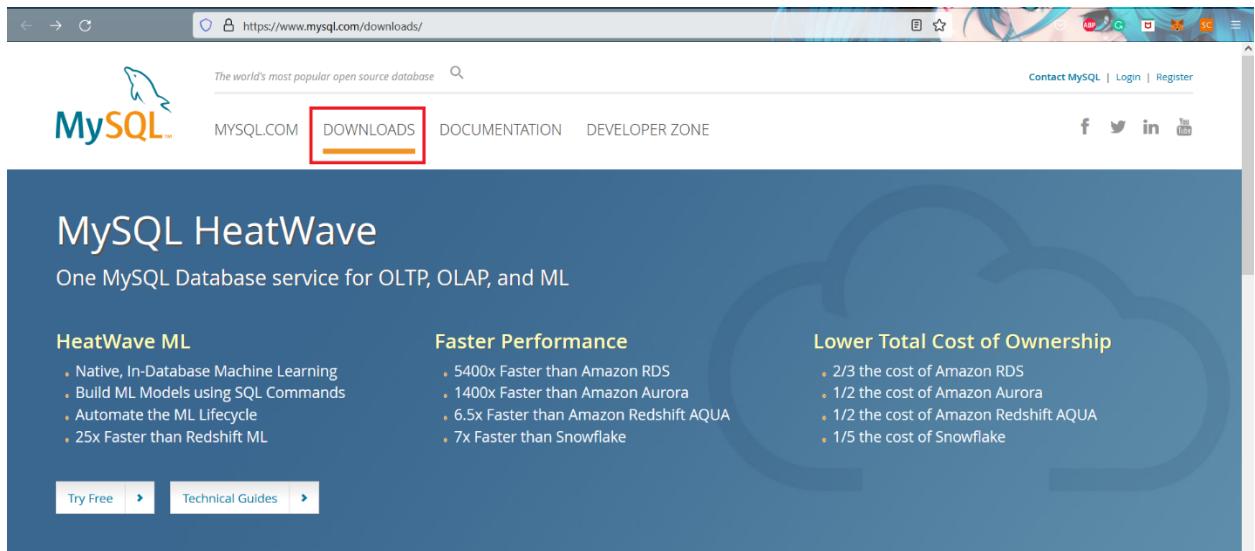


M2 Assignment 2 (Talend)

I. Downloading and Installing MySQL

We need to download MySQL for this assignment. Open the MySQL website on a browser and select the [Downloads](#) option.



Scroll down and click on “MySQL Community (GPL) Downloads >>”.

MySQL Cluster CGE

MySQL Cluster is a real-time open source transactional database designed for fast, always-on access to data under high throughput conditions.

- MySQL Cluster
- MySQL Cluster Manager
- Plus, everything in MySQL Enterprise Edition

[Learn More »](#)

[Customer Download »](#) (Select Patches & Updates Tab, Product Search)

[Trial Download »](#)

[MySQL Community \(GPL\) Downloads »](#)

Select MySQL Community Server and then select your preferred Operating System. After click on “Go to Download Page >”

④ MySQL Community Downloads

- MySQL Yum Repository
- MySQL APT Repository
- MySQL SUSE Repository
- MySQL Community Server
- MySQL Cluster
- MySQL Router
- MySQL Shell
- MySQL Operator
- MySQL Workbench
- MySQL Installer for Windows
- MySQL for Visual Studio
- C API (libmysqlclient)
- Connector/C++
- Connector/J
- Connector/.NET
- Connector/Node.js
- Connector/ODBC
- Connector/Python
- MySQL Native Driver for PHP
- MySQL Benchmark Tool
- Time zone description tables
- Download Archives

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④ MySQL Community Downloads

◀ MySQL Community Server

General Availability (GA) Releases Archives ?

MySQL Community Server 8.0.30

Select Operating System: Microsoft Windows Looking for previous GA versions?

Recommended Download:

MySQL Installer
for Windows

All MySQL Products. For All Windows Platforms.
In One Package.

Starting with MySQL 5.6 the MySQL Installer package replaces the standalone MSI packages.

Windows (x86, 32 & 64-bit), MySQL Installer MSI



Go to Download Page >

Other Downloads:

After, select the “mysql-installer-community” download button and you will be directed to a page that says to login or sign up for a free account. You may choose to do so, otherwise just click on “No thanks, just start my download.”. MySQL will then be downloaded to your computer.

④ MySQL Community Downloads

◀ MySQL Installer

The screenshot shows the MySQL Community Downloads page. At the top, there are tabs for "General Availability (GA) Releases" (which is selected), "Archives", and a help icon. Below the tabs, it says "MySQL Installer 8.0.30". A dropdown menu for "Select Operating System" is set to "Microsoft Windows". To the right, there's a link "Looking for previous GA versions?". The main content area lists two download options:

Version	File Type	Size	Action
8.0.30	Windows (x86, 32-bit), MSI Installer (mysql-installer-web-community-8.0.30.0.msi)	5.5M	Download
8.0.30	Windows (x86, 32-bit), MSI Installer (mysql-installer-community-8.0.30.0.msi)	448.3M	Download

A note at the bottom suggests using MD5 checksums and GnuPG signatures for package integrity verification.

⑤ MySQL Community Downloads

Login Now or Sign Up for a free account.

An Oracle Web Account provides you with the following advantages:

- Fast access to MySQL software downloads
- Download technical White Papers and Presentations
- Post messages in the MySQL Discussion Forums
- Report and track bugs in the MySQL bug system

The screenshot shows the MySQL Community Downloads page with a "Login" and "Sign Up" button. Below the buttons, a note explains Oracle SSO authentication and provides instructions for existing users.

Login »
using my Oracle Web account

Sign Up »
for an Oracle Web account

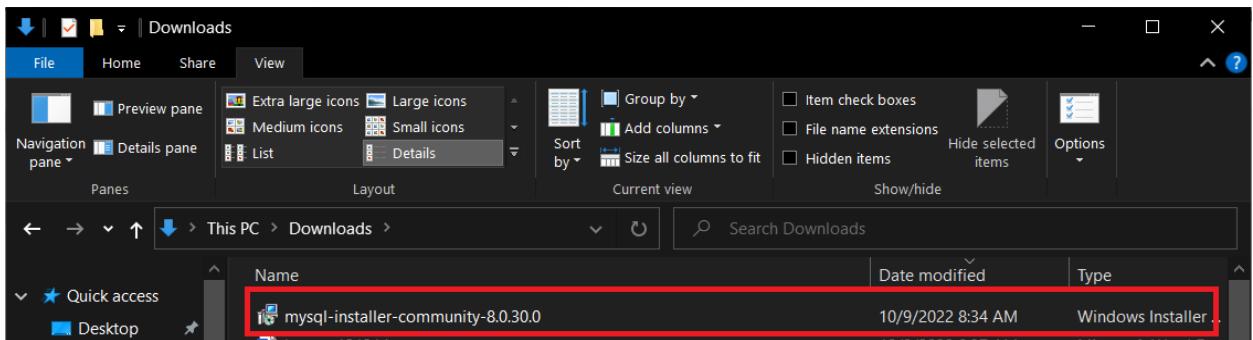
MySQL.com is using Oracle SSO for authentication. If you already have an Oracle Web account, click the Login link. Otherwise, you can signup for a free account by clicking the Sign Up link and following the instructions.

No thanks, just start my download.

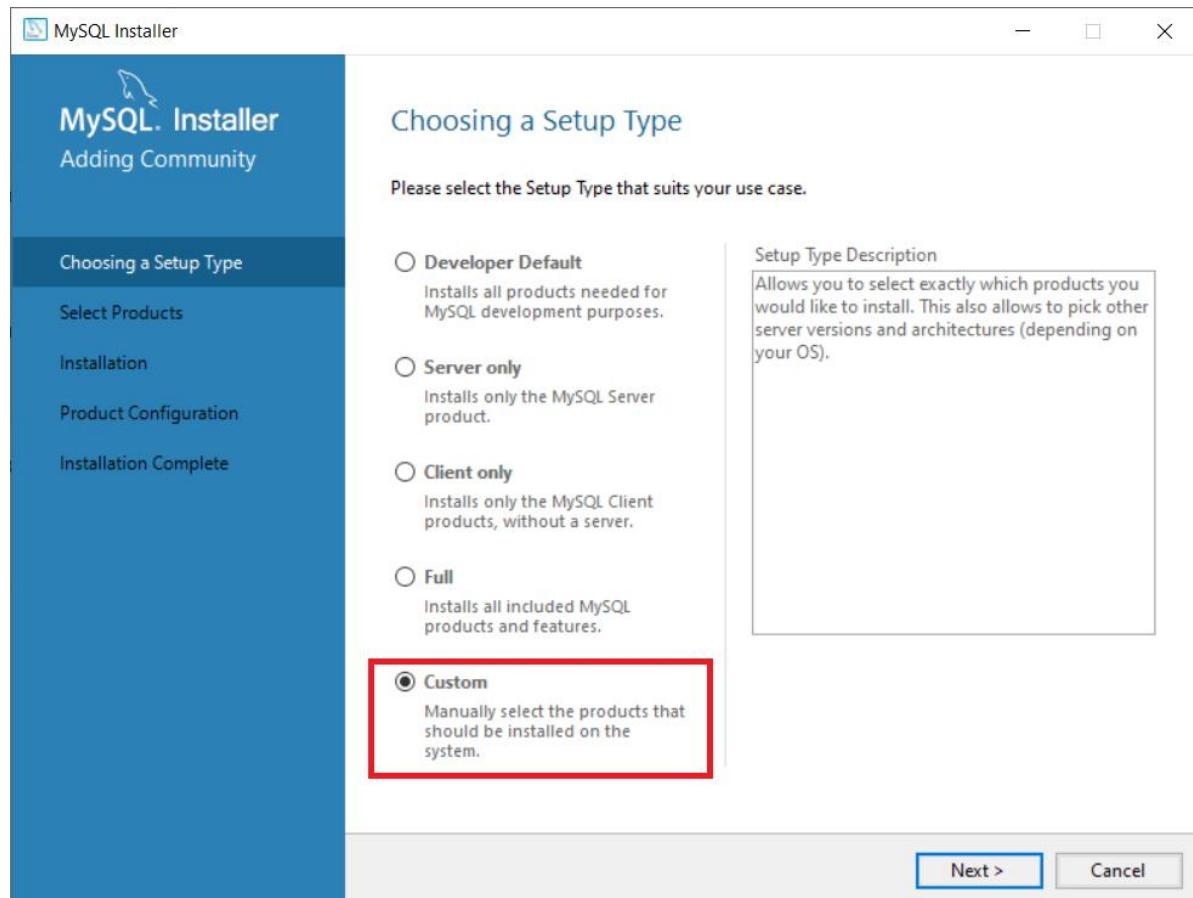
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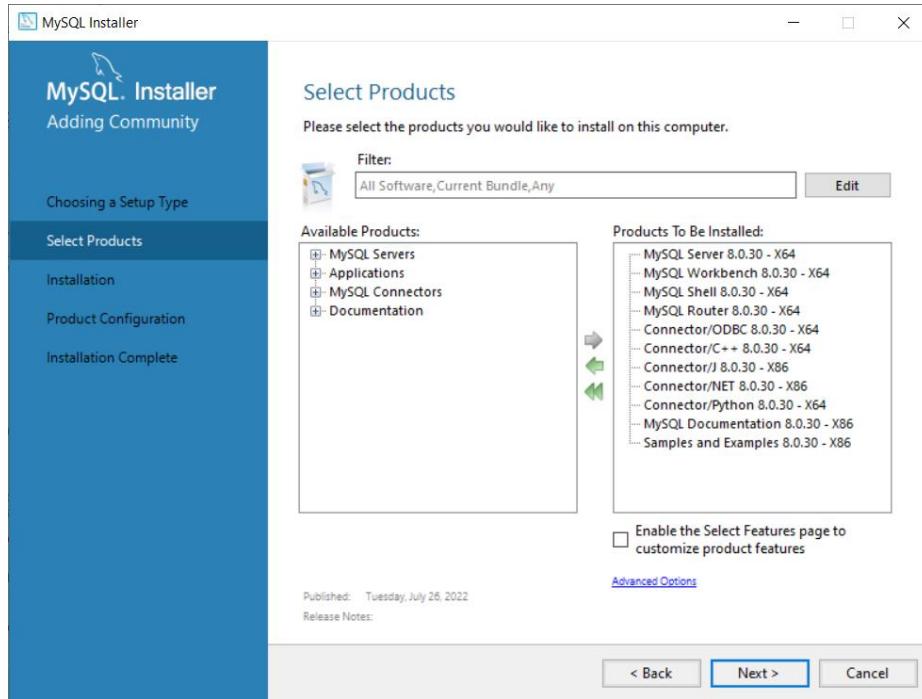
After it has downloaded, open the MySQL installer.



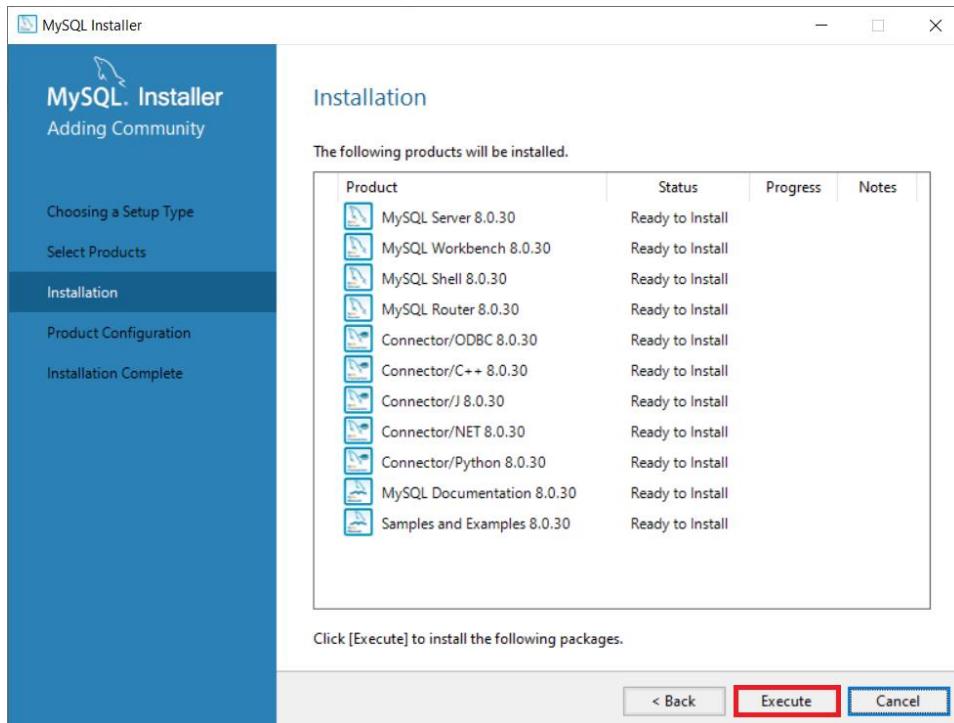
If it will ask for permission, click Yes. The installer will then open, and it will ask to choose the setup type. Here, we selected Custom since we want to manually select the products that will be installed to the computer. Click on Next once finished.



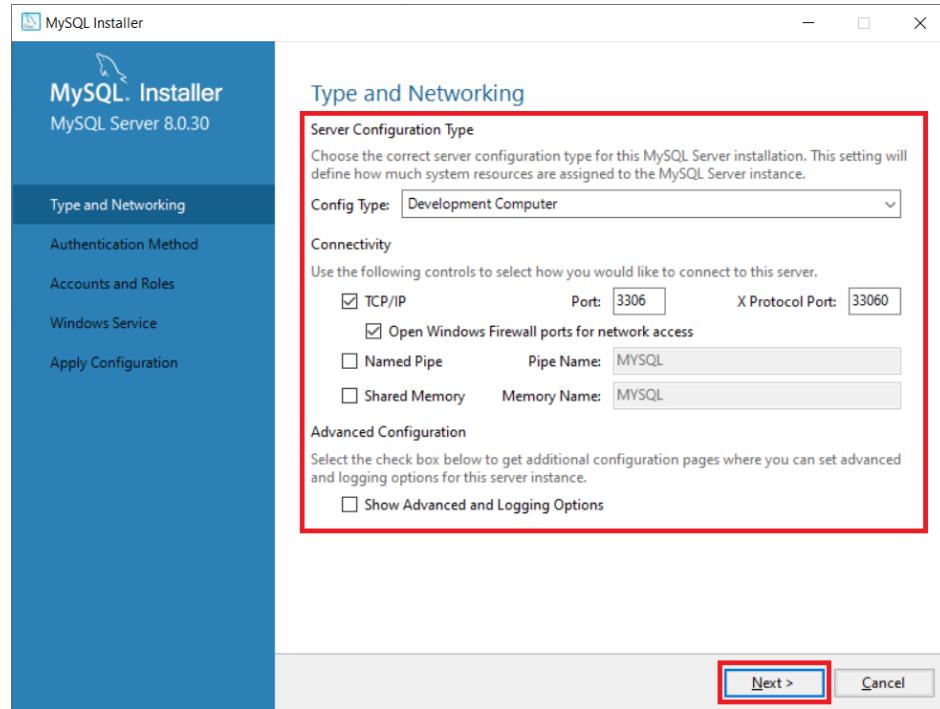
In this next part, we deselected “MySQL for Visual Studio” since we do not need Visual Studio to work with the MySQL server. You may choose to select other products to be included or removed. Once done, click on Next.



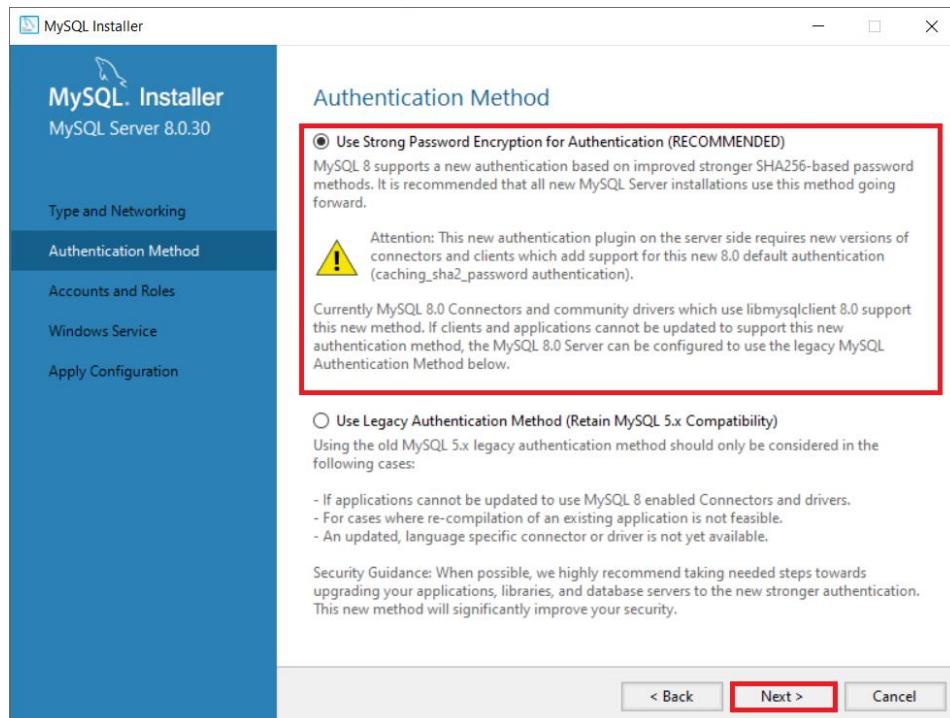
You will then be prompted to click on Execute to install the packages, please do so.



