

# Exercise

CSC230 Database Technologies for Analytics

07 November 2016

1. What does this statement accomplish?

```
SELECT astronaut , COUNT(*) AS number_of_flights
FROM crews
GROUP BY astronaut
ORDER BY number_of_flights DESC;
```

2. What does this statement accomplish?

```
SELECT YEAR( launch ) AS YEAR, COUNT(*) AS number_of_flights
FROM missions
GROUP BY YEAR(launch);
```

3. What do these statements accomplish?

```
CREATE VIEW nasa AS
SELECT m.spacecraft , c.astronaut , m.launch ,
      m.recovery , m.destination
FROM missions m INNER JOIN crews c
ON c.spacecraft = m.spacecraft;

SELECT * FROM nasa;
```

4. What does this statement accomplish?

```
SELECT astronaut , MIN(launch) , MAX(recovery)
FROM nasa GROUP BY astronaut;
```

5. Modify the previous SQL statement to produce a result whose columns have labels that more clearly describe the contents.

6. What does this statement accomplish?

```
SELECT astronaut ,
      SUM(TO_DAYS(recovery) - TO_DAYS(launch) + 1) AS days_in_space
FROM nasa
GROUP BY astronaut
ORDER BY days_in_space DESC;
```

7. What does this statement accomplish?

```
SELECT spacecraft , COUNT(*) AS size_of_crew
FROM nasa
GROUP BY spacecraft
ORDER BY size_of_crew , spacecraft;
```

8. What does this statement accomplish?

```
SELECT DISTINCT astronaut FROM crews ORDER BY astronaut;
```

9. What does this statement accomplish?

```
SELECT a.spacecraft , b.spacecraft
FROM missions a JOIN missions b
WHERE a.launch > b.launch AND a.launch < b.recovery;
```

10. What does this statement accomplish?

```
SELECT astronaut , COUNT(*) AS trips_to_the_moon
FROM nasa WHERE destination = 'lunar_orbit' OR
    destination = 'lunar_surface'
GROUP BY astronaut
ORDER BY trips_to_the_moon DESC, astronaut ASC;
```