**Name: Faitus Jeline Joseph**

Database used: MySQL

**Question 3) Design the database objects required to store the result in a relational fashion.**

Created the table earthquake with the fields earthquakeid (primary key), magnitude, readabletime, location, type and properties. Below is the schema

**Schema:**

create table earthquake (  
earthquakeid INT NOT NULL AUTO\_INCREMENT PRIMARY KEY,  
magnitude float(50),  
readabletime datetime,  
location varchar(1000),  
type varchar(5000),  
properties varchar(5000));

**Sample Data:**

Text

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**Question 6) Provide query/analysis to give biggest earthquake of 2017**

Answer: Biggest earthquake was recorded in New Guinea with the magnitude of 7.9 in the year 2017.

Note: filter condition 2017 is not added in the query because, I ingested only 2017 data to the MYSQL database

select distinct magnitude,readabletime, location  
from earthquake   
where magnitude =   
(select max(magnitude) max  
from earthquake);

Graphical user interface, text, application, email

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**Question 7) Provide query/analysis to give most probable hour of the day for the earthquakes bucketed by the range of magnitude (0-1,1-2,2-3,3-4,4-5,5-6,>6   For border values in the bucket, include them in the bucket where the value is a lower limit so for 1 include it in 1-2 bucket)**

Please find the query and the query output below

select \*   
FROM (select  count, HOUR, b.magnitude\_range,rank() over (PARTITION BY b.magnitude\_range ORDER BY count DESC) as r  
FROM  
(SELECT COUNT(\*) count,a.magnitude\_range,HOUR  
FROM (select   
CASE WHEN magnitude > 0 AND magnitude < 1 THEN '0 - 1'  
WHEN magnitude >= 1 AND magnitude < 2 THEN '1 - 2'  
    WHEN magnitude >= 2 AND magnitude < 3 THEN '2 - 3'  
    WHEN magnitude >= 3 AND magnitude < 4 THEN '3 - 4'  
    WHEN magnitude >= 4 AND magnitude < 5 THEN '4 - 5'  
    WHEN magnitude >= 5 AND magnitude < 6 THEN '5 - 6'  
    WHEN magnitude >= 6 THEN '> 6'  
 END AS magnitude\_range,     
 HOUR(readabletime) as HOUR,  
 DATE(readabletime) as DATE  
from earthquake ) a  
group by a.magnitude\_range,HOUR) b) c  
where r = 1;

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