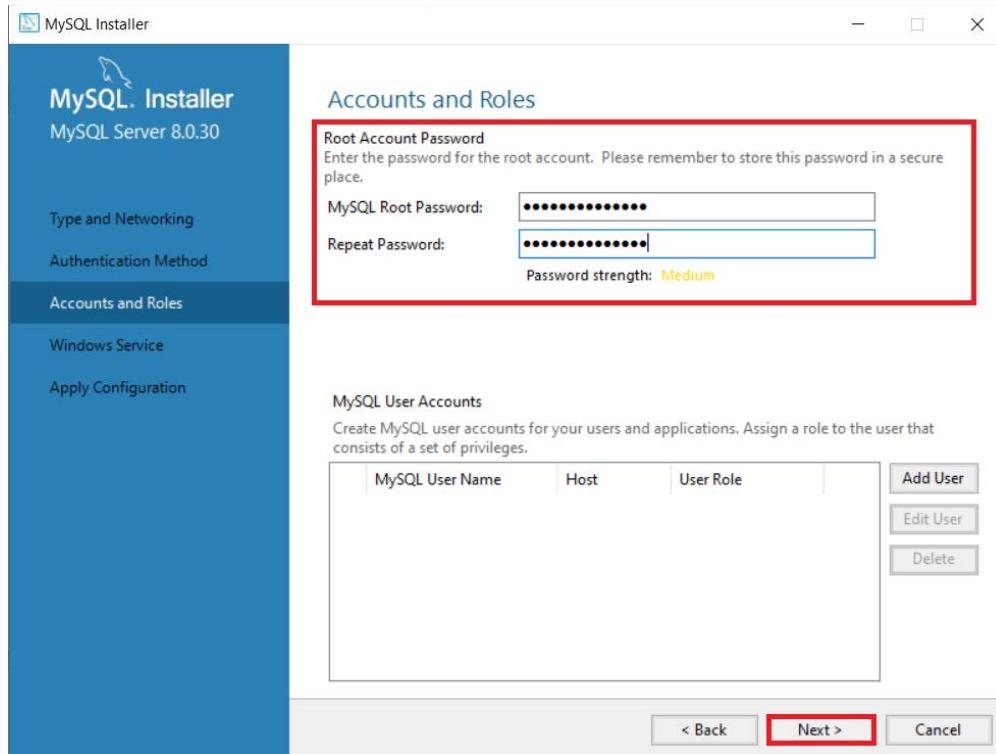
After all packages were successfully installed, click on Next. Now the products are ready to be configured. For the MySQL Server product you will be prompted to a new screen. Under Type and Networking, continue with the default settings and click Next.



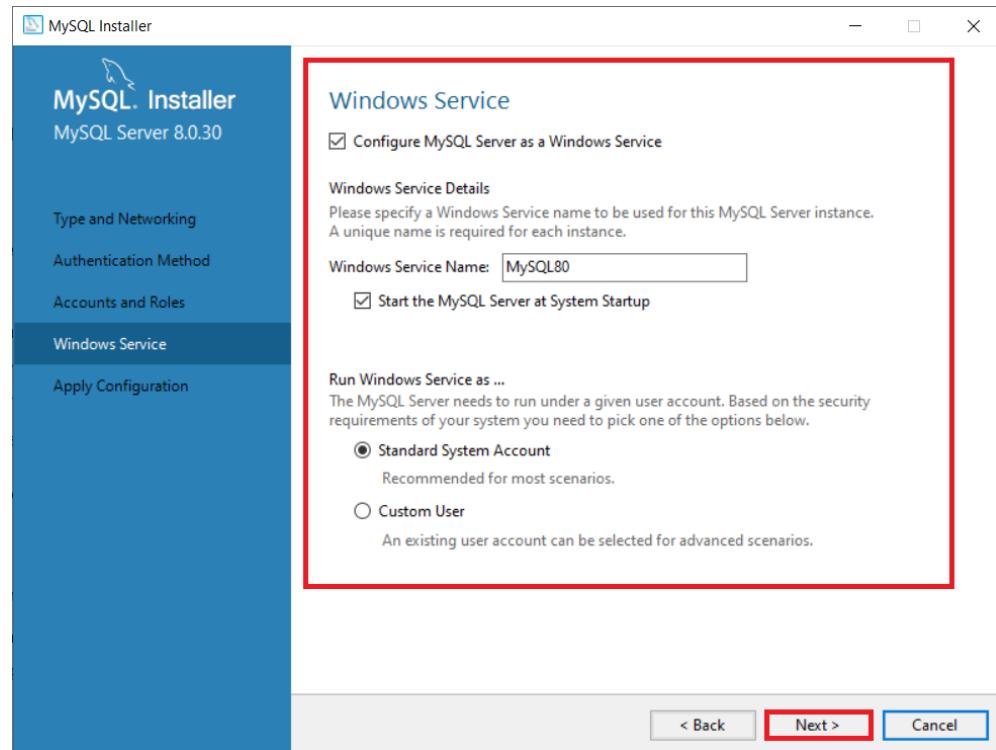
Under Authentication, use the recommended strong password encryption for the authentication method.



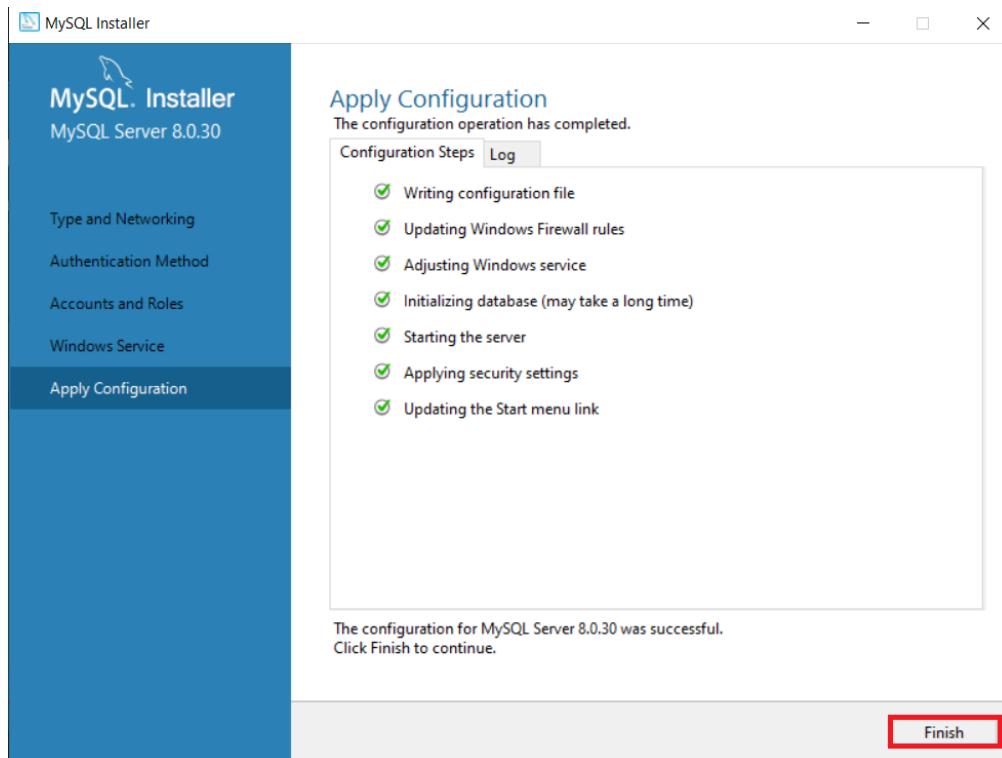
In the next screen, set your chosen MySQL Root password. Click Next once finished.



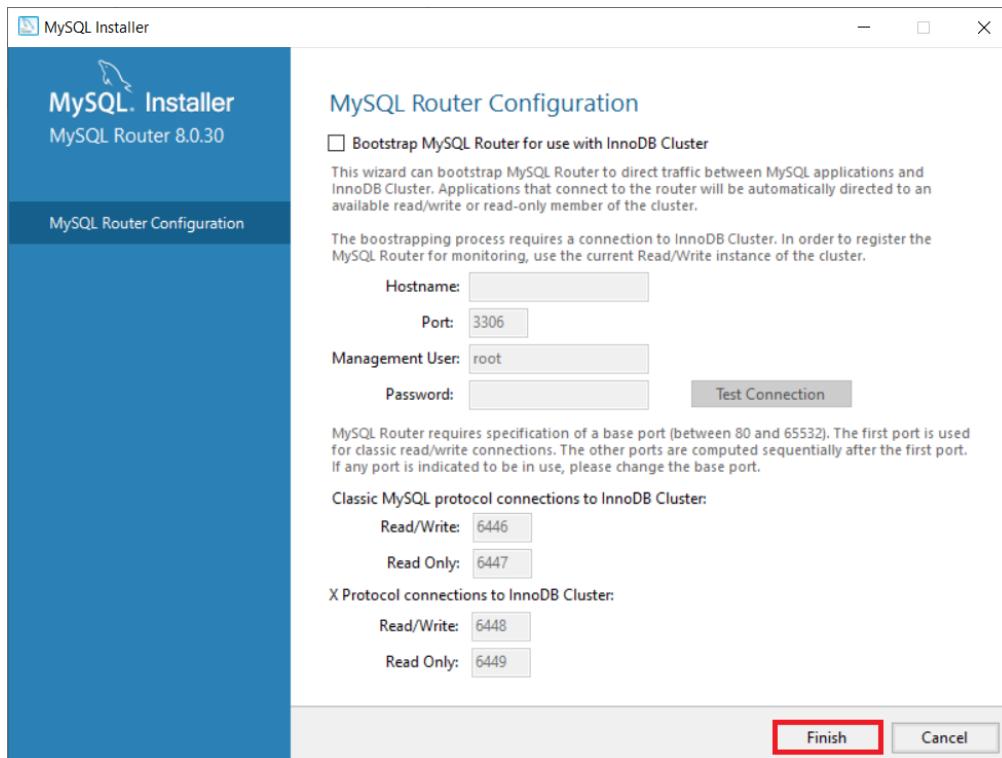
Under Windows Service, continue with the default settings as well and click Next.



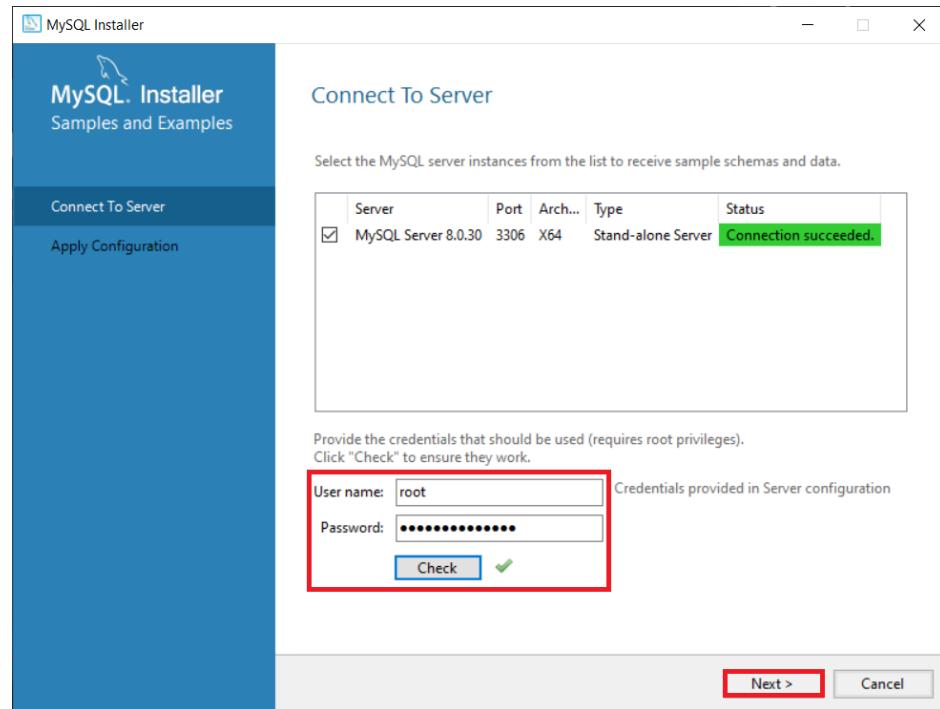
Under Apply Configuration, click on Execute. Once all configurations are complete, click on Finish.



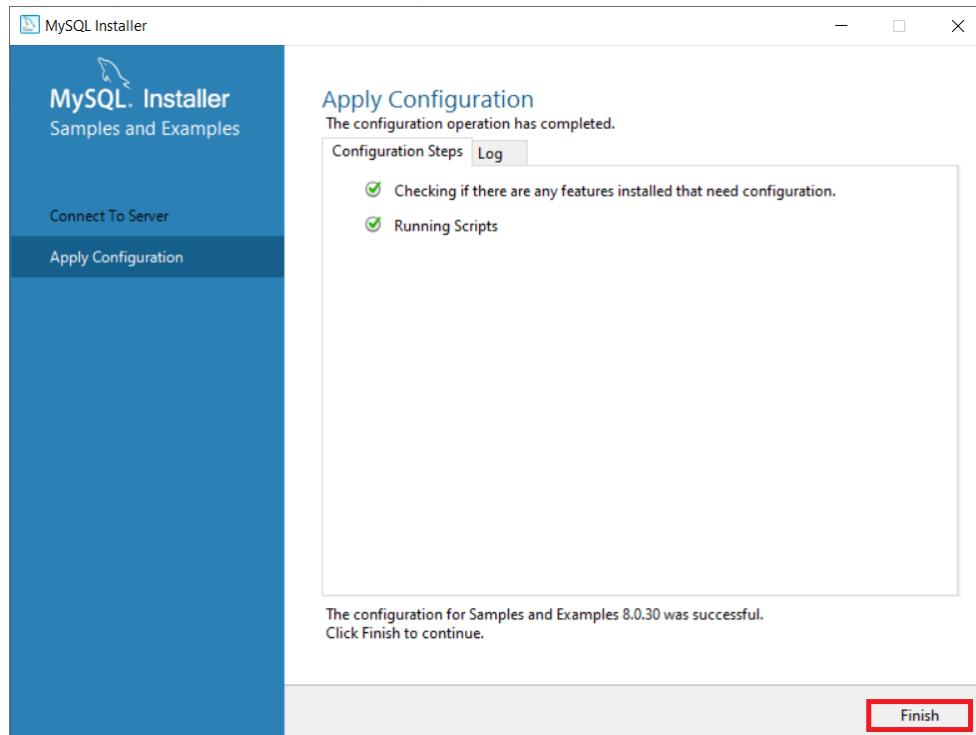
For the MySQL Router Configuration, proceed with the default settings and click on Finish.



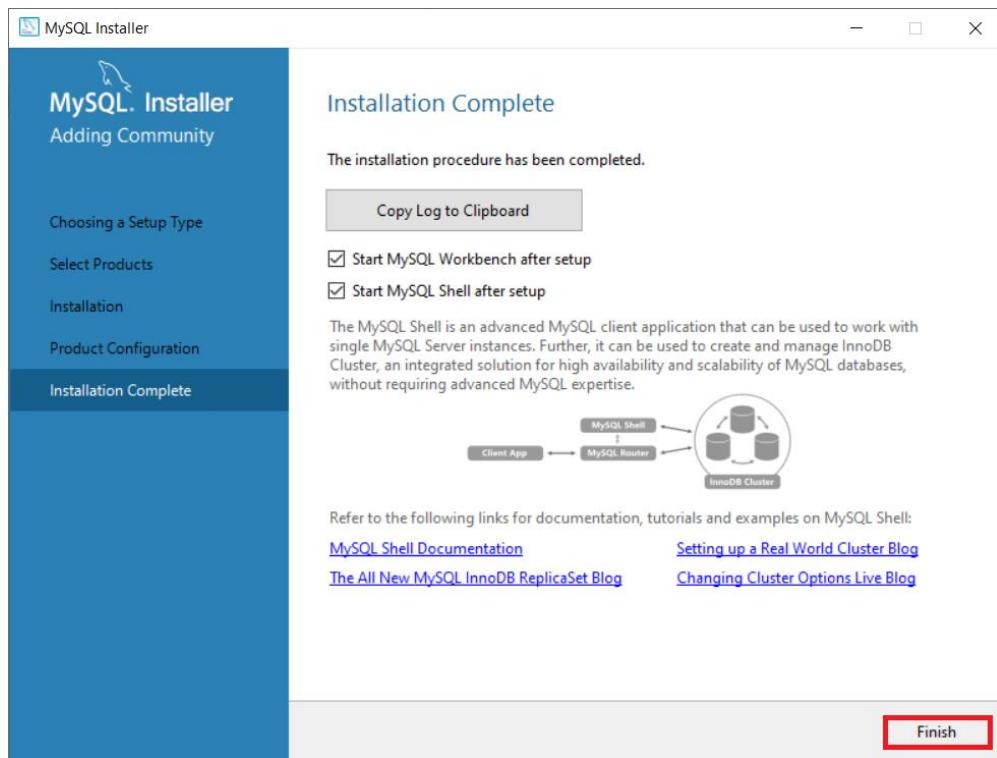
Lastly, for the Samples and Examples Configuration, type in your root password to receive sample schemas and data.



Under Apply Configuration, click on Execute to run the following config steps. Click on Finish once everything is done.



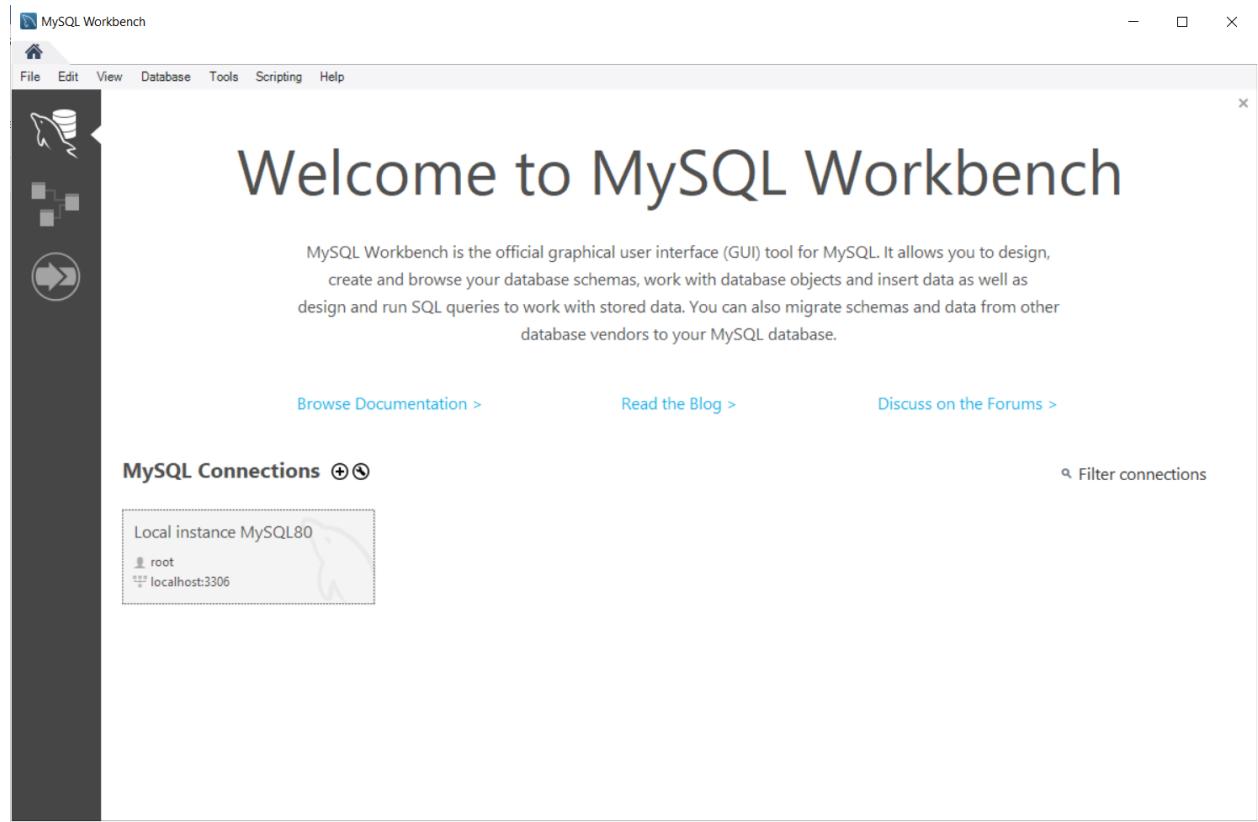
After all products were configured, installation is now complete. It will now launch MySQL Workbench and the MySQL Shell. Click on Finish to exit the setup wizard.



MySQL Shell

A screenshot of a terminal window titled "C:\Program Files\MySQL\MySQL Shell 8.0\bin\mysqlsh.exe". The title bar also shows "MySQL Shell 8.0.30". The window displays the MySQL Shell welcome message: "Copyright (c) 2016, 2022, Oracle and/or its affiliates. Oracle is a registered trademark of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners." Below this, it says "Type '\help' or '\?' for help; '\quit' to exit." and shows the prompt "MySQL [JS] >".

