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# Queries

# (1) Display tabular company information on the company tab.
SELECT name, categories, market, country, state, city, founding_date,
homepage_URL, status
FROM Financial_Entity f JOIN Company c
ON f.ID = c.company_ID
ORDER BY name
LIMIT 20;

# (2) Display tabular investment information.
SELECT name, categories, market, country, state, city
FROM Financial_Entity f JOIN Investor i
ON f.ID = i.investor_ID
ORDER BY name
LIMIT 20;

# (3) Display tabular acquisition information.
SELECT price, currency, f1.name AS acquired_name, f.name AS
acquirer_name, f1.market AS acquired_market, f.market AS
acquirer_market
FROM Financial_Entity f JOIN Acquisition a ON f.ID = a.acquirer_ID
    JOIN Financial_Entity f1 ON f1.ID = a.acquired_ID
ORDER BY price DESC
LIMIT 20;

# (4) Display tabular round information.
SELECT amount_USD, round_type, date, f.name AS company, f1.name AS
investor, f.market AS company_market, f1.market AS investor_market
FROM Financial_Entity f
    JOIN Round r ON f.ID = r.company_ID
    JOIN Financial_Entity f1 ON f1.ID = r.investor_ID
ORDER BY amount_USD DESC
LIMIT 20;

# (5) How has funding for software companies changed over time?
SELECT YEAR(date) AS year, SUM(amount_USD) AS total_funding,
AVG(amount_USD) AS avg_investment
FROM Financial_Entity f JOIN Round r ON f.ID = r.company_ID
WHERE f.market LIKE "%Software%"
GROUP BY YEAR(date)
ORDER BY YEAR(date) DESC

# (6) Which countries have the most biotechnology companies?
SELECT Country, COUNT(*) AS n_biotech_companies
FROM Financial_Entity
WHERE is_a = "company" AND market LIKE "%Biotechnology%" AND country
IS NOT NULL
GROUP BY country
ORDER BY COUNT(*) DESC
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# (7) Which U.S. states are losing/gaining the most (net) investment
funding?
SELECT f.state,
       IFNULL(SUM(r.amount_USD),0) - IFNULL(SUM(r1.amount_USD),0) AS
net_funding,
       IFNULL(SUM(r.amount_USD),0) AS funding_in,
       IFNULL(SUM(r1.amount_USD),0) AS funding_out
FROM Financial_Entity f
    JOIN Round r ON f.ID = r.company_ID
    JOIN Round r1 ON f.ID = r1.investor_ID
WHERE state IS NOT NULL
GROUP BY f.state
ORDER BY IFNULL(SUM(r.amount_USD),0) - IFNULL(SUM(r1.amount_USD),0)
DESC;

# (8) Which companies have been acquired four times?
WITH CompanyName AS (
    SELECT id, name
    FROM Financial_Entity
)
SELECT c1.name AS compnay1, date1,
    c2.name AS company2, date2,
    c3.name AS company3, date3,
    c4.name AS company4, date4,
    c5.name AS company5
FROM (
    SELECT a1.*, a.date AS date4, a.acquirer_id AS id5
    FROM Acquisition a JOIN
        (SELECT a1.*, a.date AS date3, a.acquirer_id AS id4
          FROM Acquisition a JOIN
              (SELECT a.acquired_id AS id1, a.date AS date1,
a.acquirer_id AS id2, a1.date AS date2, a1.acquirer_id AS id3
               FROM Acquisition a
               JOIN Acquisition a1 ON a.acquirer_id = a1.acquired_id
               WHERE a1.date > a.date) a1
            ON a.acquired_id = a1.id3
            WHERE a.date > a1.date2) a1
    ON a.acquired_id = a1.id4
    WHERE a.date > a1.date3) a1
    JOIN CompanyName c1 on c1.id = a1.id1
    LEFT JOIN CompanyName c2 on c2.id = a1.id2
    LEFT JOIN CompanyName c3 on c3.id = a1.id3
    LEFT JOIN CompanyName c4 on c4.id = a1.id4
    LEFT JOIN CompanyName c5 on c5.id = a1.id5;

# (9) Which investors have invested in seed, angel, venture, and
debt_financing rounds?
WITH OrderedRounds AS (
    SELECT investor_id, round_type
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    FROM Round
    ORDER BY round_type
)
SELECT id,
       name AS investor_name, GROUP_CONCAT(DISTINCT round_type
SEPARATOR ", ") AS round_types
FROM Financial_Entity f JOIN OrderedRounds r
ON f.id = r.investor_id
GROUP BY id, name
HAVING GROUP_CONCAT(DISTINCT round_type) LIKE
"%angel%debt_financing%seed%venture%";

# (10) Which rounds types attract the highest percentage of
international investors?
WITH CleanedRound AS (
    SELECT company_ID, investor_ID, round_type
    FROM Round
),  CleanedCompany AS (
    SELECT id, country AS company_country
    FROM Financial_Entity
    WHERE is_a = "company" AND country IS NOT NULL
), CleanedInvestor AS (
    SELECT id, country AS investor_country
    FROM Financial_Entity
    WHERE is_a = "investor" AND country IS NOT NULL
)
SELECT round_type,
       SUM(IF(company_country != investor_country,1,0)) / COUNT(*) *
100 AS percentage_international
FROM CleanedRound r
    JOIN CleanedCompany c ON r.company_id = c.id
    JOIN CleanedInvestor i ON r.investor_id = i.id
GROUP BY round_type
ORDER BY SUM(IF(company_country != investor_country,1,0)) / COUNT(*)
DESC
```

Credentials:

Our database was created using AWS. We have used the AWS student
account to do so. The database uses MYSQL for querying.

The instructions and settings used to create the database were from
the handout given to us for homework and exercises. Since this
database is created with AWS student, it is stopped temporarily when
the session is closed. Therefore, the session has to be on to be able
to access and use this database for querying.

Here are the login details for the database:

Host: [cis5500project.cdz0fraetoci.us-east-1.rds.amazonaws.com]
(http://cis5500project.cdz0fraetoci.us-east-1.rds.amazonaws.com)

Username: finalprojectteam

Password: PasswordForCIS5500Project

Port: 3306