#### **NUS Dev Toolkit 2 - NUSmoney app Presentations**by Jon Scheele

Dear Students,

Dixant and I have enjoyed working with you to explore the world of back-end development.

As mentioned, we have schedule a one-hour Zoom call for each group to present your NUSmoney app.

The call is from 2:00pm-3:00pm on Monday 31 May.

Zoom Meeting details are:  
<https://us02web.zoom.us/j/81195239040?pwd=VmJzRDdLL21IRXhlK2VuMnJzV1Judz09>

Meeting ID: 811 9523 9040  
Passcode: 946855

**Some guidelines for your presentation:**

* **In your groups**
* **Each group presents for 5 minutes**
* **Tell us "Who is it for?" (the user persona you identified in the Design Thinking course)**
* **"Show don't tell": wherever possible, show us a working app rather than documentation**
* **We really want to know:**
  + **What went well**
  + **What you had trouble with**
  + **What you would do differently next time**
  + **How you can build on this foundation**

We have posted an example of a previous student presentation in the Quiz section of LumiNUS.

We're looking forward to seeing your presentations.

Regards,

Jon and Dixant

Open Visual Studio Code (VSC)

Create Database

First, we create a database in the MySQL database - fintechsg08.mysql.database.azure.com  
Since we are already connected to it, no need to do the 3306 stuff oledi. (if we are disconnected from it, we need to connect, then do the 3306 stuff)  
We create a database there by right-clicking the fintechsg08....   
a drop down with 3 stuff should appear, - “New Query” , “Refresh” and “Delete Connection”  
we choose “New Query” (left click)  
  
A new query page will appear in the editor side of VSC.  
Here we create a database by running a MySQL code called

create database

We also will have to name the database we are creating so we attach/assign a name at the end of that code like follows

create database b9\_group5

For any code in MySQL to work, we need to remember to put the “;” at the end of the code as follows

create database b9\_group5;

Then we highlight the code and right click it, and in the drop down menu, we choose “Run MySQL Query” by left clicking it.

We can check what happened in the terminal below under the OUTPUT tab.  
Once we have done that, a new database should have been created.  
To view it, we would simply need to refresh the fintechsg08.mysql.database.azure.com by right clicking it and left click “Refresh”. Voila! Check out the new database!

\*Note- SQL only allows for letters, numbers, and simple undersign characters for the names of database and all will be displayed in lower case.

Create Table

We now need to put some tables into the database so that we can then put data in a structured manner to be stored. Here we would do well to think about the tables and the sort of data we want to be stored in them. For example, in our case, a table for the members in which information like name, age, nationality, marital status, etc. can be created. As we can adjust the table with other commands later, we create the table first.

We go through similar steps as above but for tables we have additional stuff to be identified, mainly the columns and its data type.  
  
Here we create a table by running a MySQL code called

create table

We also will have to name the table we are creating so we attach/assign a name at the end of that code like follows

create table member

Next we will need to do two main things,

1) name the column inside the table we are creating

2) identify the type of data that will be in the column

We do this by first typing () after creating table member, which is to say, all the things we put inside the brackets, will be created for the member table.

create table member ()

Next we fill in the brackets with the (1) and (2) mentioned above.

create table member

(

Name varchar(8)

)

The above is an example of of creating a column in the table with the header named “Name”, and the type of data that is to be stored in the column is of variable character. There are basically only two types of data we need to concern ourselves with at this point of time, varchar and int; where int stands for integer which is basically number types of data in which meaningful mathematically calculations can be made from the data.   
The numbers inside the brackets (8) that comes after the varchar is the number of characters we choose to allow the variable character (varchar) to have. In this example, 8 is the maximum number and a name cannot be spelled Herolahwei as it will only allow for 8 characters which is Herolahw. 8 is just an example and we can choose the number, which in the case for names, best to give a number much greater than 8.  
  
  
As for int, I think there is an assigned value of 11 automatically and we do not have to do the (11) stuff. We just put int after the column header name (See below example)  
  
As each column can only have one type of data, we need at least two columns to see how the different data type are assigned.

An example of both the varchar and int types to be created in two columns is as follows;

create table member

(

Name varchar(38)

Number\_Of\_Properties\_Own int

)

As with all SQL codes, we end it with a “;”

create table member

(

Name varchar(38)

Number\_Of\_Properties\_Own int

)

;

Then we highlight the code and right click it, and in the drop down menu, we choose “Run MySQL Query” by left clicking it.

We can check what happened in the terminal below under the OUTPUT tab.  
Once we have done that, a new table should have been created.  
To view it, we would simply need to refresh our database (which is b9\_group5 is the example above) by right clicking it and left click “Refresh”. Voila! Check out the new table!  
  
So for our case we type

Create table member

(

MemberId int auto\_increment NOT NULL,

GivenName varchar(255)

LastName varchar(255)

Gender char(10)

Email varchar(255)

Age int

MemberType int

Property\_type varchar(50)

No\_of\_bedroom int

Budget int

Loc varchar(30)

)

;

Ok. So there are a few additions to this code and some differences from what was explained. Firstly, the char for Gender.... here char represents a fixed number of characters, so this is assuming that there will be a fixed amount of 10 characters to be used to describe the Gender. I do not know why or how it is 10.  
The other glaring ones are the   
auto\_increment

And

NOT NULL

Auto\_increment is an SQL code that assigns a number automatically and keeps on increasing in value. Like Member ID, first data will be 1, second to submit will be 2 etc.

Whereas NOT NULL means that this field MUST be filled with data and cannot be left empty.

So for our group, we create the following tables to add on to the above table to be used. The creation of multiple tables is schema?

create table