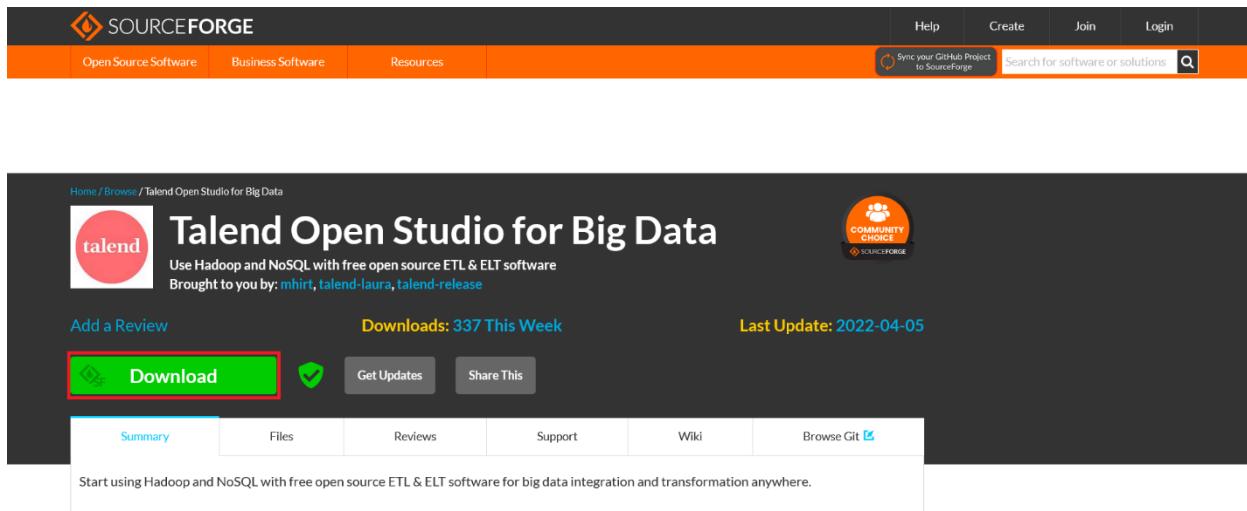
MySQL Workbench



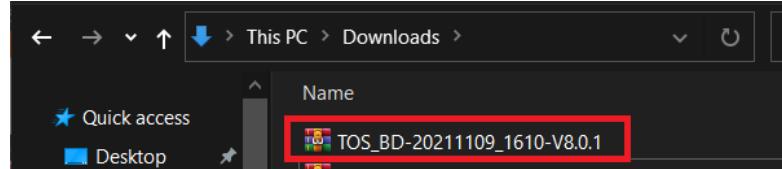
Now that MySQL is ready, do not close the MySQL Shell and Workbench as this will be used later.

II. Downloading and Installing Talend for Big Data

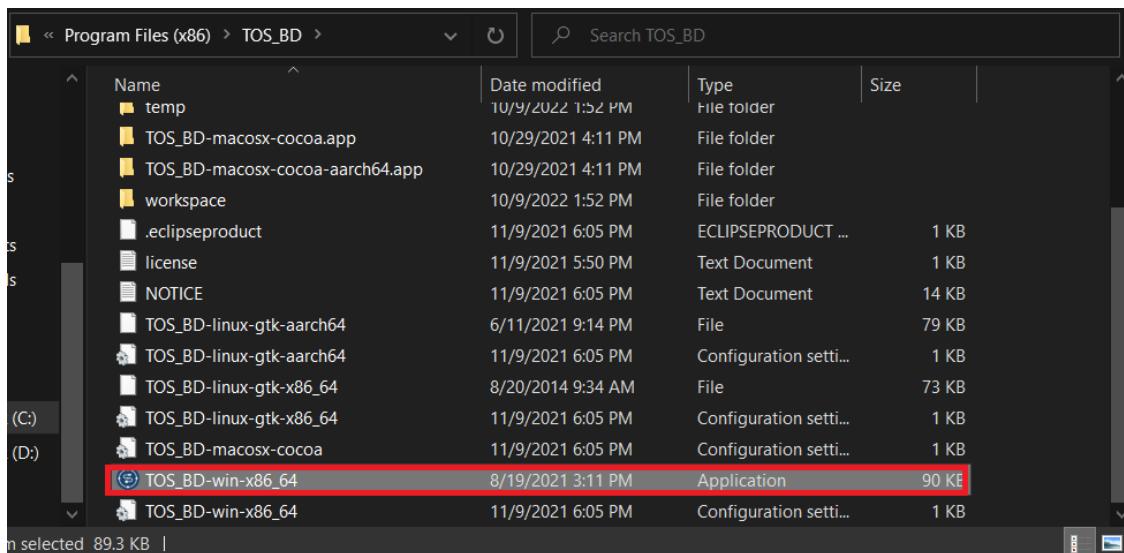
To download Talend, head over to this website, <https://sourceforge.net/projects/talend-bigdata/> and click on the “Download now” button. The zip file of Talend Open Studio for Big Data will then be downloaded.



The screenshot shows the SourceForge project page for "Talend Open Studio for Big Data". The page has a dark header with the SourceForge logo and navigation links for Help, Create, Join, and Login. Below the header, there's a search bar and a "Sync your GitHub Project to SourceForge" button. The main content area features the Talend logo, the project name "Talend Open Studio for Big Data", a brief description, and a "Community Choice" badge. It includes metrics like "Downloads: 337 This Week" and "Last Update: 2022-04-05". A prominent green "Download" button is highlighted with a red box. Below the main content, there's a summary tab and other navigation links like Files, Reviews, Support, Wiki, and Browse Git. A note at the bottom says "Start using Hadoop and NoSQL with free open source ETL & ELT software for big data integration and transformation anywhere."

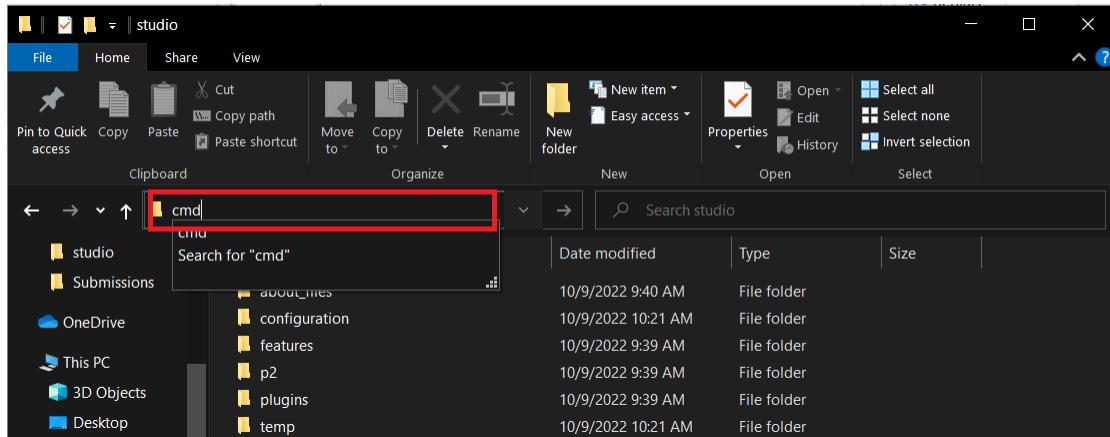


Extract the zip file using any file archiver (7-zip, WinRAR, etc.) and place it to your chosen directory folder. Then open the application based on your operating system. In this example, we used the windows app because we have Windows 10.



Note: If you encountered a message that says “Incompatible JVM” when you tried to open Talend then you may continue with the following steps. Otherwise, proceed [here](#). This error may be due to having more than one JVM installation on your machine. **Make sure that the JVM version you have is 11 or above.**

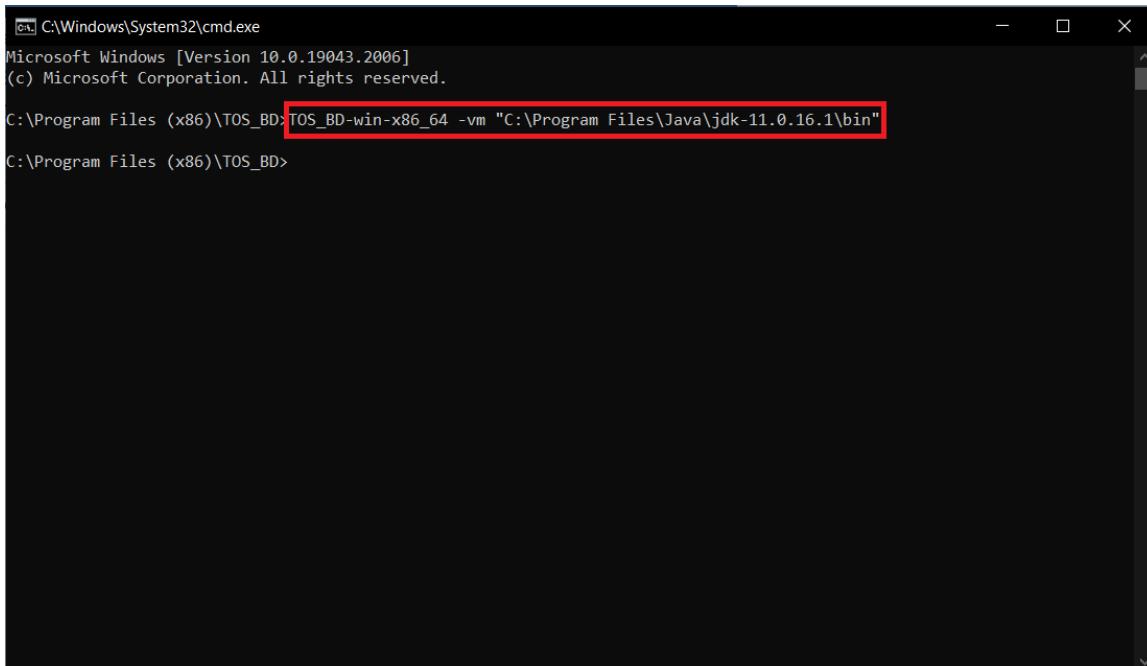
Go to the directory file of Talend, which in our case is “C:\Program Files (x86)\TOS_BD”. Click on the address bar and type in cmd.



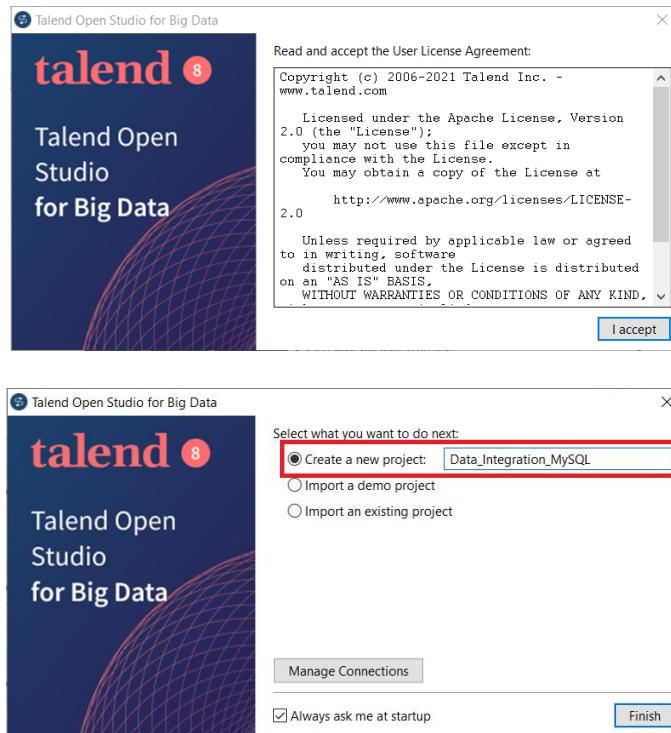
In the command prompt, type in:

```
TOS_BD-win-x86_64 -vm "<JRE_Directory>"
```

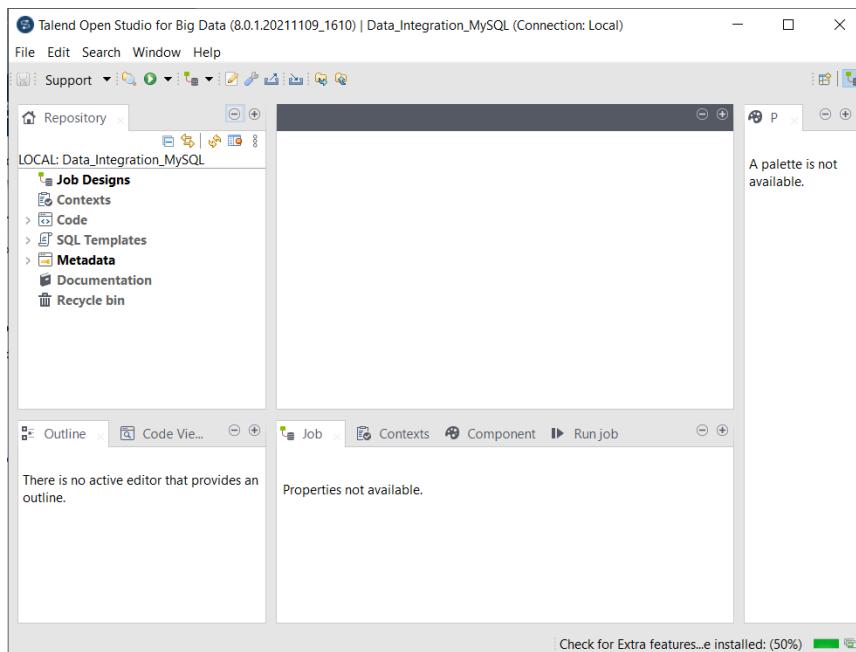
In our case, our JRE directory is "C:\Program Files\Java\jdk-11.0.16.1\bin".



Talend will now be open, and you will be prompted to accept the User License Agreement. Next, you will be asked to select whether you want to create a new project, import a demo project, or import an existing project. Select “Create a new project” and type in a name of your choosing. Click Finish once done.



Talend is now ready to be used. Do not close this as it will be used later.



III. Importing the MySQL database/tables in MySQL DBMS

Let us look at the scripts from the Data folder given. Looking at the Script_to_Create_DBs folder with the Data folder, there are two scripts to create two separate databases. Since we want this to be a unified database, we need to combine the databases. First, we open a notepad and type in a new database name. Next, make sure that the scripts to make each table from the two databases are placed. Then save this notepad as an .sql file. The code would look like this:

```
CREATE DATABASE studentdb;
USE studentdb;

CREATE TABLE Student (
    STUDNO    nchar (10) NOT NULL,
    LNAME     nchar (20) NOT NULL,
    FNAME     nchar (20) NOT NULL,
    MNAME     nchar (20) NULL,
    PROGRAM   nchar (10) NOT NULL,
    YEARLEVEL nchar (1) NOT NULL,
    NATIONALITY nchar (10) NULL,
    GENDER    nchar (1) NOT NULL,
    PRIMARY KEY (STUDNO)
);

CREATE TABLE Courses (
    `COURSE CODE`  nchar (10) NOT NULL,
    `COURSE TITLE` nchar (50) NOT NULL,
    UNITS      tinyint NOT NULL,
    `TUITION FEE` double (10,2),
    `LFD FEE`    double (10,2),
    PRIMARY KEY (`COURSE CODE`)
);
```

```
CREATE TABLE SubjectsEnrolled (
    `SY TERM` nchar (11) NOT NULL,
    STUDNO nchar (10) NOT NULL,
    `COURSE CODE` nchar (10) NOT NULL,
    SECTION nchar (5) NOT NULL,
    `FINAL GRADE` nchar (5) NULL,
    `C GRADE` nchar (5) NULL,
    REMARK nchar (10) NULL
);
```

```
CREATE TABLE StudentContact (
    STUDNO nchar (10) NOT NULL,
    `PERMANENT ADDRESS` nchar (100) NULL,
    `MAILING ADDRESS` nchar (100) NOT NULL,
    TELEPHONE nchar (30) NOT NULL,
    EMAIL nchar (50) NOT NULL,
    PRIMARY KEY (STUDNO)
);
```

```
CREATE TABLE Schedule (
    `COURSE CODE` nchar (10) NOT NULL,
    SECTION nchar (5) NOT NULL,
    TIME nchar (20) NOT NULL,
    DAY nchar (8) NOT NULL,
    ROOM nchar (10) NOT NULL,
    PROFESSOR nchar (30) NULL
);
```

```
CREATE TABLE Form (
    FormNumber int NOT NULL,
    STUDNO nchar (10) NOT NULL,
```

```
    DATEPRINTED  date  NOT NULL,  
    PRIMARY KEY (FormNumber)  
);
```

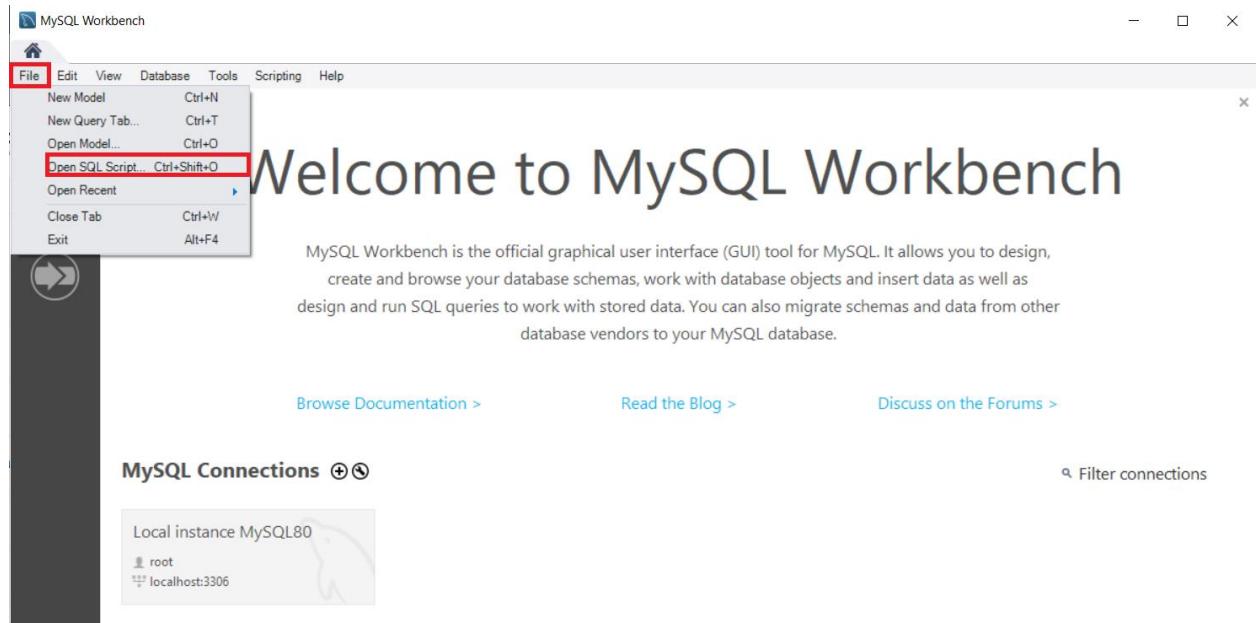
```
CREATE TABLE Payments (  
    ORNumber  int  NOT NULL ,  
    STUDNO   nchar (15) NULL,  
    AmountPaid  double (10,2),  
    Date    nchar (10) NULL,  
    SYTerm   nchar (11) NULL,  
    PRIMARY KEY (ORNumber)  
);
```

```
CREATE TABLE ModeOfPayment (  
    STUDNO   nchar (10) NOT NULL,  
    MODEOFPAYMENT  nchar (15) NOT NULL  
);
```

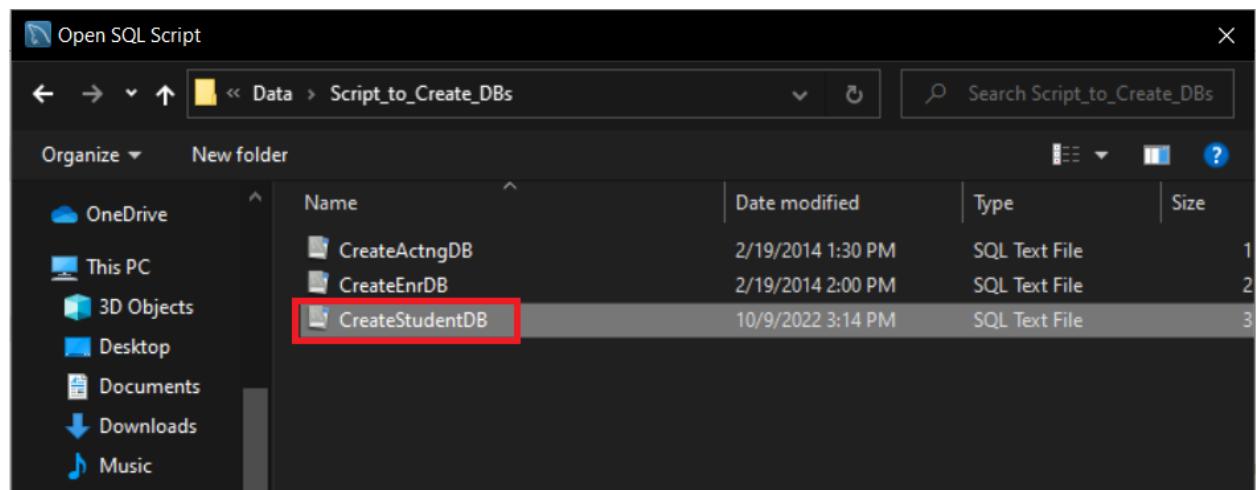
```
CREATE TABLE MiscellaneousFees (  
    FeeCode   nchar (10) NOT NULL,  
    FeeDescription  nchar (25) NOT NULL,  
    Amount    double (10,2),  
    PRIMARY KEY (FeeCode)  
);
```

```
CREATE TABLE Assessment (  
    STUDNO   nchar (15) NOT NULL,  
    FeeCode   nchar (10) NOT NULL,  
    Amount    double (10,2),  
    FeeType   nchar (3) NULL  
);
```

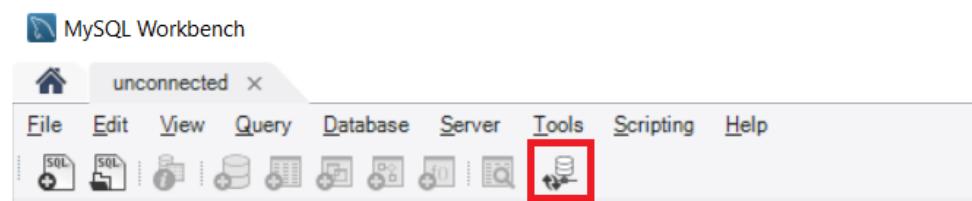
Now we go back to the opened MySQL Workbench and click on File > Open SQL Scripts...



