

## Homework 2 – Written

1. What is the difference between a view and a table in sql?

A table is an actual table that stores the data. It exists in the memory and it has columns and rows. While a view is just a select statement, a query. It is a virtual table. It is not the conceptual model but is made visible to a user as a virtual relation. It does not exist in the memory.

2. How does a GROUP BY statement in SQL work?

Group by statement works by grouping the rows that have the same values of some columns. They will be aggregated into summary rows. They are used such as find each department's average salary. In this case, we can group by Department and then calculate their average salary.

3. What is HTTP and how do HTTP requests work?

HTTP is Hyper Text Transfer Protocol. It is used everywhere when we enter a URL. HTTP is essentially a protocol that could define how messages are formatted and transmitted and actions web servers and browsers should take to response the commands received. It is a request to response protocol. It gives users a way to interact with web resources by transmitting hypertext messages between clients and servers.

4. What are the characteristics of a RESTFUL API?

Rest is Representational state transfer, a software architectural style that defines a set of constraints to be used for creating web services. It has POST , GET, PUT and DELETE. Characteristics include Client-server based architecture, Stateless, Cacheable, Multiple layered system, representation of resources and implementational freedom.

5. A) SELECT name, birth\_month, astrological sign FROM birth\_info LEFT JOIN astrological\_info ON birth\_info.birth\_month = astrological\_info.month

	name	birth_month	astrological_sign
►	Aly	January	Aquarius
	Don	September	Virgo
	Ara	September	Virgo
	Meghna	June	Gemini
	Kirit	May	NULL

- B) SELECT name, birth\_month, astrological sign FROM birth\_info OUTER JOIN astrological\_info ON birth\_info.birth = astrological\_info.month

	name	birth_month	astrological_sign
►	Aly	January	Aquarius
	Don	September	Virgo
	Ara	September	Virgo
	Meghna	June	Gemini
	Kirit	May	NULL

- C) SELECT name, birth\_month, astrological sign FROM birth\_info INNER JOIN astrological\_info ON birth\_info.birth\_month = astrological\_info.month

	name	birth_month	astrological_sign
►	Don	September	Virgo
	Meghna	June	Gemini
	Aly	January	Aquarius
	Ara	September	Virgo

- D) SELECT name, birth\_month, astrological sign FROM birth\_info RIGHT JOIN astrological\_info ON birth\_info.birth\_month = astrological\_info.month

	name	birth_month	astrological_sign
►	Don	September	Virgo
	Meghna	June	Gemini
	Aly	January	Aquarius
	Ara	September	Virgo

6. What do these HTTP response codes mean:

Code	Meaning
200	OK
201	Created
400	Bad Request
401	Unauthorized
300	Multiple Choices
403	Forbidden
404	Not Found
500	Internal Server Error