1) Find the names of all people in the database who acted in *Avatar*.

- **SQL:**
  ```sql
  SELECT P.name
  FROM Person P, Actor A, Movie M
  WHERE P.id = A.actor_id
  AND M.id = A.movie_id
  AND M.name = 'Avatar';
  ```

- **MongoDB:**
  ```javascript
  db.movies.find( { name: "Avatar" },
                   { "actors.name": 1, _id: 0 } )
  ```

  or

  ```javascript
  db.movies.aggregate(,
                        { $match: { name: "Avatar" } },
                        { $project: { actors: "$actors.name", _id: 0 } }
  )
  ```

2) How many people in the database who were born in California have won as Oscar?

- **SQL:**
  ```sql
  SELECT COUNT(DISTINCT P.id)
  FROM Person P, Oscar O
  WHERE P.id = O.person_id
  AND P.pob LIKE '%,California%';
  ```

  Can't easily answer this question using our MongoDB version of the database. Why not?
3) How many actors in the database were born in California?
   - **SQL:**
     
     ```sql
     SELECT COUNT(DISTINCT P.id)
     FROM Person P, Actor A
     WHERE P.id = A.actor_id
     AND P.pob LIKE '%, California%';
     ```

   - **MongoDB:**
     
     ```
     db.people.count( { hasActed: true, 
                        pob: /, California/ } )
     ```

      - *or*
      
      ```
      db.people.aggregate(
        { $match: { hasActed: true, 
                    pob: /, California/ } },
        { $group: { _id: 0, numActors: { $sum: 1 } } },
        { $project: { numActors: 1, _id: 0 } }
      )
      ```

4) Which people in the database have directed a movie in which Tom Hanks has acted?
   - **SQL:**
     
     ```sql
     SELECT DISTINCT DirP.name
     FROM Person ActP, Actor A, 
         Director D, Person DirP
     WHERE ActP.id = A.actor_id
     AND A.movie_id = D.movie_id
     AND D.director_id = DirP.id
     AND ActP.name = 'Tom Hanks';
     ```

   - **MongoDB:**
     
     ```
     db.movies.distinct( "directors.name",
                        { "actors.name": "Tom Hanks" } )
     ```
5) Find all years before 1970 that have 6 or more movies in the database.

- **SQL:**

  ```sql
  SELECT year, COUNT(*)
  FROM Movie
  WHERE year < 1970
  GROUP BY year
  HAVING COUNT(*) >= 6;
  ```

- **MongoDB:**

  ```javascript
  db.movies.aggregate(
    { $match: { year: { $lt: 1970 } } },
    { $group: { _id: "$year", count: { $sum: 1 } } },
    { $match: { count: { $gte: 6 } } },
    { $project: { year: "_id", count: 1, _id: 0 } }
  )
  ```