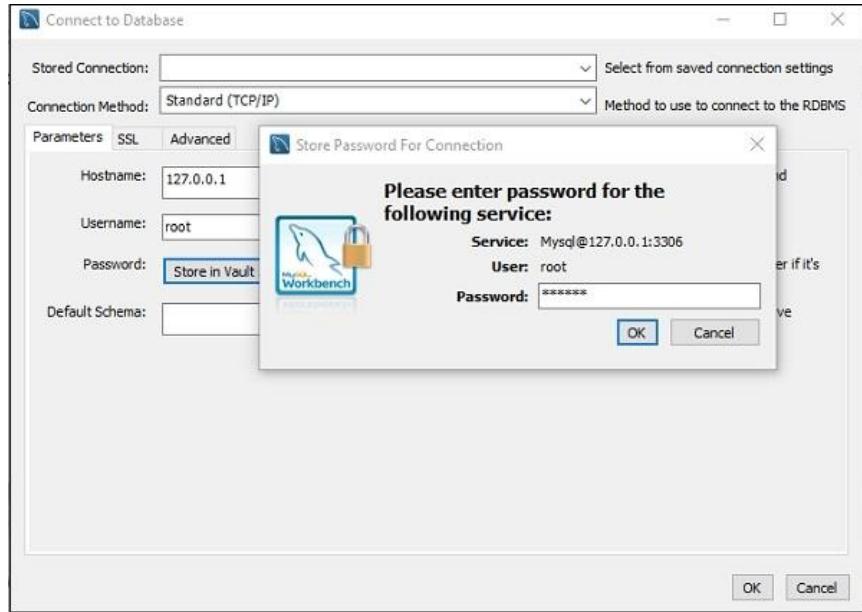
Using the Data folder, select the Script_to_Create_DBs and select the script that was created (CreateStudentDB) from the folder.



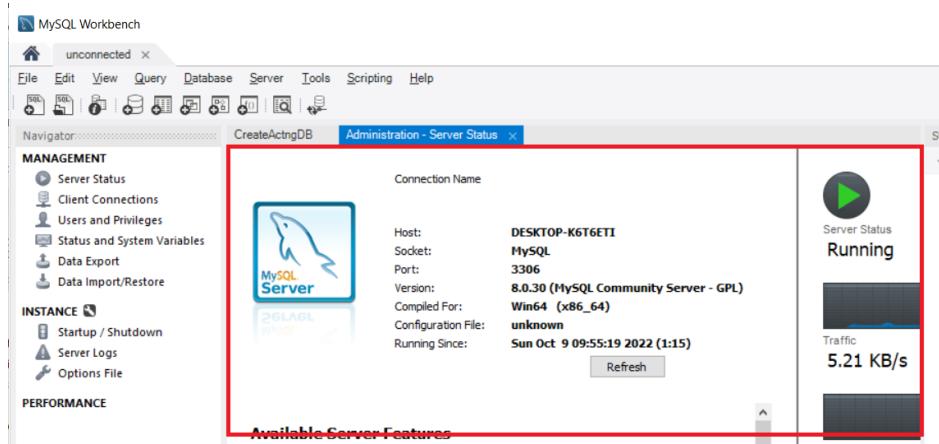
After the SQL script is shown, click on the button indicated below to reconnect to a database.



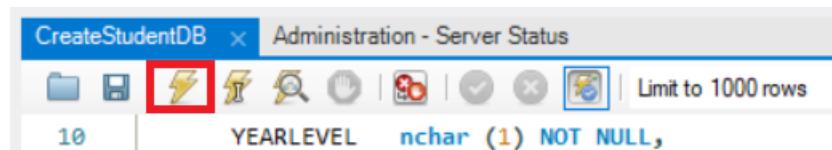
The “Connect to Database” window will open. Continue with the default settings and click OK. Enter your root password to continue.



The administrator is now connected. Now, go back to your script.



Click on the button as shown below to execute the sql script.



The database and tables are now created.

Output				
Action Output			Message	Duration / Fetch
#	Time	Action	Message	Duration / Fetch
1	15:22:35	CREATE DATABASE studentdb	1 row(s) affected	0.000 sec
2	15:22:35	USE studentdb	0 row(s) affected	0.000 sec
3	15:22:35	CREATE TABLE Student (STUDNO nchar (10) NOT NULL, LNAME n...)	0 row(s) affected, 8 warning(s): 3720 NATIONAL/NCHAR/NVARCHAR impli...	0.032 sec
4	15:22:35	CREATE TABLE Courses ('COURSE CODE' nchar (10) NOT NULL, 'C...	0 row(s) affected, 4 warning(s): 3720 NATIONAL/NCHAR/NVARCHAR impli...	0.015 sec
5	15:22:35	CREATE TABLE SubjectsEnrolled ('SY TERM' nchar (11) NOT NULL, ...)	0 row(s) affected, 7 warning(s): 3720 NATIONAL/NCHAR/NVARCHAR impli...	0.016 sec
6	15:22:35	CREATE TABLE StudentContact (STUDNO nchar (10) NOT NULL, 'PE...	0 row(s) affected, 5 warning(s): 3720 NATIONAL/NCHAR/NVARCHAR impli...	0.015 sec
7	15:22:35	CREATE TABLE Schedule ('COURSE CODE' nchar (10) NOT NULL, S...	0 row(s) affected, 6 warning(s): 3720 NATIONAL/NCHAR/NVARCHAR impli...	0.016 sec
8	15:22:35	CREATE TABLE Form (FormNumber int NOT NULL, STUDNO nchar (...)	0 row(s) affected, 1 warning(s): 3720 NATIONAL/NCHAR/NVARCHAR impli...	0.016 sec
9	15:22:35	CREATE TABLE Payments (ORNNumber int NOT NULL , STUDNO nc...	0 row(s) affected, 4 warning(s): 3720 NATIONAL/NCHAR/NVARCHAR impli...	0.015 sec
10	15:22:35	CREATE TABLE ModeOfPayment (STUDNO nchar (10) NOT NULL, M...	0 row(s) affected, 2 warning(s): 3720 NATIONAL/NCHAR/NVARCHAR impli...	0.016 sec
11	15:22:35	CREATE TABLE MiscellaneousFees (FeeCode nchar (10) NOT NULL, F...	0 row(s) affected, 3 warning(s): 3720 NATIONAL/NCHAR/NVARCHAR impli...	0.016 sec
12	15:22:35	CREATE TABLE Assessment (STUDNO nchar (15) NOT NULL, FeeCod...	0 row(s) affected, 4 warning(s): 3720 NATIONAL/NCHAR/NVARCHAR impli...	0.015 sec

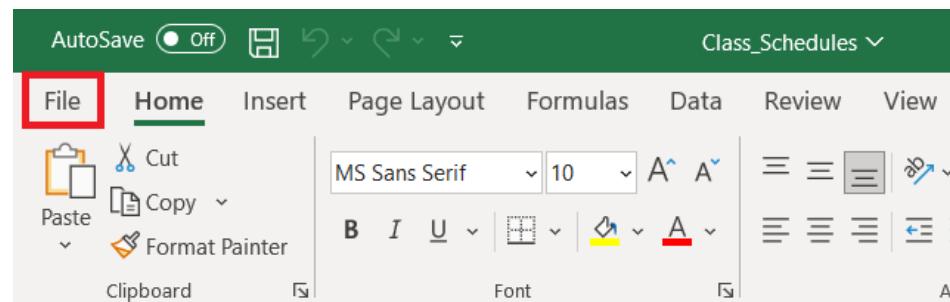
IV. Populating tables in MySQL using Talend

Note that the tables in our database are empty so we have to populate them with data.

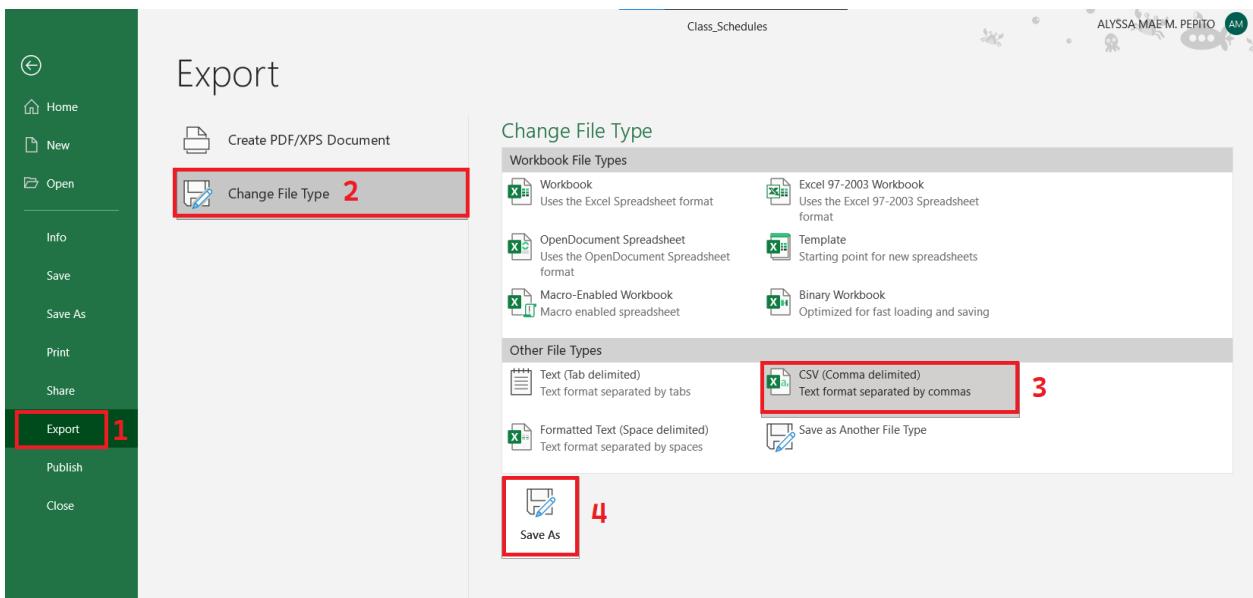
Going back to the Data folder, we can see that there are files that can be used to populate the tables of the enrolment database. They must be preprocessed into CSV files so they can be easily inserted into the MySQL database. Contact_Info is already a CSV file so we will ignore it.

M2-Assignment-2 > Data				
	Name	Date modified	Type	Size
	Script_to_Create_DBs	7/3/2019 5:21 PM	File folder	
	ScriptToPopulateEnrolmentDB	10/9/2022 11:35 AM	File folder	
	Class_Schedules	3/27/2019 6:40 PM	Microsoft Excel W...	15 KB
	Contact_Info	3/27/2019 2:00 PM	Microsoft Excel Co...	9 KB
	Course_Details	3/27/2019 5:01 PM	XML Document	15 KB

Open the first file (Class_Schedules) in Excel and click on File.



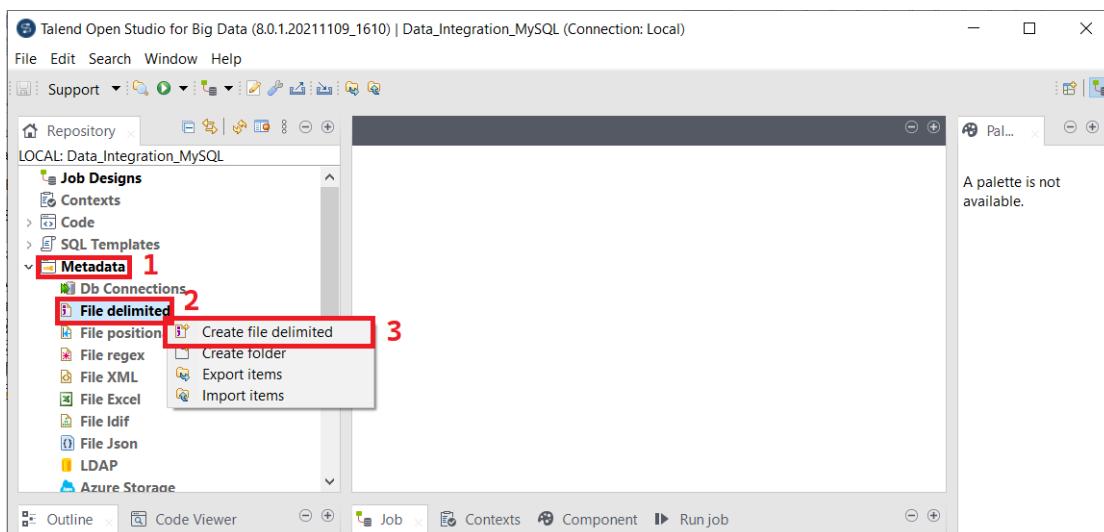
Select Export > Change File Type > CSV > Save As to export the Class_Schedules file as a CSV.



Repeat this step for the other file Course_Details. The files will now look like this in the folder.

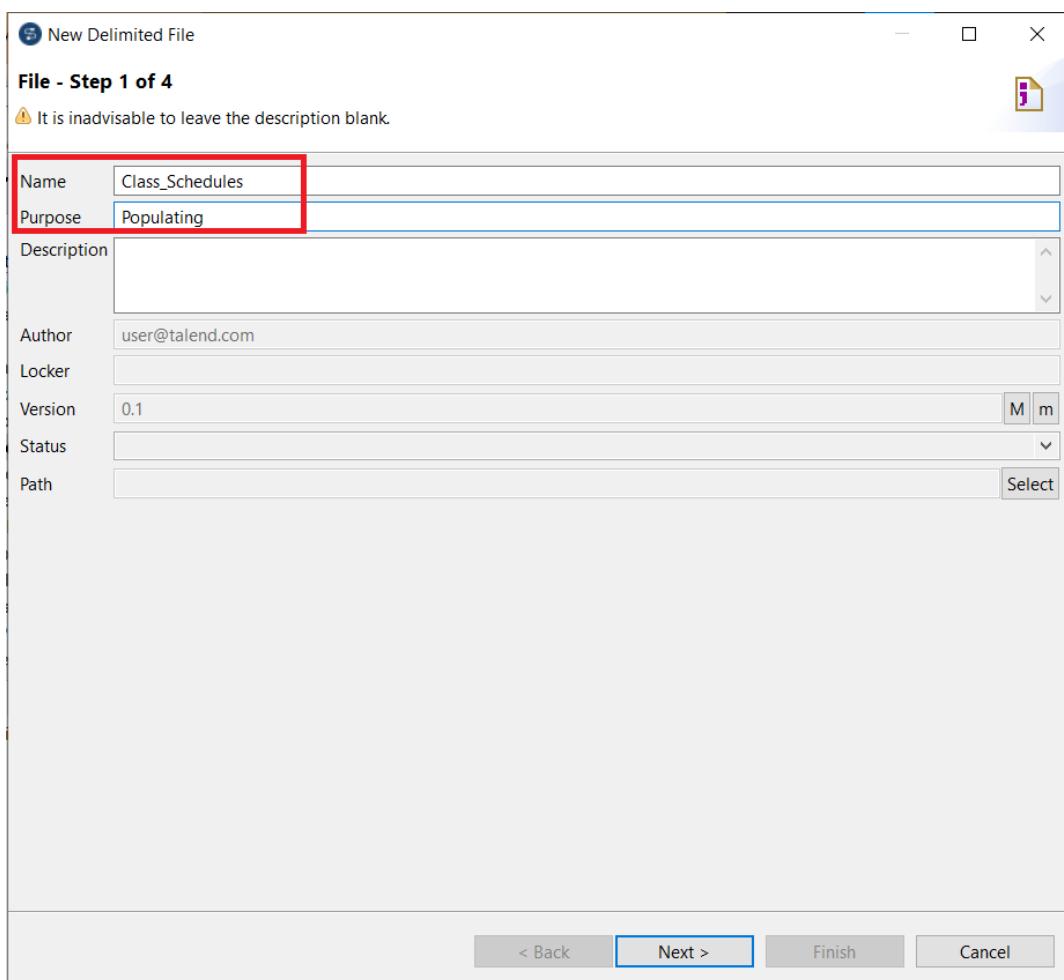
Name	Date modified	Type	Size
Script_to_Create_DBs	7/3/2019 5:21 PM	File folder	
ScriptToPopulateEnrolmentDB	10/9/2022 11:35 AM	File folder	
Class_Schedules	10/9/2022 11:49 AM	Microsoft Excel Co...	7 KB
Contact_Info	3/27/2019 2:00 PM	Microsoft Excel Co...	9 KB
Course_Details	10/9/2022 12:23 PM	Microsoft Excel Co...	3 KB

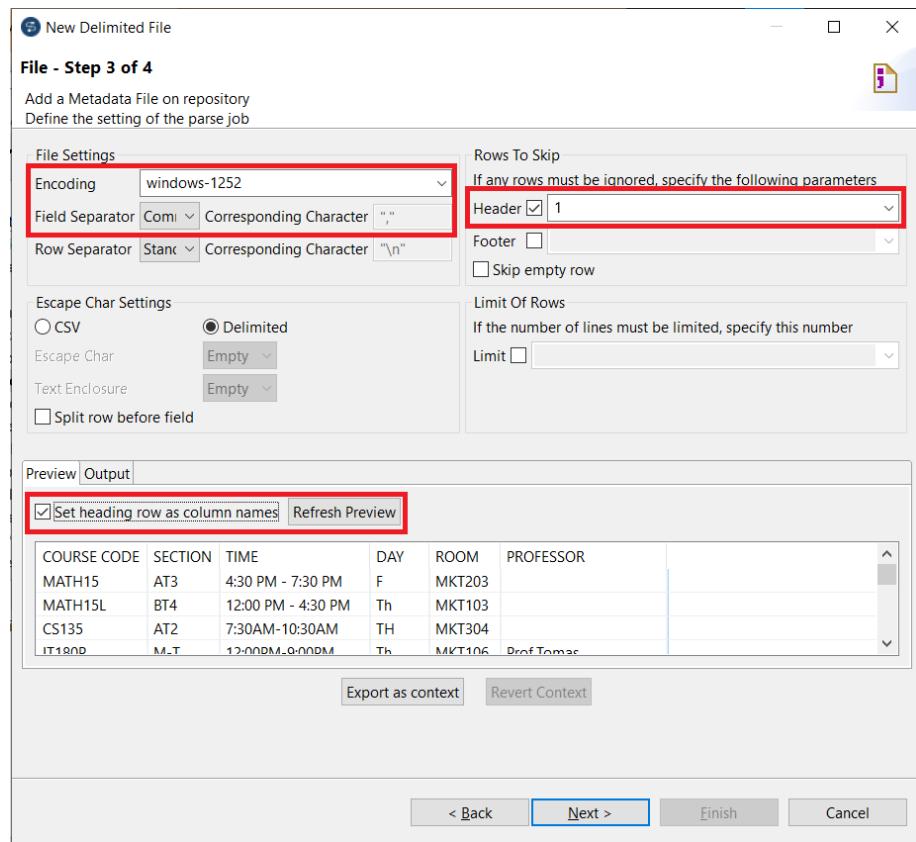
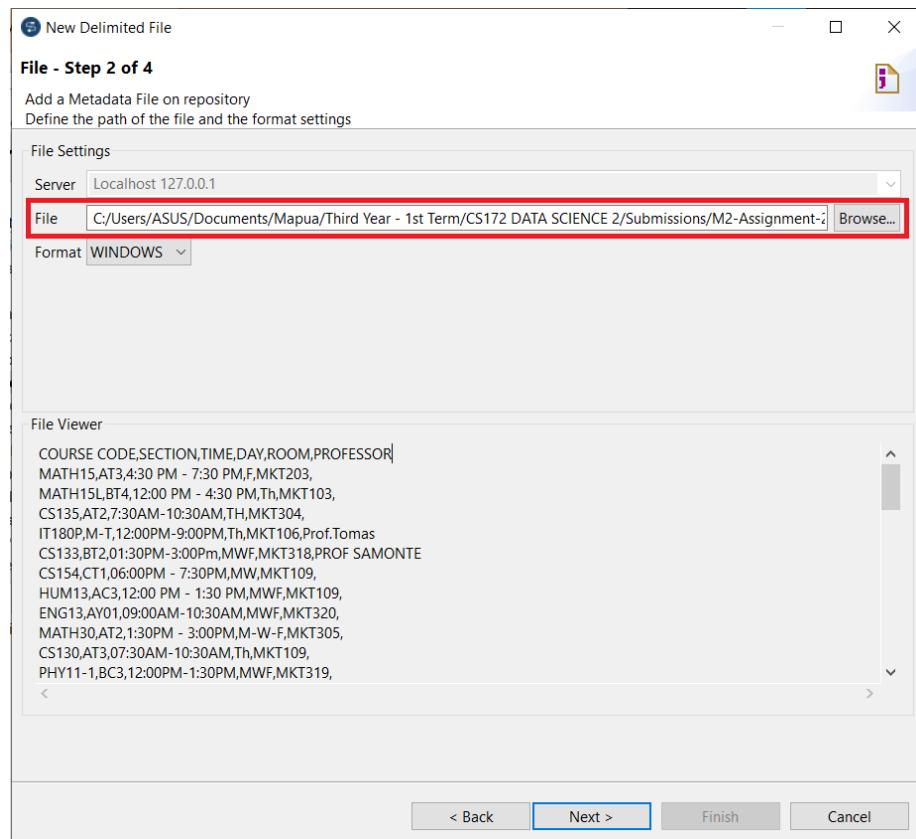
Go back to your opened Talend Open Studio for Big Data. Select Metadata and right click on File delimited to create a file delimited.

