Assignment 6 - DBMS

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2K21/CO/417

Date .....

1) Write a query that returns year, month, day, species ID and weight in mg:

Soln,

Assumption for survey's table:

surveys (id, date, plot, species_id, weight_in_gm genus, location)

1) Soln,

```
SELECT YEAR(date) as year,
       MONTH(date) as month,
       DAY(date) as day,
       species_id
       weight_in_gm * 1000 as weight_in_mg
FROM surveys;
```

2)

```
SELECT DAY(date), MONTH(date), YEAR(date),
       species_id, weight/1000 AS weight_in_kg
FROM surveys
WHERE plot = 1 AND weight_in_gm > 0.075;
```

3)

```
SELECT YEAR(date), species_id, weight_in_gm
       /1000 AS weight_in_kg
FROM surveys
ORDER BY weight_in_gm DESC;
```

Spiral

Date .....

4) query to display 3 date fields, species ID and weight in kg (rounded to 2 decimal places) for rodents captured in 1999, order alphabetically by species ID.

```
SELECT YEAR(date), MONTH(date), DAY(date),
       species_id, ROUND(weight_in_gm/1000,2)
       AS weight_in_kg
FROM surveys
WHERE YEAR(date) = 1999 AND genus = 'Rodent'
ORDER BY species_id ASC;
```

5) soln,

```
SELECT
SUM(weight_in_gm) AS Total_weight,
AVG(weight_in_gm) AS Avg_weight,
MIN(weight_in_gm) AS min_weight,
MAX(weight_in_gm) AS max_weight,
FROM surveys;
```

Date .....

modification:

```
SELECT
    SUM(weight_in_gm) AS wt_50_100,
    AVG(weight_in_gm) AS avgwt_50_100,
    MIN(weight_in_gm) AS mnwt_50_100,
    MAX(weight_in_gm) AS mxwt_50_100,
    FROM (
        SELECT *
        FROM surveys
        WHERE weight_in_gm BETWEEN 50 AND 100
    ) AS filtered_data;
```

6) soln,

```
SELECT YEAR(date), COUNT(*) AS count
FROM surveys
GROUP BY year; YEAR(date);
```

~~7) soln,~~

```
SELECT YEAR(date) AS year
        species_id
        AVG(weight_in_gm)/1000 AS averagewt_in_kg
FROM surveys
GROUP BY year, species_id;
```

7) soln,

```
SELECT YEAR(date) AS year, species_id,
    COUNT(*) AS individuals_count
FROM surveys
GROUP BY year, species_id
ORDER BY year DESC, individuals_count DESC;
```

Spiral

Date .....

8) Soln;

```
SELECT genus, species_id, weight_in_gm
FROM surveys;
```

9) Soln;

```
SELECT plot, COUNT(DISTINCT genus) AS
                    count_of_genus
FROM surveys
GROUP BY plot
ORDER BY genus_count DESC;
```

10) Soln;

```
SELECT YEAR(date), DAY(date), MONTH(date),
        species_id, weight/1000 as wt_inkg
FROM surveys
WHERE plot = 1 AND weight_in_gm > 75;
```

11) Soln;

```
SELECT DAY(date) AS day,
    MONTH(date) AS month,
    YEAR(date) AS year,
    species_id
FROM surveys
WHERE MONTH(date) IN (1, 5, 7);
```

12) Soln;

```
SELECT YEAR(date) AS year
        species_id,
        COUNT(*) AS num_captured
FROM surveys
GROUP BY year, species_id
ORDER BY year DESC, num_captured DESC;
```

Special