

953212 Database system and database design

Lab 2 (15 points)

This lab assignment going to use Java with your favorite IDE to construct an array of object from the given input file and product a simple result.

1. Write a Java program to **open and read** the dataset from the following link (1 points)
<https://archive.ics.uci.edu/ml/machine-learning-databases/iris/iris.data>
2. Write a method 'displayNumRow' to check how many rows/samples in the dataset. (1 point)
3. Construct a class called 'Iris' with proper attributes. (1 point)
4. Write a method to 'displayNumIrisByType' to display how many of each flower type. (1 point)
5. Call method two method from your main. (1 point)
6. What is the difference between data structure and database (Search and answer)? (1 point)
7. (1 point) Install mysql server and mysqlworkbench
8. (1 point) create the database file. Start the MySQL client and type the following command:

```
mysql> create database se212_IRIS;
```

After the database is created, we must select it to continue with our database use se212_IRIS;

After this, you would need to create a database table to hold your data. The SQL here defines a table. Below is the command and the output from the command. The database created below will be used in a simple student application.

```
mysql> create table iris
```

9. -> (flowerID int not null primary key auto_increment,

```
->s_length NUMERIC
```

```
->s_width NUMERIC)
```

```
-p_length NUMERIC)
```

```
->p_width NUMERIC)
```

```
-> name varchar(30),
```

10 (5 points) Now we need to add all iris data to the table, so we can actually run some queries against it. However, we have lots of rows/sample to be insert. In this question, you are going to write a java method called "InsertSQL" that generate insert sql script to insert all samples in to the iris database.

```
mysql> insert into iris.....
```

FirstName

LastName

StudenID

Expected output

[name of flower 1] – XX

[name of flower 2] – XX

[name of flower 3] – XX

Total number of flower : XXX

A screen shot of your table iris in workbench

An output of your insert function.

Submission

Submit your **java source code** and **program output** and **screen shot** to the google classroom for your lab