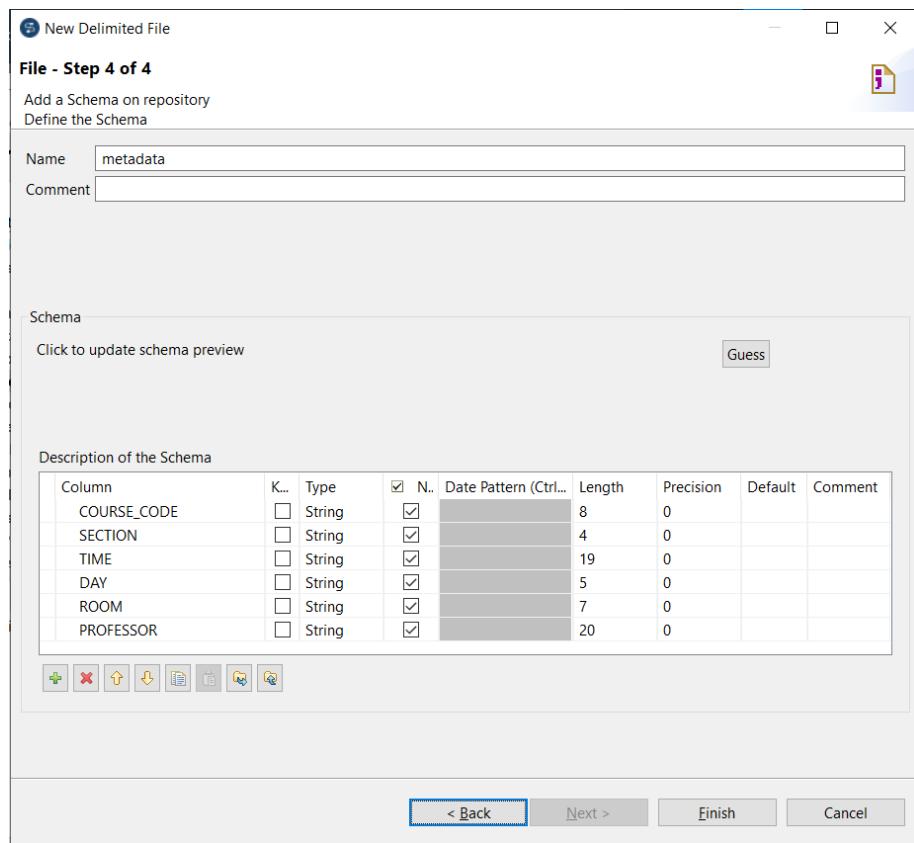


Just follow the steps as listed below:

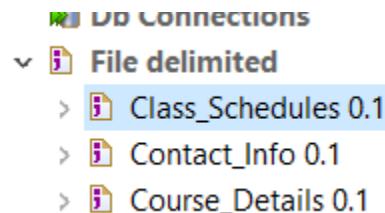
1. Input desired name and purpose for the delimited file. Click Next once done.
2. Select the desired file, in this case, we first used Class_Schedules. Click on Next.
3. Under **File Settings**, change encoding to “windows-1252” and field separator to “Comma”. Under **Rows to Skip**, check Header and input it as 1. Lastly, you may preview what the delimited file will look like by checking on “Set heading row as column names” and clicking on “Refresh Preview”.
4. Leave the settings as it is. Click on Finish to make the delimited file.



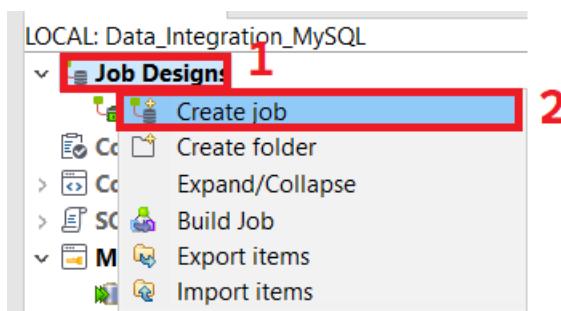


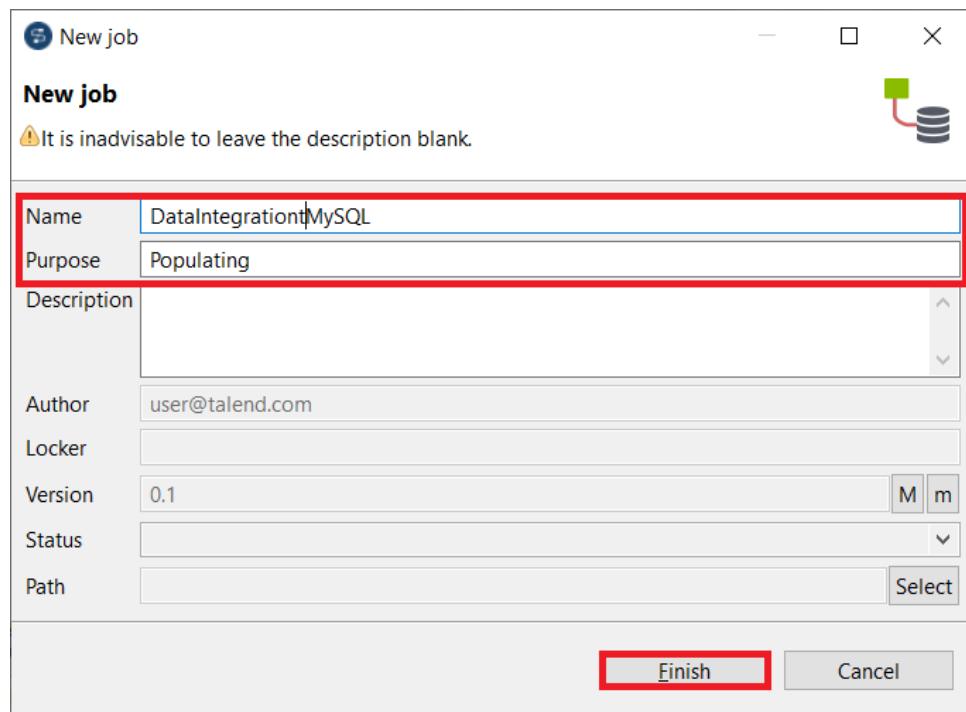


Repeat steps 1-4 for the rest of the files: Contact_Info and Course_Details. The delimited files will be under the category File delimited in your Talend project.

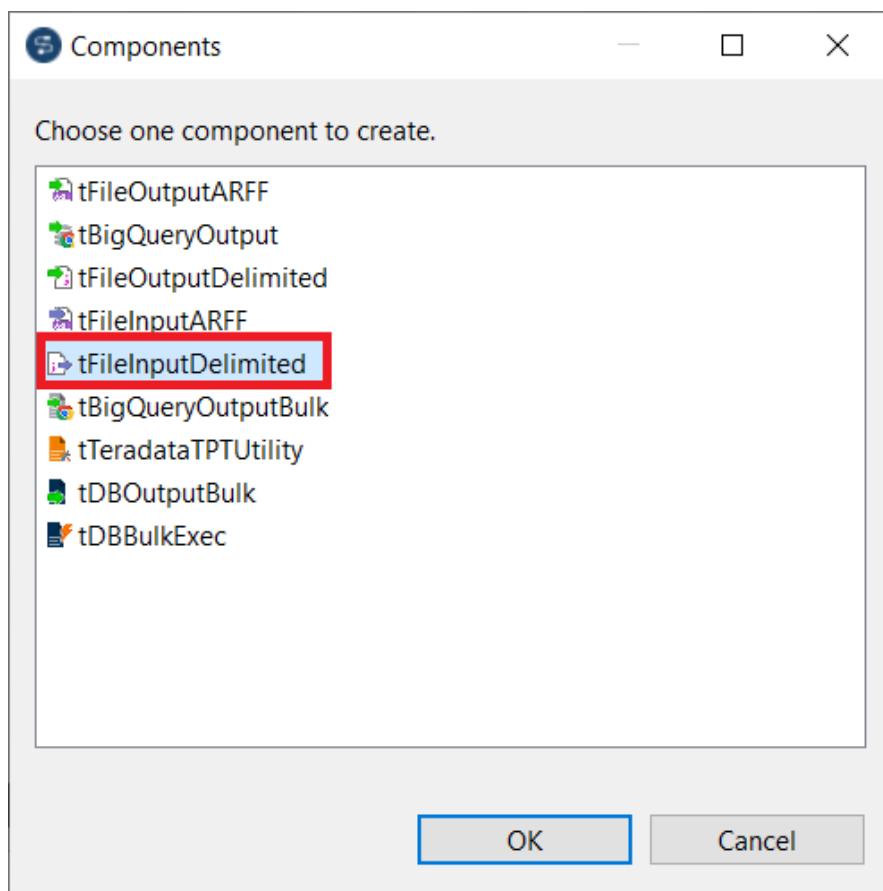


Next, create a job by right clicking on Job Design and pressing Create job. Input any name and purpose as you wish. Click on Finish to create a job.

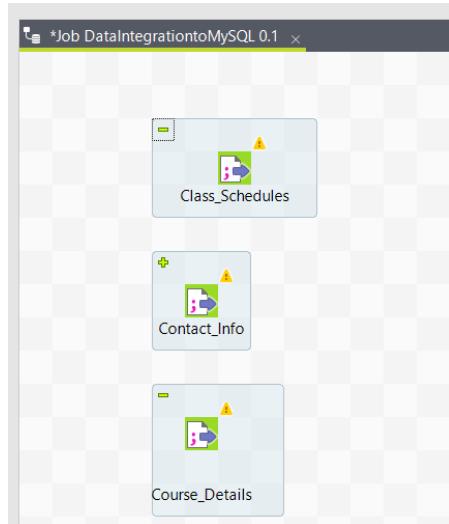




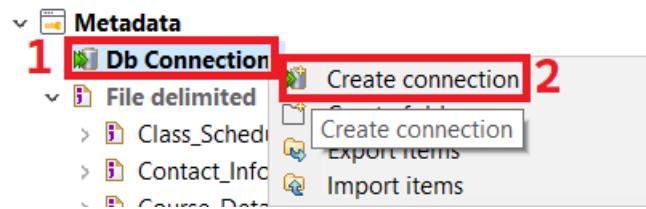
Drag and drop the delimited files into this job. Select **tFileInputDelimited** for all three files.



It will look like this inside the job.



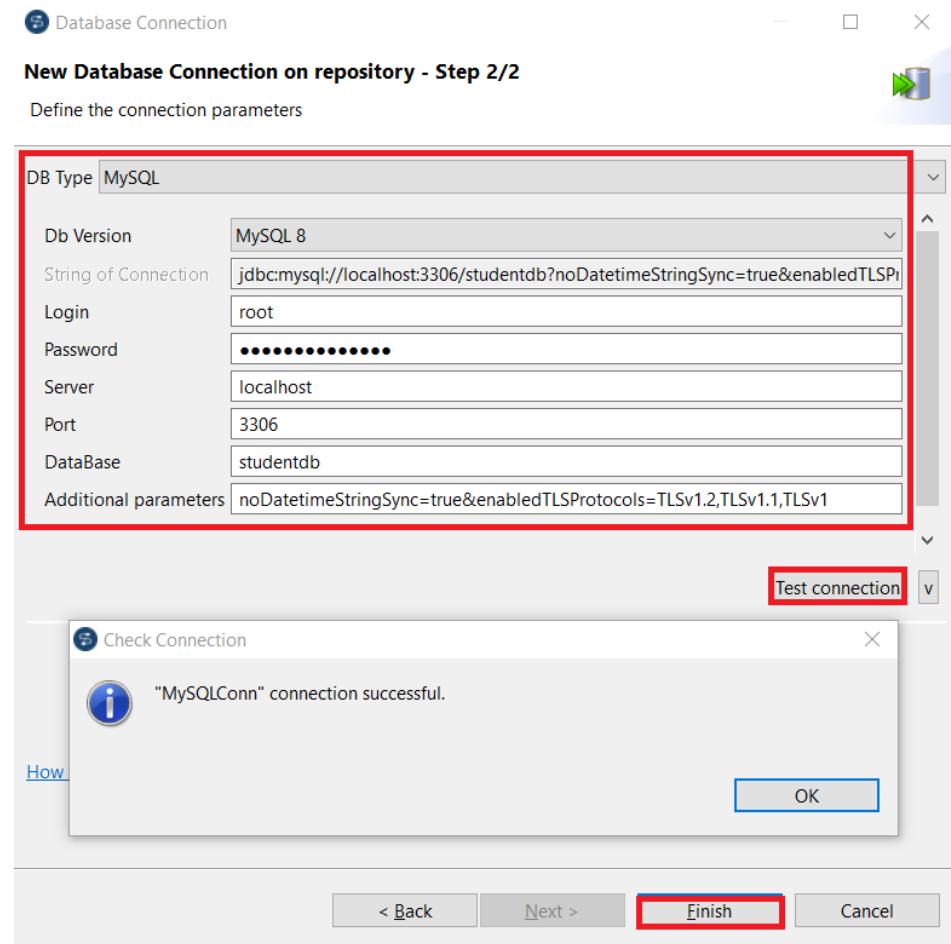
We then need to setup the Talend MySQL connection. Under Metadata, right click on Db Connection to select Create connection.



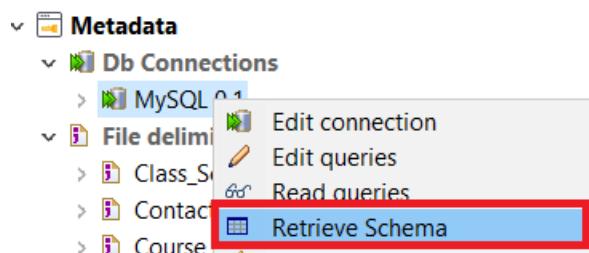
Once again, input any name and purpose as you desire. Select Next once finished.

The screenshot shows the "Database Connection" configuration dialog. The title bar says "Database Connection" and the sub-title is "New Database Connection on repository - Step 1/2". A warning message at the top states: "⚠ It is inadvisable to leave the description blank." The "Name" field is set to "MySQLConn" and the "Purpose" field is set to "Database", both of which are highlighted with a red box. The "Description" field is empty. Below these fields are other optional settings: "Author" (user@talend.com), "Locker", "Version" (0.1), "Status", and "Path". At the bottom of the dialog are buttons for "< Back", "Next >" (highlighted with a red box), "Finish", and "Cancel".

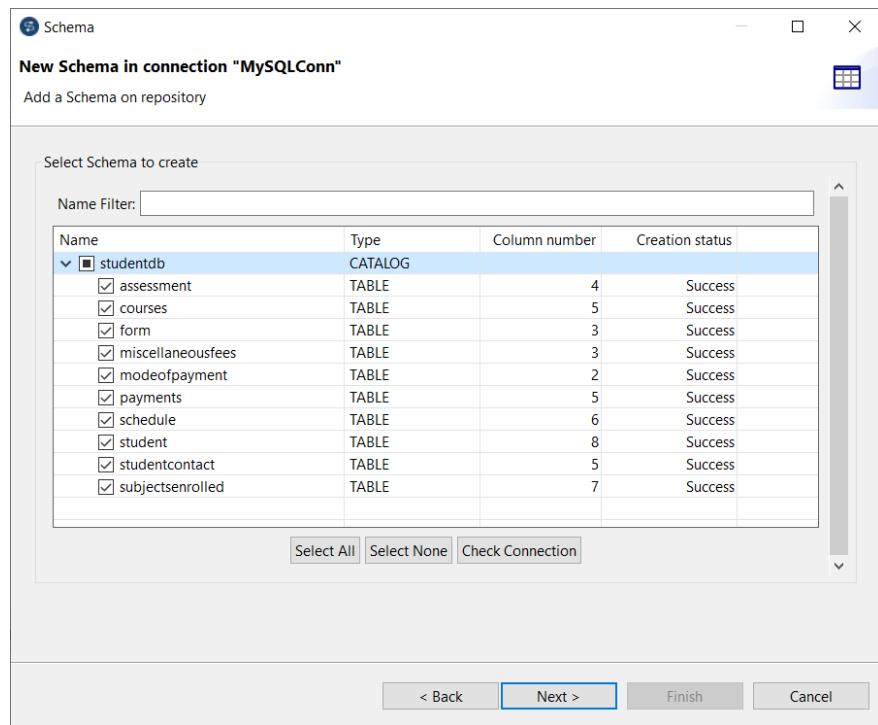
Make sure that you have selected MySQL for the DB Type. Input necessary fields such as Login, Password, Server, and Database. Click on Test Connection if it is successful. Click Finish once done.



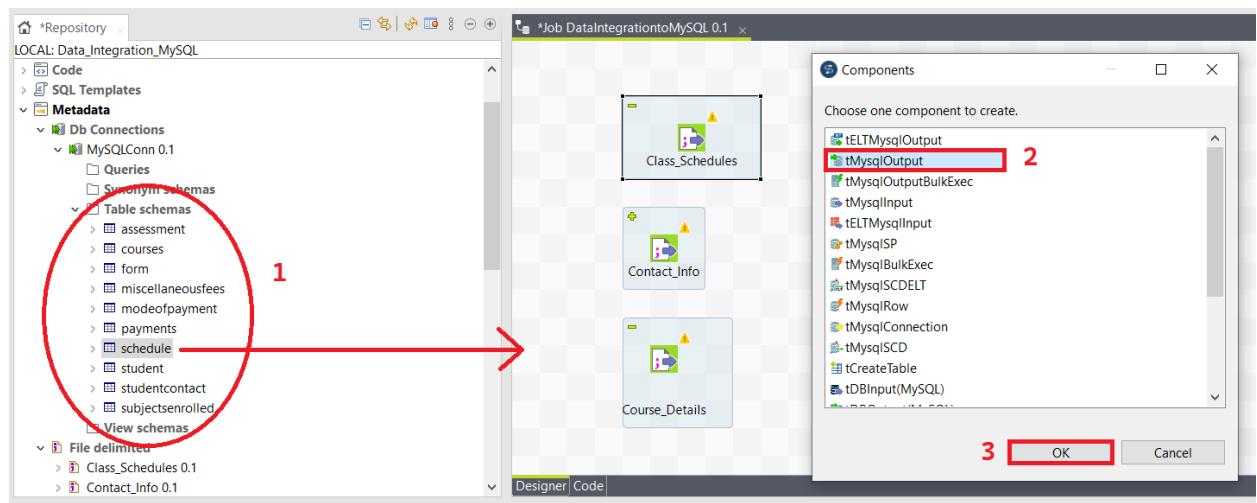
Right click on the newly created Db connection and select retrieve schema.



