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## COMS W4111 Homework 2 Written

1. A table stores the actual data, whereas a view is a definition built on top tables and/or views that references the underlying artifacts in order to generate the output. A view stores no data, whereas a table does.
2. The GROUP BY statement is often used for aggregating data into a summarized fashion for certain groups within the data. A single column or multiple columns from the table are passed to GROUP BY, where all possible combinations of values within the column/s are the groups of which the aggregate functions are applied to.
3. HTTP stands for Hyper Text Transfer Protocol and is a mechanism for communication to and from computers and web servers. The communication works in two ways: The computer sends an HTTP Request via a browser to the web server, where the web server receives and processes the request, and returns an HTTP Response.
4. The characteristics of a RESTful interface are:
  1. Client-Server: Separating user interface and data improves portability and scalability
  2. Stateless: Session state is kept entirely on the client
  3. Cacheable: Data within response is either cacheable or non-cacheable
  4. Uniform Interface: Overall system architecture is simplified and visibility is improved via interface constraints
  5. Layered System: Architecture comprised of hierarchical layers
  6. Code on demand (optional): downloadable executables simplifies client pre-implementation requirements
5. The results of the queries given the tables are represented below:

a.

| name   | birth_month | astrological_sign |
|--------|-------------|-------------------|
| Aly    | September   | Aquarius          |
| Don    | September   | Virgo             |
| Ara    | September   | Virgo             |
| Meghna | June        | Gemini            |
| Kirit  | May         | NULL              |

b.

| name | birth_month | astrological_sign |
|------|-------------|-------------------|
| Aly  | September   | Aquarius          |
| Don  | September   | Virgo             |
| Ara  | September   | Virgo             |

|        |      |        |
|--------|------|--------|
| Meghna | June | Gemini |
| Kirit  | May  | NULL   |

c.

| name   | birth_month | astrological_sign |
|--------|-------------|-------------------|
| Aly    | September   | Aquarius          |
| Don    | September   | Virgo             |
| Ara    | September   | Virgo             |
| Meghna | June        | Gemini            |

d.

| name   | birth_month | astrological_sign |
|--------|-------------|-------------------|
| Aly    | September   | Aquarius          |
| Don    | September   | Virgo             |
| Ara    | September   | Virgo             |
| Meghna | June        | Gemini            |

6. The HTTP response code table is filled out below

| Code | Meaning               |
|------|-----------------------|
| 200  | OK                    |
| 201  | CREATED               |
| 400  | BAD REQUEST           |
| 401  | UNAUTHORIZED          |
| 300  | MULTIPLE CHOICE       |
| 403  | FORBIDDEN             |
| 404  | NOT FOUND             |
| 500  | INTERNAL SERVER ERROR |