_expectancy

FROM world.countries

WHERE capital > 200 and government\_form = 'Constitutional Monarchy' and life\_expectancy > 75;

7. What query would you run to get all the cities of Argentina inside the Buenos Aires district and have the population greater than 500, 000? The query should return the Country Name, City Name, District and Population. (2)

SELECT countries.name, cities.district, cities.population, cities.name

FROM world.cities

JOIN world.countries ON countries.id = cities.country\_id

WHERE countries.name = 'Argentina' AND cities.district ='Buenos.Aires'AND cities.population > 500000;

8. What query would you run to summarize the number of countries in each region? The query should display the name of the region and the number of countries. Also, the query should arrange the result by the number of countries in descending order. (2)

SELECT region, COUNT(id)

FROM world.countries

GROUP BY region

ORDER BY COUNT(id) desc;

**4. Lead Gen Business**

1. What query would you run to get the total revenue for March of 2012?

SELECT (billing.amount) AS Revenue

FROM lead\_gen\_business.billing

WHERE charged\_datetime >= '2012-03-01' AND charged\_datetime <= '2012-03-31'

2. What query would you run to get total revenue collected from the client with an id of 2?

SELECT SUM(billing.amount) AS Revenue

FROM lead\_gen\_business.billing

WHERE clients\_id = 2;

3. What query would you run to get all the sites that client=10 owns?

SELECT domain\_name, clients\_id

FROM lead\_gen\_business.sites

WHERE clients\_id = 10;

4. What query would you run to get total # of sites created per month per year for the client with an id of 1? What about for client=20?

SELECT clients\_id, SUM(domain\_name) As total\_site,

MONTHNAME(created\_datetime), YEAR(created\_datetime)

FROM lead\_gen\_business.sites

WHERE clients\_id =1

GROUP BY MONTH(created\_datetime), YEAR(created\_datetime)

ORDER BY sites.id;

5. What query would you run to get the total # of leads generated for each of the sites between January 1, 2011 to February 15, 2011?

select sites.site\_id, sites.domain\_name, count(leads.leads\_id) as total\_leads

from sites

join leads on sites.site\_id = leads.site\_id

where leads.registered\_datetime between '2011-01-01' and '2011-02-15'

group by sites.site\_id

6. What query would you run to get a list of client names and the total # of leads we've generated for each of our clients between January 1, 2011 to December 31, 2011?

SELECT CONCAT(clients.first\_name, " ", clientS.last\_name) As Name, SUM(leads.id)

FROM lead\_gen\_business.clients

LEFT JOIN sites ON lead\_gen\_business.clients.id=sites.clients\_id

LEFT JOIN leads ON lead\_gen\_business.sites.id=leads.sites\_id

WHERE leads.registered\_datetime BETWEEN '2011/01/01' AND '2011/12/31';

7. What query would you run to get a list of client names and the total # of leads we've generated for each client each month between months 1 - 6 of Year 2011?

select concat(clients.first\_name, " ", clients.last\_name) as client, count(leads.leads\_id) as number\_of\_leads, monthname(leads.registered\_datetime) as month\_generated

from clients

join sites on sites.client\_id = clients.client\_id

join leads on sites.site\_id = leads.site\_id

where leads.registered\_datetime between '2011-01-01 00:00:00' and '2011-06-31 00:00:00'

group by clients.client\_id, month\_generated

order by leads.registered\_datetime asc

8. What query would you run to get a list of client names and the total # of leads we've generated for each of our clients' sites between January 1, 2011 to December 31, 2011? Order this query by client id. Come up with a second query that shows all the clients, the site name(s), and the total number of leads generated from each site for all time.

select concat(clients.first\_name, " ", clients.last\_name) as client, sites.domain\_name, count(leads.leads\_id) as total\_leads

from clients

join sites on sites.client\_id = clients.client\_id

join leads on sites.site\_id = leads.site\_id

group by sites.site\_id

order by clients.client\_id

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9. Write a single query that retrieves total revenue collected from each client for each month of the year. Order it by client id.

select clients.client\_id, concat(clients.first\_name, " ", clients.last\_name) as client, sum(billing.amount), monthname(billing.charged\_datetime) as month, year(billing.charged\_datetime) as year

from clients

join billing on clients.client\_id = billing.client\_id

group by clients.client\_id, month(billing.charged\_datetime)

order by clients.client\_id, billing.charged\_datetime

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10. Write a single query that retrieves all the sites that each client owns. Group the results so that each row shows a new client. It will become clearer when you add a new field called 'sites' that has all the sites that the client owns. (HINT: use GROUP\_CONCAT)

select concat(clients.first\_name, " ", clients.last\_name) as client, group\_concat(sites.domain\_name)

from clients

join sites on clients.client\_id = sites.site\_id

group by clients.client\_id

order by clients.client\_id;