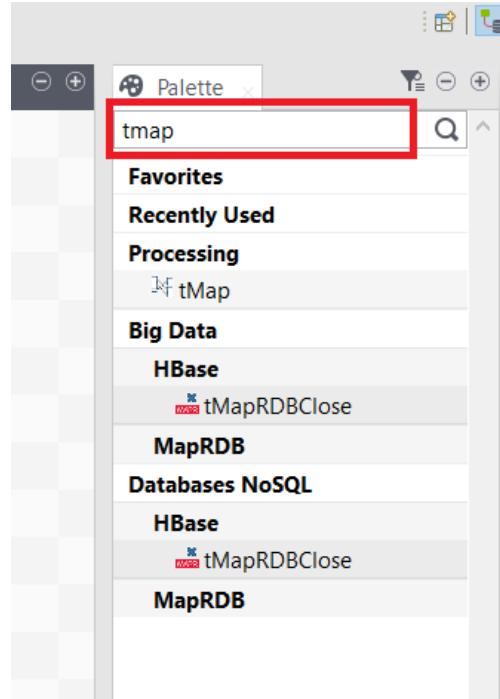
Click on all the tables to be retrieved from the studentdb Database. Click on Next and then Finish to create the schema.



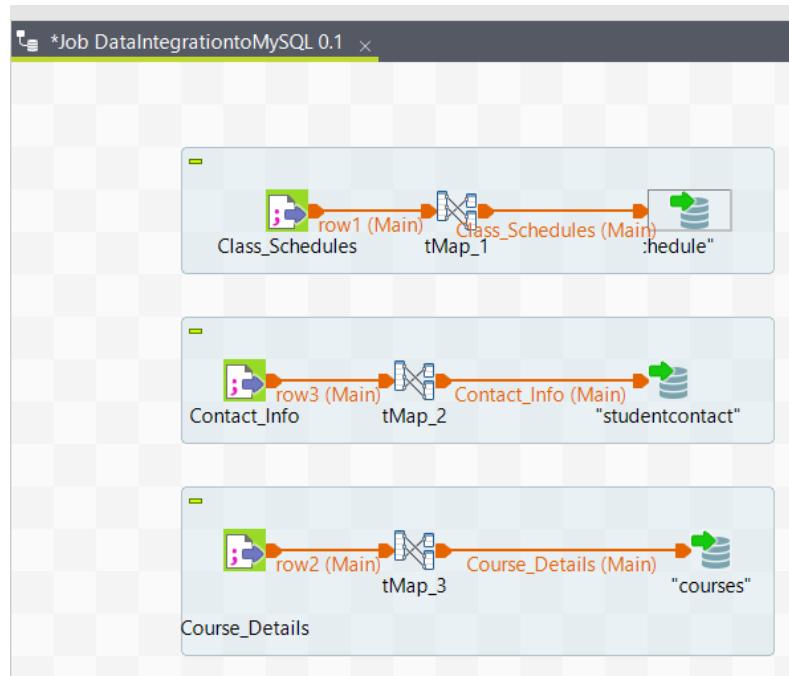
Drag and drop the following table schemas: schedule, studentcontact, and courses. Select **tMysqlOutput** for all of them.



Go to the Palette panel and type tMap in the search box. Drag the tMap component in between the delimited file and the MySQL output component. The tMap should be connected to the file and the MySQL connection. Repeat this two times for the other delimited files.



Make sure that everything looks right and connected. After, click on each tMap to drag appropriate columns from the data to the columns in MySQL.



Class_Schedules:

row1	Var	Class_Schedules
Column COURSE_CODE SECTION TIME DAY ROOM PROFESSOR		Column COURSE_CODE SECTION TIME DAY ROOM PROFESSOR

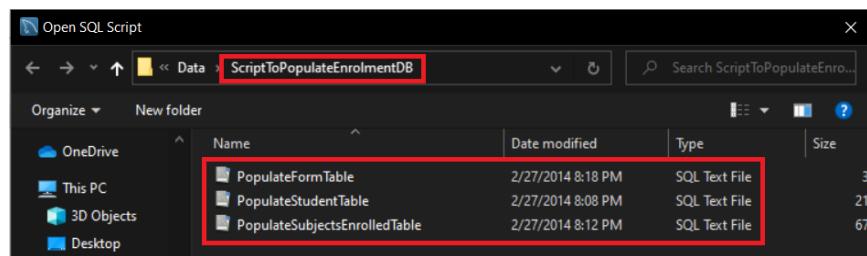
Contact_Info:

row3	Var	Contact_Info
Column STUDNO PERMANENT_ADDRESS MAILING_ADDRESS TELEPHONE EMAIL		Column STUDNO PERMANENT_ADDRESS MAILING_ADDRESS TELEPHONE EMAIL

Course_Details:

row2	Var	Course_Details
Column COURSE_CODE COURSE_TITLE UNITS TUITION_FEE LFD_FEE		Column COURSE_CODE COURSE_TITLE UNITS TUITION_FEE LFD_FEE

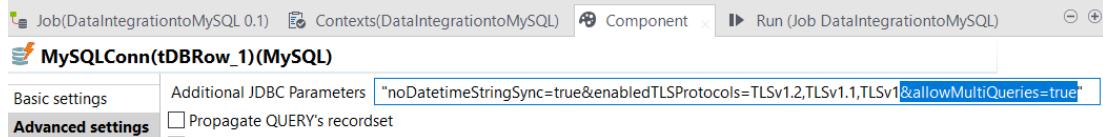
Now that we have inserted the three csv files, we will go back to the Data folder. Inside the Data folder, there is a folder called ScriptToPopulateEnrolmentDB. We would be using these scripts to populate the rest of tables in our database.



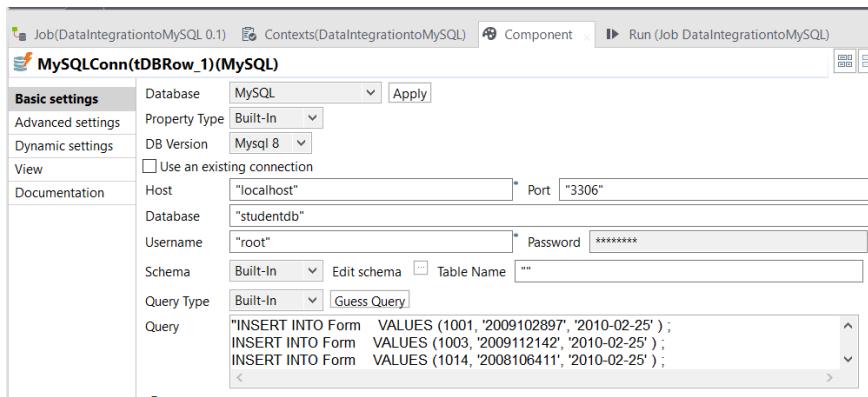
Drag and drop the mysql connection into the job again to create a tMysqlRow component.



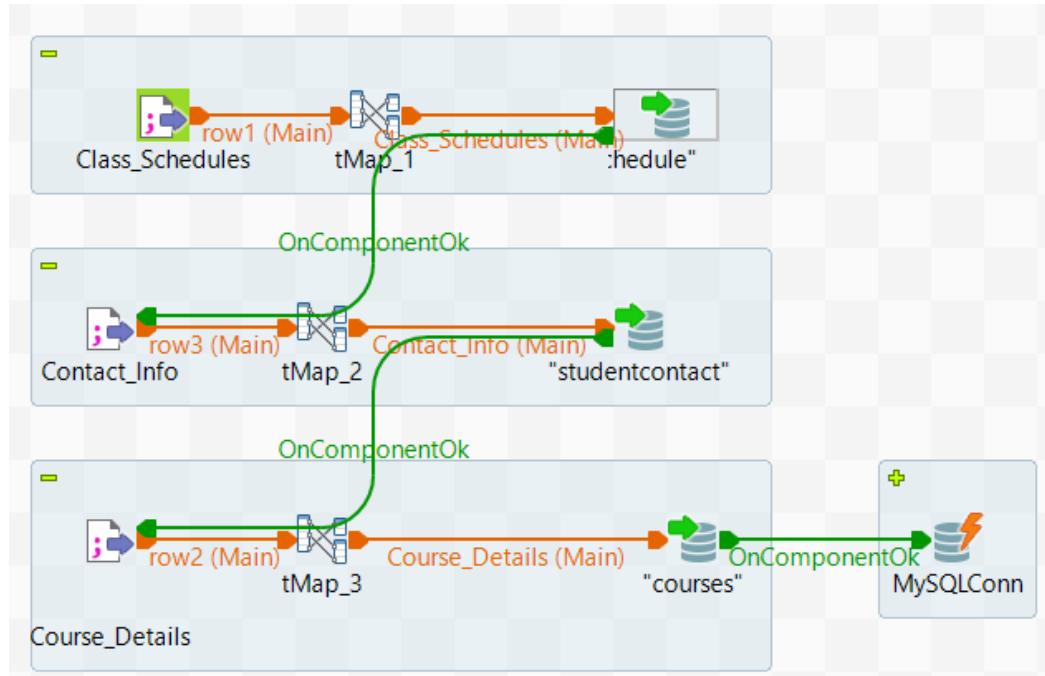
Since we will be running multiple queries we need to add something essential. Click on the minus sign above the tMysqlRow to edit the component. Click on Advanced Settings. Add "&allowMultiQueries=true" into the Additional JDBC parameters.



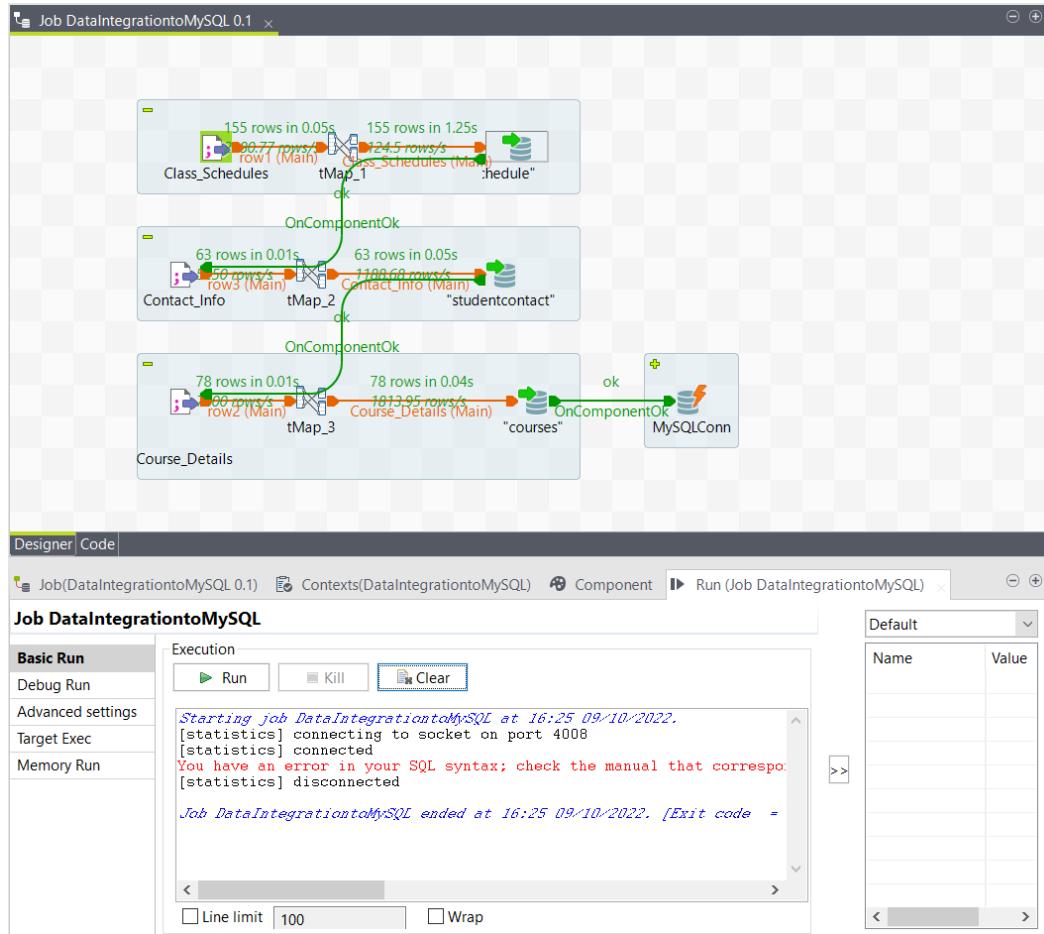
Go back to Basic settings and insert the code from the three SQL files from [here](#).



Now right click each tMySqlOutput and select Trigger > On Component OK to the first end of each subjob. Our job will now look like this. Run once everything looks okay.



The tables in MySQL will already be populated as shown below:



Schedule table:

	COURSE CODE	SECTION	TIME	DAY	ROOM	PROFESSOR
▶	MATH15	AT3	4:30 PM - 7:30 PM	F	MKT203	
	MATH15L	BT4	12:00 PM - 4:30 PM	Th	MKT103	
	CS135	AT2	7:30AM-10:30AM	TH	MKT304	
	IT180P	M-T	12:00PM-9:00PM	Th	MKT106	Prof.Tomas
	CS133	BT2	01:30PM-3:00Pm	MWF	MKT318	PROF SAMONTE
	CS154	CT1	06:00PM - 7:30PM	MW	MKT109	
	HUM13	AC3	12:00 PM - 1:30 PM	MWF	MKT109	
	ENG13	AY01	09:00AM-10:30AM	MWF	MKT320	
	MATH30	AT2	1:30PM - 3:00PM	M-W-F	MKT305	
	CS130	AT3	07:30AM-10:30AM	Th	MKT109	
	PHY11-1	BC3	12:00PM-1:30PM	MWF	MKT319	
	CS135L	CT1	4:30PM - 9:00PM	Th	MKT204	
	IT137L	AT2	7:30AM-12:00PM	Th	MKT105	
	IT152L	BT4	12:00 NN-04:30 PM	TH	MKT201	

Studencontact Table:

	STUDNO	PERMANENT ADDRESS	MAILING ADDRESS	TELEPHONE	EMAIL
▶	2001118122	72 MADARANG ST. SAN ANTONIO, ZAMBALES	SAMPALOC,MANILA	9213650690	deadsea_04@yahoo.com
	2004105021	BLK 19 L 7 KING SOLOMON ST. DEL REY CAMAR...	BLK 19 L 7 KING SOLOMON ST. DEL REY CAMAR...	9154776360	marlon_caras@yahoo.com
	2004115108	BLOCK 7 LOT 14 QC VILLE SUBDIVISION, CULIA...	BLOCK 7 LOT 14 QC VILLE SUBDIVISION, CULIA...	9159038123	eisen_jc@yahoo.com
	2005105725	1690 BALER ST.,MAKATI CITY	1690 BALER ST.,MAKATI CITY	9154776360	janvincent_rodriguez@yahoo.com
	2005160716	POBLACION, PULILAN, BULACAN	POBLACION, PULILAN, BULACAN 3005	9157499033	jeric_jcruz@yahoo.com
	2006103119	41 RIZAL ST. PENARANDA NUEVA ECIJA	41 RIZAL ST. PENARANDA NUEVA ECIJA	9275014578	gknives04@yahoo.com
	2006151614	BLOCK13 LOT14 PLA-PLA STREET BRGY LONGO...	BLOCK13 LOT14 PLA-PLA STREET BRGY LONGO...	9268101258	kris_pabustan@yahoo.com
	2007101181	BRGY USUSAN TAGUIG CITY	LUBANG OCCIDENTAL MINDORO	9154776360	paul_whitegold@yahoo.com
	2007101736	654 REMIGIA ST.,DE GUZMAN SUBD., CABANA...	ILANG ILANG STREET., GUADALUPE VIEJO, MA...	9154776360	dj_nacpil15@live.com
	2007103447	2027 GEN. RICARTE ST SOUTH CEMBO MAKATI...	2027 GEN. RICARTE ST SOUTH CEMBO MAKATI...	9154776360	sparda03@yahoo.com
	2007103483	BLK 1 LOT 4 FIESTA SOUTH HOMES, SALITRAN ...	BLK 1 LOT 4 FIESTA SOUTH HOMES, SALITRAN ...	9053158604	Jmelatna@live.co.uk
	2007140232	26 SALALILLA ST. PROJ. 4 Q.C.	26 SALALILLA ST. PROJ. 4 Q.C.	9154776360	czar8_camua@yahoo.com
	2008101547	T1 2308 Taft Ave. Pasay City	T1 2308 Taft Ave. Pasay City	9154776360	glentan_07@yahoo.com
	2008102122	#044 V. CONSTANTINO ST, BRGY. RAJAH SOLI...	2425B M. DELA CRUZ, STA. CLARA PASAY CITY	9165981602	alyssa.deveza@yahoo.com
	2008102122	CONANTON ST. CAG. TONDO N.	CONANTON ST. CAG. TONDO N.	9174034120	luisvictor123@gmail.com

Courses Table:

	COURSE CODE	COURSE TITLE	UNITS	TUITION FEE	LFD FEE
▶	ACT111	BUSINESS ACCOUNTING	3	5190.00	1537.00
	BIO106L	BioInformaticcs Lab	1	1730.00	2624.00
	CS126	PROGRAMMING 1	3	5190.00	1537.00
	CS127	PROGRAMMING 2	2	5190.00	1537.00
	CS130	HTML	2	3460.00	0.00
	CS130L	HTML(LAB)	1	1730.00	2624.00
	CS133	DATA STRUCTURE	3	5190.00	0.00
	CS135	OBJECT ORIENTED PROGRAMMING	2	3460.00	0.00
	CS135L	OBJECT ORIENTED LABORATORY	1	1730.00	2624.00
	CS137	Discrete MATheMATics	3	5190.00	1537.00
	CS141	ANALYSIS OF ALGORITHM	3	5190.00	0.00
	CS150	KNOWLEDGE MANAGEMENT	3	4899.00	0.00
	CS152	HUMAN COMPUTER INTERACTION	3	5190.00	1537.00

Form Table:

	FormNumber	STUDNO	DATEPRINTED
▶	1001	2009102897	2010-02-25
	1003	2009112142	2010-02-25
	1014	2008106411	2010-02-25
	1044	2007103483	2010-02-25
	12345	2009103514	2010-02-25
	15524	2007101181	2010-02-25
	15824	2009111974	2010-02-25
	125478	2008140833	2010-02-25
	154576	2008104186	2010-02-25
	227227	2008102122	2010-02-25
	493040	2009112198	2010-02-25
	497609	2008101547	2010-02-25

Student Table:

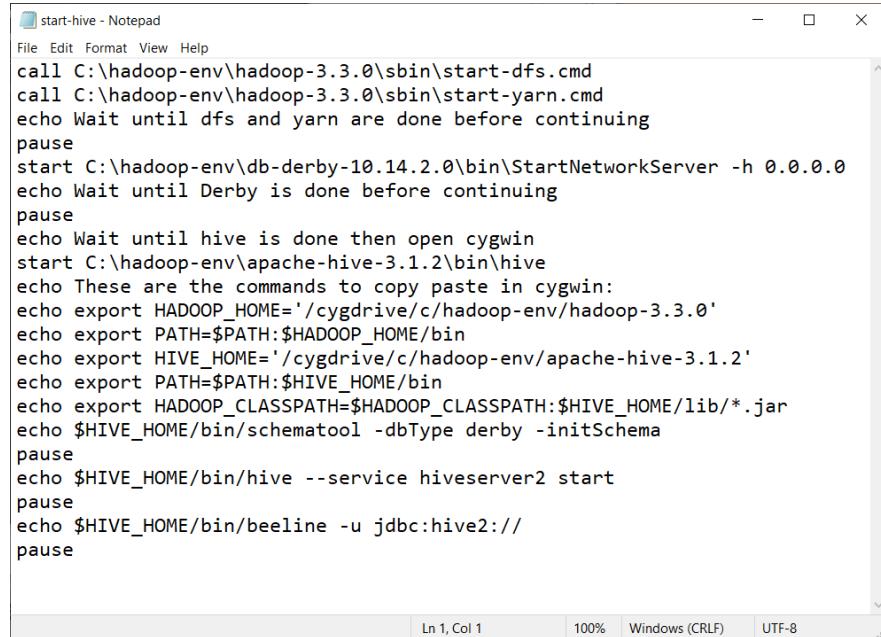
	STUDNO	LNAME	FNAME	MNAME	PROGRAM	YEARLEVEL	NATIONALITY	GENDER
▶	098098	ioawjhdjk	1kbnsejkadfl	a	CS	3	ARABO	M
	1111111111	Test	Test	T	IT	2	Test	F
	1122334455	Test	Test	T	IT	2	Test	M
	1231231	1231231	123123	2312312	CS	1	123123	M
	1231231231	Test	Test	T	IT	2	Test	F
	123412345	Velasco	A	A	IT	2	A	F
	1234567890	Hello	Hi	H.	IT2	2	Hello	M
	1234567891	test	test	test	IT	2	test	F
	1234567892	test	tesdt	test	IT	2	test	F
	1234567893	test	test	test	BA	2	dfterfhb	F

SubjectsEnrolled Table:

	SY TERM	STUDNO	COURSE CODE	SECTION	FINAL GRADE	C GRADE	REMARK
▶	2010-2011 4	2009111504	CS135	BT1			
	2010-2011 4	2009111504	CS135L	AT2			
	2010-2011 4	2009111504	CS141	AC1			
	2010-2011 4	2009111504	HUM17	AT4			
	2010-2011 4	2009111504	IT131	BC3			
	2010-2011 4	2009111504	IT131L	BC2			
	2010-2011 4	2009111504	SS15	AT2			
	2010-2011 4	2008180219	CS135	AT2			
	2010-2011 4	2008180219	CS135L	AT1			
	2010-2011 4	2008180219	IT131	BC2			
	2010-2011 4	2008180219	IT131L	BC2			
	2010-2011 4	2008180219	IT137	BT1			
	2010-2011 4	2008180219	IT137	AT1			

V. Migration of MySQL to Hive using Talend

Running Hive needs a few prerequisites to run so we created a .bat file to start everything for us.



```
start-hive - Notepad
File Edit Format View Help
call C:\hadoop-env\hadoop-3.3.0\sbin\start-dfs.cmd
call C:\hadoop-env\hadoop-3.3.0\sbin\start-yarn.cmd
echo Wait until dfs and yarn are done before continuing
pause
start C:\hadoop-env\db-derby-10.14.2.0\bin\StartNetworkServer -h 0.0.0.0
echo Wait until Derby is done before continuing
pause
echo Wait until hive is done then open cygwin
start C:\hadoop-env\apache-hive-3.1.2\bin\hive
echo These are the commands to copy paste in cygwin:
echo export HADOOP_HOME='/cygdrive/c/hadoop-env/hadoop-3.3.0'
echo export PATH=$PATH:$HADOOP_HOME/bin
echo export HIVE_HOME='/cygdrive/c/hadoop-env/apache-hive-3.1.2'
echo export PATH=$PATH:$HIVE_HOME/bin
echo export HADOOP_CLASSPATH=$HADOOP_CLASSPATH:$HIVE_HOME/lib/*.jar
echo $HIVE_HOME/bin/schematool -dbType derby -initSchema
pause
echo $HIVE_HOME/bin/hive --service hiveserver2 start
pause
echo $HIVE_HOME/bin/beeline -u jdbc:hive2://
pause
```

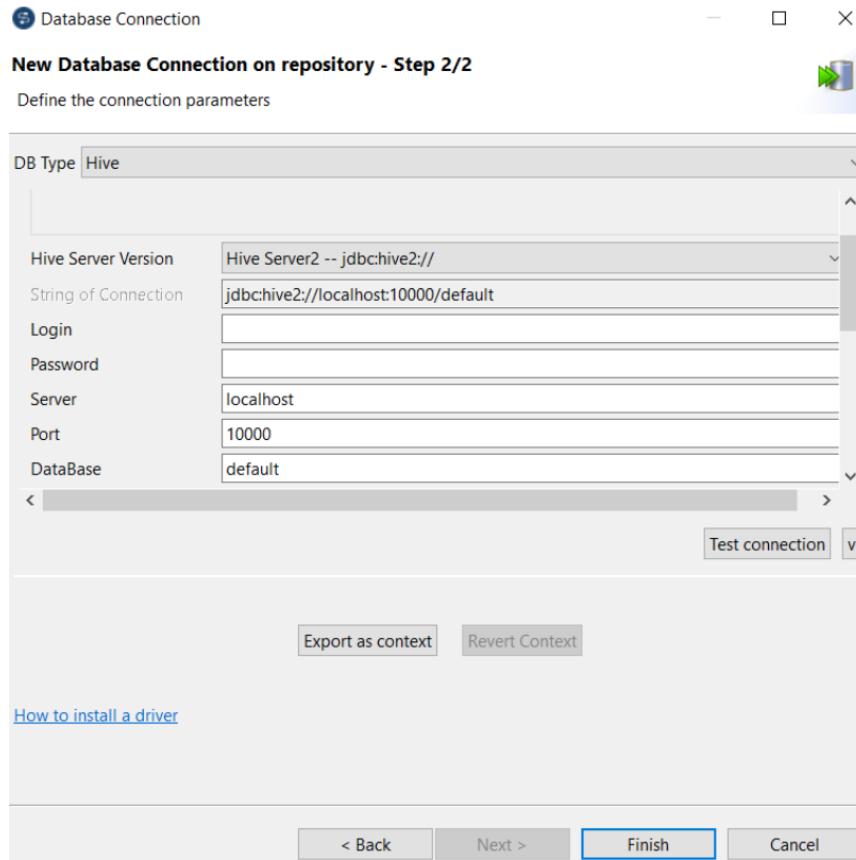
Within Hive2, we created a new database called studentdb.

```
0: jdbc:hive2://> create database studentdb;
22/10/09 17:07:28 [HiveServer2-Background-Poo
tStore: Failed to get database hive.studentdb
OK
No rows affected (1.271 seconds)
0: jdbc:hive2://> show databases;
OK
+-----+
| database_name |
+-----+
| default      |
| studentdb    |
+-----+
2 rows selected (0.779 seconds)
0: jdbc:hive2://>
```

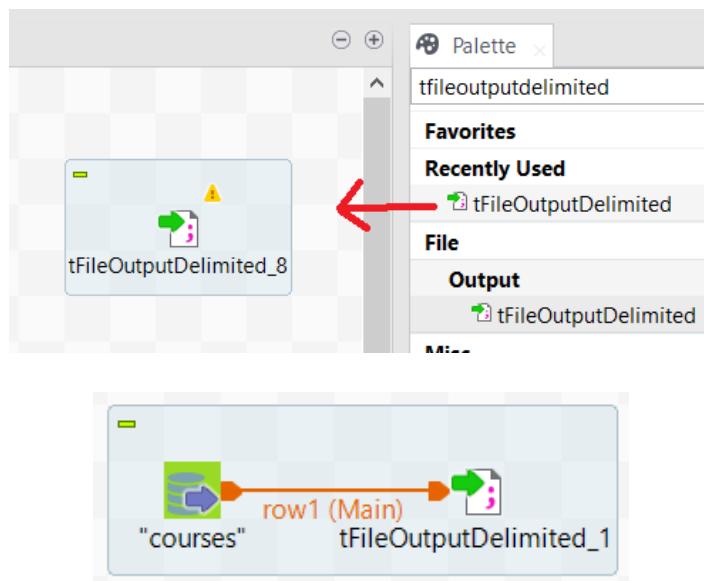
Back to Talend, we will be creating a new job called “MySQLtoHive”.



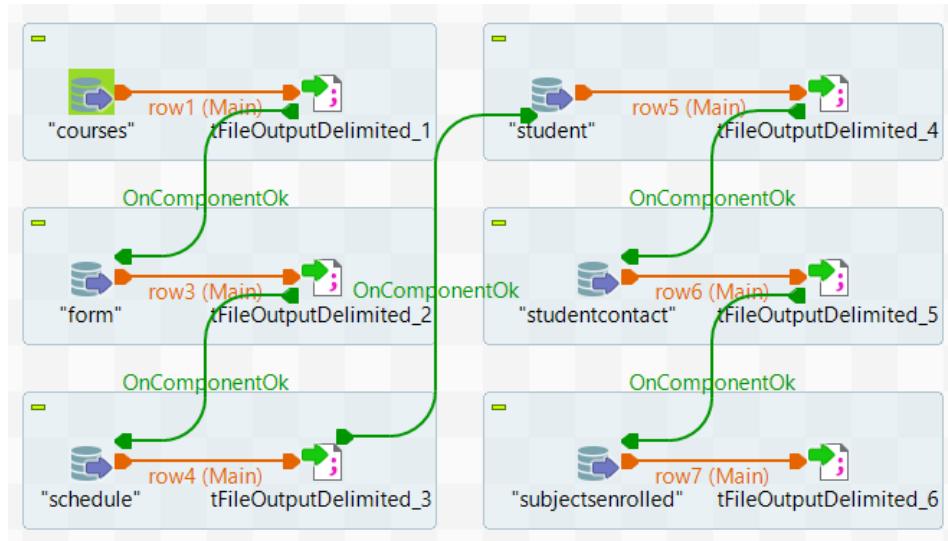
Then, we create a new DB connection to connect to Hive using Talend.



After creating the dbconnection, we then drag one of the mysql tables into the newly created job. Next, go to the Palette tab and search for tFileOutputDelimited. We connect the DB connection with this tFileOutputDelimited component to create a .csv file of the table's data.



We repeat this process until all MySQL tables are displayed. Make sure that they are connected using Trigger > On Component Ok.



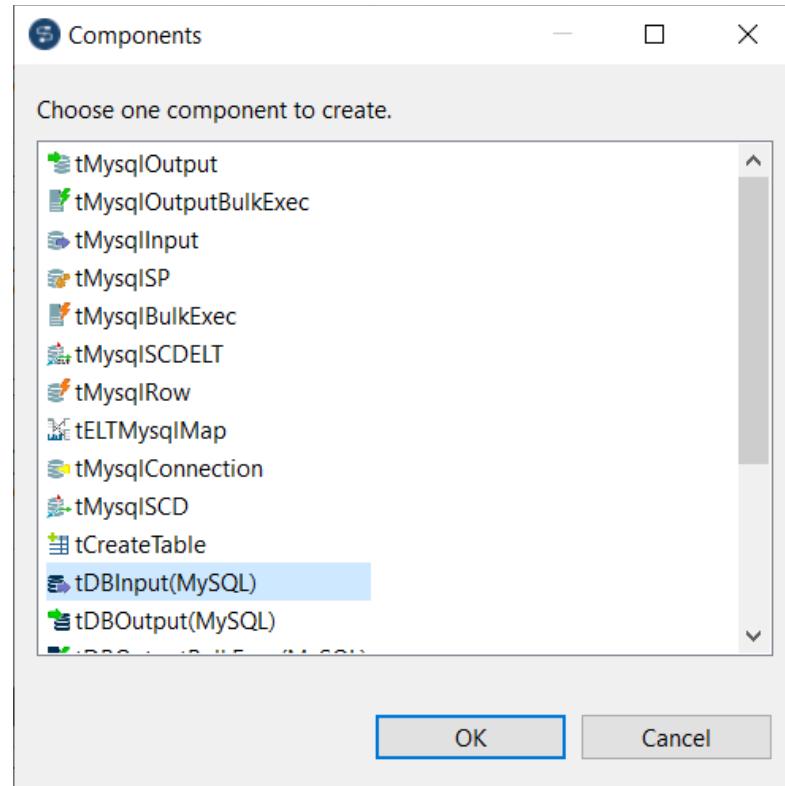
Next, we will write a MySQL query that generates a table with each Enrolled Student's Student Number, Program, Year Level, Gender, and Load information. We accomplished this using a **select** query that inner joins the student table with the subjects enrolled table.

```

SELECT
    Student.STUDNO AS Student_No,
    Student.LNAME AS Last_Name,
    Student.FNAME AS First_Name,
    Student.PROGRAM,
    Student.YEARLEVEL,
    Student.GENDER,
    SubjectsEnrolled.`COURSE CODE`,
    Courses.`COURSE TITLE`,
    SubjectsEnrolled.SECTION,
    Courses.UNITS
FROM
    Student
    INNER JOIN SubjectsEnrolled ON Student.STUDNO = SubjectsEnrolled.STUDNO
    INNER JOIN Courses ON SubjectsEnrolled.`COURSE CODE` = Courses.`COURSE CODE`;

```

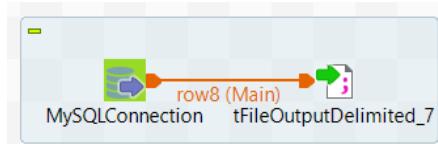
Next step is to drag and drop the MySQL connection and turn it into a tDBInput component.



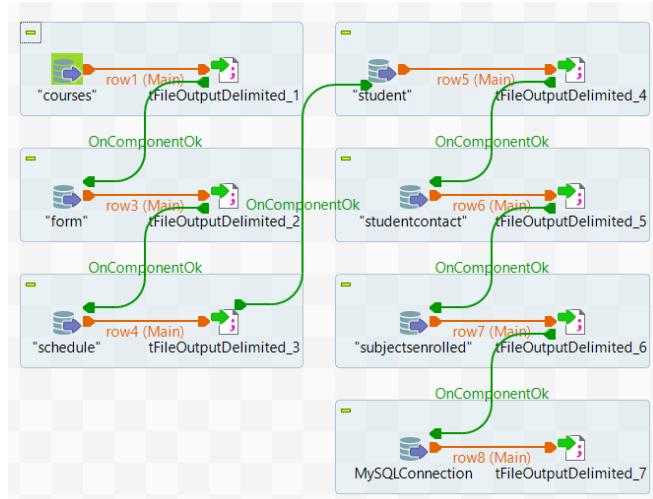
Click on the tDBInput component and go to the Basic Settings. We place the [MySQL query](#) we just made here.

A screenshot of the MySQLConnection component configuration screen. The title bar shows 'Job(MySQLtoHive 0.1)', 'Contexts(MySQLtoHive)', 'Component', and 'Run (Job MySQLtoHive)'. The main area is titled 'MySQLConnection(tDBInput_7)(MySQL)'. On the left is a sidebar with tabs: 'Basic settings' (selected), 'Advanced settings', 'Dynamic settings', 'View', and 'Documentation'. Under 'Basic settings': - Database: MySQL, Apply button. - Property Type: Repository, dropdown set to DB (MYSQL):MySQLConn. - DB Version: Mysql 8. - Use an existing connection: unchecked. - Host: "localhost", Port: "3306". - Username: "root", Password: masked. - Schema: Built-In, Edit schema button. - Table Name: "" (empty). - Query Type: Built-In, Guess Query, Guess schema buttons. - Query: A text area containing the MySQL query: "SELECT Student.STUDNO AS Student_No, Student.LNAME AS Last_Name,".

We then connect this tDBInput component to another tFileOutputDelimited component.



Everything should be connected and look like this:

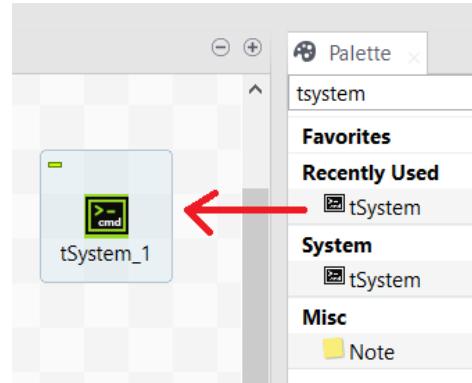


Now, you may use a notepad or another text editor to do this part. We want to create a.bat file that runs commands to take the.csv files generated by the talend job and place them in the hdfs namenode before deleting the.csv files inside the local directory.

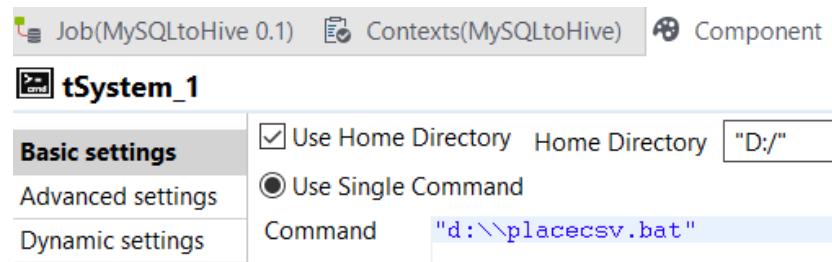
A screenshot of a Notepad window titled "placecsv - Notepad". The window contains a batch script (a.bat) with the following content:

```
call hadoop fs -put /d:/tcourses.csv /
call del "d:/tcourses.csv" /q
call hadoop fs -put /d:/tform.csv /
call del "d:/tform.csv" /q
call hadoop fs -put /d:/tschedule.csv /
call del "d:/tschedule.csv" /q
call hadoop fs -put /d:/tstudent.csv /
call del "d:/tstudent.csv" /q
call hadoop fs -put /d:/tstudentcontact.csv /
call del "d:/tstudentcontact.csv" /q
call hadoop fs -put /d:/tform.csv /
call del "d:/tform.csv" /q
call hadoop fs -put /d:/tcourses.csv /
call del "d:/tcourses.csv" /q
call hadoop fs -put /d:/tsubjectenrolled.csv /
call del "d:/tsubjectenrolled.csv" /q
call hadoop fs -put /d:/tstudentload.csv /
call del "d:/tstudentload.csv" /q
```

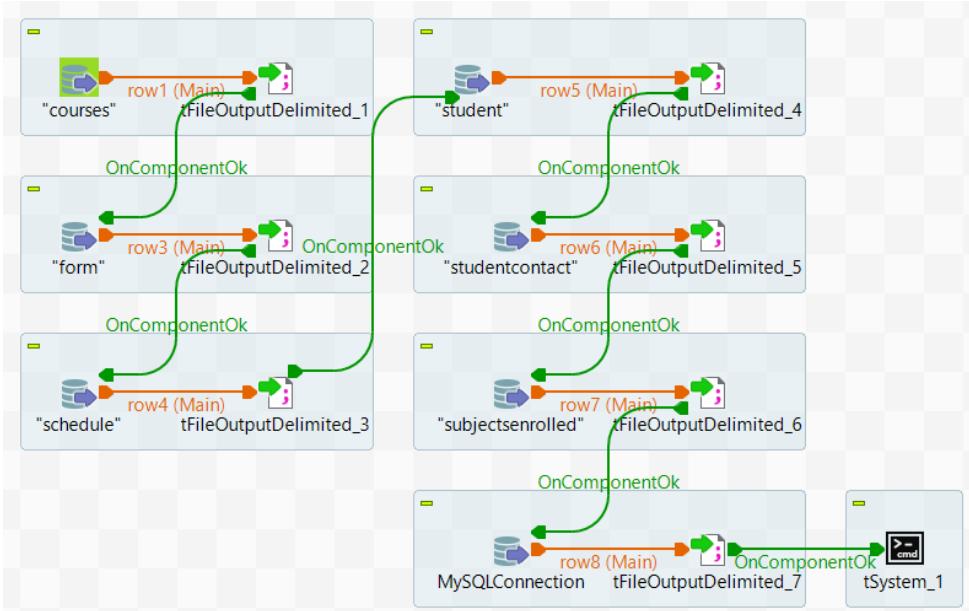
Go to the Palette tab and search for tSystem. Drag the tSystem component to the job.



Click on this tSystem and go its Basic Settings. Input the name of the .bat file in the Command.



We connect this tSystem component with the rest of the subjobs.



We then create a .txt file containing the hive queries used to create the tables that will contain the.csv files, and then load the csv files from the hdfs root directory.

```
hivetbl - Notepad
File Edit Format View Help
CREATE TABLE studentdb.schedule (
    `COURSE CODE` varchar (10) NOT NULL,
    SECTION varchar (5) NOT NULL,
    TIME varchar (20) NOT NULL,
    DAY varchar (8) NOT NULL,
    ROOM varchar (10) NOT NULL,
    PROFESSOR varchar (30)
)
ROW FORMAT DELIMITED
FIELDS TERMINATED BY ','
STORED AS TEXTFILE ;
CREATE TABLE studentdb.student (
    STUDNO varchar (10) NOT NULL,
    LNAME varchar (20) NOT NULL,
    FNAME varchar (20) NOT NULL,
    MNAME varchar (20),
    PROGRAM varchar (10) NOT NULL,
    YEARLEVEL varchar (1) NOT NULL,
    NATIONALITY varchar (10),
    GENDER varchar (1) NOT NULL,
)
ROW FORMAT DELIMITED
FIELDS TERMINATED BY ','
STORED AS TEXTFILE ;
CREATE TABLE studentdb.studentcontact (
    STUDNO varchar (10) NOT NULL,
    `PERMANENT ADDRESS` varchar (100),
    `MAILING ADDRESS` varchar (100) NOT NULL,
    TELEPHONE varchar (30) NOT NULL,
    EMAIL varchar (50) NOT NULL,
)
ROW FORMAT DELIMITED
FIELDS TERMINATED BY ','
STORED AS TEXTFILE ;

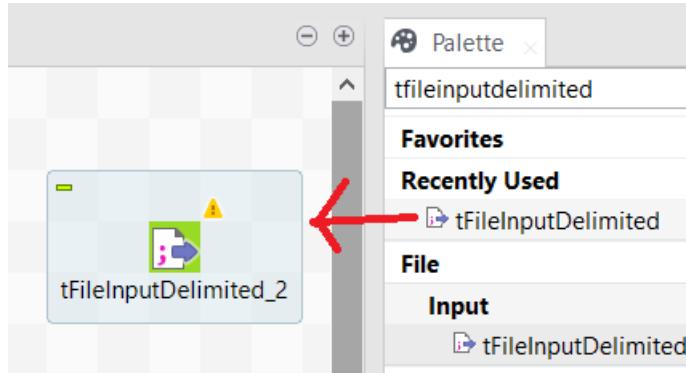
CREATE TABLE studentdb.courses (
    `COURSE CODE` varchar (10) NOT NULL,
    `COURSE TITLE` varchar (50) NOT NULL,
    UNITS int NOT NULL,
    `TUITION FEE` int,
    `LFD FEE` int,
)
ROW FORMAT DELIMITED
FIELDS TERMINATED BY ','
STORED AS TEXTFILE ;
CREATE TABLE studentdb.subjectsenrolled (
    `SY TERM` varchar (11) NOT NULL,
    STUDNO varchar (10) NOT NULL,
    `COURSE CODE` varchar (10) NOT NULL,
    SECTION varchar (5) NOT NULL,
    `FINAL GRADE` varchar (5),
    `C GRADE` varchar (5),
    REMARK varchar (10)
)
ROW FORMAT DELIMITED
FIELDS TERMINATED BY ','
STORED AS TEXTFILE ;
```

```

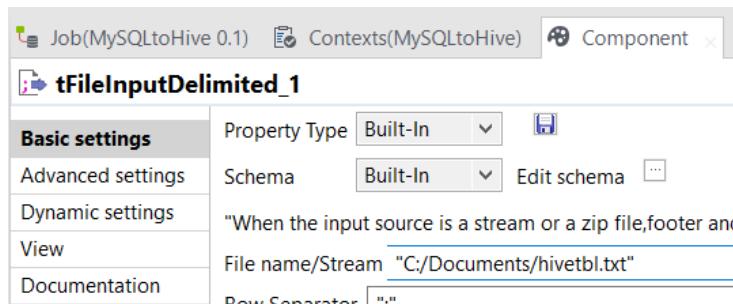
CREATE TABLE studentdb.studentload (
    STUDNO varchar (10) NOT NULL,
    LNAME varchar (20) NOT NULL,
    FNAME varchar (20) NOT NULL,
    PROGRAM varchar (10) NOT NULL,
    'YEAR LEVEL' varchar (1) NOT NULL,
    GENDER varchar (1) NOT NULL,
    'COURSE CODE' varchar (10) NOT NULL,
    'COURSE TITLE' varchar (50) NOT NULL,
    SECTION varchar (5) NOT NULL,
    UNITS int NOT NULL,
)
ROW FORMAT DELIMITED
FIELDS TERMINATED BY ','
STORED AS TEXTFILE ;
LOAD DATA INPATH '/tform.csv' INTO TABLE studentdb.form;
LOAD DATA INPATH '/tcourses.csv' INTO TABLE studentdb.courses;
LOAD DATA INPATH '/tstudent.csv' INTO TABLE studentdb.student;
LOAD DATA INPATH '/tschedule.csv' INTO TABLE studentdb.schedule;
LOAD DATA INPATH '/tstudentload.csv' INTO TABLE studentdb.studentload;
LOAD DATA INPATH '/tstudentcontact.csv' INTO TABLE studentdb.studentcontact;
LOAD DATA INPATH '/tsubjectsenrolled.csv' INTO TABLE studentdb.subjectsenrolled;

```

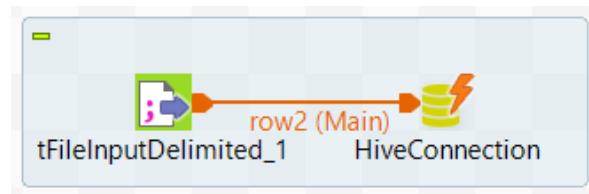
Next, go to the Palette once again and search for tFileInputDelimited. Drag the component into the job.



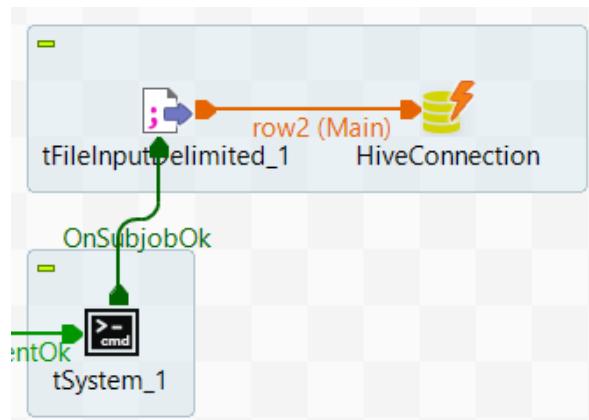
Click on this component to edit its Basic Settings. Input the directory of the [text file](#) we created into the “File name/Stream”.



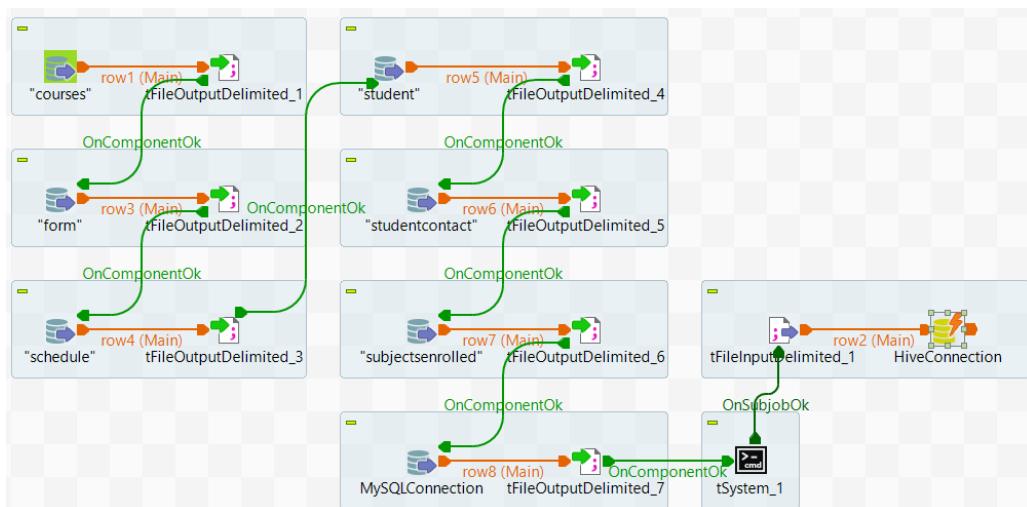
Drag the hive connection we made earlier into the job. Make this into a tHiveRow and connect it with the tFileInputDelimited component.



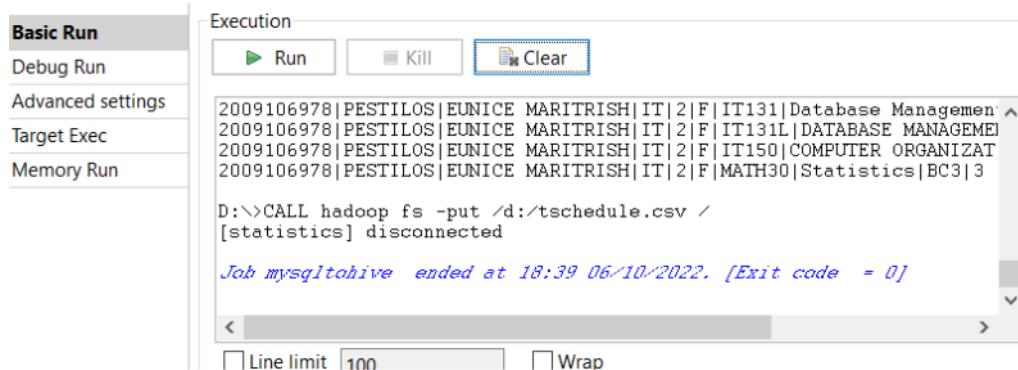
Then connect the tFileInputDelimited to the tSystem by right-clicking the tSystem and clicking on Trigger > On Subjob Ok.



The talend job should now be complete. Our job starts by taking the data from the newly populated MySQL tables and the table that we want to make that consists of the enrolled student's student number, program, etc., into CSV files. A subjob will use a command line component to run a .bat file that takes these CSV files and places them into hdfs. Another subjob will run a hive query to create hive tables containing the generated data and then load the.csv files onto the hive tables.



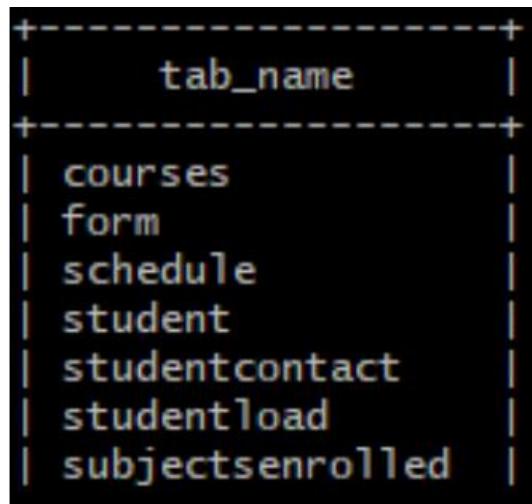
Finally run the Talend job. The hive tables should now be populated.



The screenshot shows the Talend Job Execution interface. On the left is a sidebar with options: Basic Run (selected), Debug Run, Advanced settings, Target Exec, and Memory Run. The main area is titled 'Execution' and contains three buttons: Run (highlighted in blue), Kill, and Clear. Below the buttons is a scrollable text area displaying the output of the job run. The output shows four rows of data from a CSV file being loaded into a Hive table. The last row is partially cut off. Below the scrollable area are two checkboxes: 'Line limit 100' and 'Wrap'. The scroll bar indicates there is more content below the visible area.

```
2009106978|PESTILOS|EUNICE MARITRISH|IT|2|F|IT131|Database Management  
2009106978|PESTILOS|EUNICE MARITRISH|IT|2|F|IT131L|DATABASE MANAGEMENT  
2009106978|PESTILOS|EUNICE MARITRISH|IT|2|F|IT150|COMPUTER ORGANIZATION  
2009106978|PESTILOS|EUNICE MARITRISH|IT|2|F|MATH30|Statistics|BC3|3  
  
D:\>>CALL hadoop fs -put /d:/tschedule.csv /  
[statistics] disconnected  
  
Job mysqltohive ended at 18:39 06/10/2022. [Exit code = 0]
```

Show tables from studentdb:



The screenshot shows a terminal window displaying the output of the 'show tables' command. The output is a table with one column labeled 'tab_name' containing the names of the tables in the database. The tables listed are: courses, form, schedule, student, studentcontact, studentload, and subjectsenrolled.

tab_name
courses
form
schedule
student
studentcontact
studentload
subjectsenrolled

Courses table:

courses.coursecode	courses.coursetitle	courses.units	courses.tuitionfee	courses.lfdfee
ACT111	BUSINESS ACCOUNTING	3	5190	1537
BTO106L	BioInformatics Lab	1	1730	2624
CS126	PROGRAMMING 1	3	5190	1537
CS127	PROGRAMMING 2	2	5190	1537
CS130	HTML	2	3460	0
CS130L	HTML (LAB)	1	1730	2624
CS133	DATA STRUCTURE	3	5190	0
CS135	OBJECT ORIENTED PROGRAMMING	2	3460	0
CS135L	OBJECT ORIENTED LABORATORY	1	1730	2624
CS137	Discrete MAtematics	3	5190	1537
CS141	ANALYSIS OF ALGORITHM	3	5190	0
CS150	KNOWLEDGE MANAGEMENT	3	4899	0
CS152	HUMAN COMPUTER INTERACTION	3	5190	1537
CS153L	Computer Organization and Assembly Language	1	5190	1537
CS154	INFORMATION SECURITY	3	5190	1537
CS155P	3D MODELLING	3	5190	1537
CS162P	CISCO NETWORKING PROTOCOL 2	3	5190	1537
CS190P	JAVA PROGRAMMING	3	5190	1537
CS191P	Java Programming 2	3	5190	1537
CS192P	JAVA PROGRAMMING 3	3	5190	2624
CS200	Thesis 2	2	5190	1537
CS220	ADVANCE DATABASE MANAGEMENT	2	5190	1537
CS220L	ADVANCE DATABASE MANAGEMENT LABORATORY	1	5190	1537
ENG13	English 13	3	5190	0
HUM10	Readings in Oriental Thought	3	5190	0
HUM11	MEDIEVAL THOUGHT	3	5190	0
HUM13	ART APPRECIATION	3	5190	0
HUM14	Introduction to Philosophy	3	5190	0
HUM15	World Literature	3	5190	0
HUM17	LOGIC AND CRITICAL THINKING	3	5190	0
IT104	Advanced Data Management	3	5190	1537
IT131	Database Management	2	3460	0
IT131L	DATABASE MANAGEMENT LABORATORY	1	1730	2624
IT134	INFORMATION SYSTEMS	3	5190	1537
IT136F	IT SEMINAR	1	5190	1537
IT137	MULTIMEDIA LEC	2	3460	0
IT137L	MULTIMEDIA LAB	1	1730	2624
IT139	PROJECT MANAGEMENT	3	5190	1537
IT145	ETHICS	3	5190	1537
IT150	COMPUTER ORGANIZATION AND ARCHITECTURE	2	3450	0
IT152L	PC TROUBLESHOOTING AND REPAIR LAB	1	1730	1451
IT153L	Assembly Language	1	5190	1537
IT154	OS	2	3460	0
IT154L	OS	1	1730	2624
IT160	LOGIC CIRCUITS LEC	2	5190	1537
IT160L	LOGIC CIRCUITS LAB	1	5190	1537
IT171	FUNDAMENTALS OF SAP	3	5190	1537
IT180P	Unix	3	5190	1537
IT181P	UNIX2	3	5190	1537
IT183P	HP-UNIX 4	3	5190	1537
IT184L	CISCO 1	2	5190	1537
IT191P	MICROSOFT .NET TECHNOLOGY 2	3	5190	1537
IT199R	OJT1	3	5190	1537
MATH 30	STAT	3	5190	1537
MATH10	Algebra	3	5190	1537
MATH15	Linear Algebra	3	5190	1537
MATH15-L	LINEAR ALGEBRA LABORATORY	1	5190	1537
Math15L	MATLAB	1	5190	1537
MATH21	CALCULUS 1	3	5190	1537
MATH22	Calculus 2	3	5190	1537
MATH30	Statistics	3	5190	1537
MGT109	Accounting	3	5190	1537
MGT109-1	Principles of Accounting	3	5190	1537
MGT1091	Accounting	3	5190	1537
NSTP13	CWTS	1	5190	1537
PHY10	Physics 1	3	5190	1537
PHY10-1	Physics 1	3	5190	0
PHY10-1L	Physics 1	1	5190	1537
PHY102	College Physics 2	2	5190	1537

Form table:

form.formnumber	form.studno	form.dateprinted
1001	2009102897	25-02-2010
1003	2009112142	25-02-2010
1014	2008106411	25-02-2010
1044	2007103483	25-02-2010
12345	2009103514	25-02-2010
15524	2007101181	25-02-2010
15824	2009111974	25-02-2010
125478	2008140833	25-02-2010
154576	2008104186	25-02-2010
227227	2008102122	25-02-2010
493040	2009112198	25-02-2010
497609	2008101547	25-02-2010
497628	2008140434	25-02-2010
497654	2008140229	25-02-2010
499067	2009107209	25-02-2010
499087	2009106452	25-02-2010
499103	2009106923	25-02-2010
500656	2006103119	25-02-2010
501045	20041115108	25-02-2010
501488	2008140590	25-02-2010
502208	2008140170	25-02-2010
502619	2009111624	25-02-2010
502633	2008150511	25-02-2010
502847	2009141229	25-02-2010
502857	2009110937	25-02-2010
502864	2009107026	25-02-2010
502895	2009111504	25-02-2010
503087	2009111458	25-02-2010
503110	2009110111	25-02-2010
503353	2009112161	25-02-2010
503538	2009112123	25-02-2010
503649	2009112127	25-02-2010
873101	2006151614	25-02-2010
2042463	2007101736	25-02-2010

Schedule table:

schedule.coursecode	schedule.section	schedule.times	schedule.days	schedule.room	schedule.professor
MATH15	AT3	4:30 PM - 7:30 PM	F	MKT203	
MATH15L	BT4	12:00 PM - 4:30 PM	Th	MKT103	
CS135	AT2	7:30AM-10:30AM	TH	MKT304	
IT180P	M-T	12:00PM-9:00PM	Th	MKT106	Prof. Tomas
CS133	BT2	01:30PM-3:00PM	MWF	MKT318	PROF SAMONTE
CS154	CT1	06:00PM - 7:30PM	MW	MKT109	
HUM13	AC3	12:00 PM - 1:30 PM	MWF	MKT109	
ENG13	AY01	09:00AM-10:30AM	MWF	MKT320	
MATH30	AT2	1:30PM - 3:00PM	M-W-F	MKT305	
CS130	AT3	07:30AM-10:30AM	Th	MKT109	
PHY11-1	BC3	12:00PM-1:30PM	MWF	MKT319	
CS135L	CT1	4:30PM - 9:00PM	Th	MKT204	
IT137L	AT2	7:30AM-12:00PM	Th	MKT105	
IT152L	BT4	12:00 NN-04:30 PM	TH	MKT201	
CS135	CT2	06:00PM-09:00PM	T	MKT111	
IT154L	AC2	12:00pm - 4:30pm	M	MKT204	
IT154	CT3	06:00 PM - 09:00 PM	S	MKT111	
IT181P	AT2	7:20am - 4:30pm	Th	MKT302	
IT137L	BT1	12:00PM-4:30PM	T	MKT104	
IT181P	AT1	7:30AM-4:30PM	T	MKT109	
SS11	AC2	3:00PM - 4:30PM	MWF	MKT109	
PHY10-1L	BT2	12:00 NN - 04:30 PM	TH	MKT324	
MATH30	AT2	1:30PM - 3:00PM	M-W-F	MKT305	
NSTP13	M-03	7:30AM - 12:00PM	Su	MKT109	
CS133	BT1	12:00PM-1:30PM	MWF	MKT304	
MATH22	AC3	12:00 NN - 01:30 PM	MWF	MKT307	
CS191P	BT1	12:00 NN - 04:30 PM	S	MKT104	
CS191P	BT1	07:30 AM - 10:30 AM	TH	MKT303	
CS141	AC1	09:00 AM-10:30 AM	MWF	MKT319	PROF. CAMUS
BIO106L	AC2	12:00 PM-04:30 PM	F	MKT211	PROF. MEDINA
IT137	BT3	04:30 PM - 07:30 PM	TH	MKT219	
CS190P	AT2	7:30AM - 12:00PM	T	MKT109	
CS154	CT2	7:30AM - 9:00AM	MWF	MKT109	
CS135L	AT2	12:00PM-4:30PM	S	MKT106	PROF. UMALI
CS130L	AT2	07:30AM-12:00PM	F	MKT109	
CS135L	AT1	7:30 - 12:00 NN	S	MKT106	
CS135	BT2	07:30 AM - 10:30 AM	Th	MKT109	
CS162P	BC1	12:00PM - 9:00PM	S	MKT109	
CS150	BC2	4:30-7:30	F	MKT109	
HUM15	AC1	07.30 AM - 09.00 AM	MWF	MKT109	
CS135L	BT2	12.00 PM - 04.30 PM	Th	MKT109	
IT131L	BC2	12:00PM-4:30PM	T	MKT109	Prof. Vea
HUM13	AT3	04:30PM - 06:00 PM	MWF	MKT109	
IT131	BC3	01:30 PM-03:00 PM	MW	MKT303	PROF. MARAYAG
SS10	BY01	3:00PM - 4:30PM	MWF	MKT319	BRO. YUZON
CS152	AC1	07:30 AM-12:00 PM	S	MKT302	PROF. PRF. SAHARKHIZ
HUM17	AC1	9:00AM-10:30AM	MWF	MKT105	PROF. RAMOS
IT154	BT3	10:30am-12:00pm	MW	MKT325	
IT171	BT2	12:00 - 4:30	T	202	
CS155P	BT1	7:30-12:00 PM	F	MKT105	
MATH21	AT4	01:30PM - 03:00PM	MWF	MKT306	
IT171	BT2	12:00 - 3:00	W	202	
PHY10-1	AC4	1:30PM-3:00PM	MWF	MKT117	Prof. Lopez
CS155P	BT1	6:00 PM-09:00 PM	F	MKT214	
IT137	BT1	4:30PM-7:30PM	T	MKT219	Prof. Villaflor
MATH30	BC3	3:00 PM - 4:30 PM	MWF	MKT327	PROF. DE JESUS
IT131	BC2	10:30 AM - 12:00 PM	MW	MKT322	PROF. VEA
MGT109-1	AC11	6:00PM-7:30PM	MWF	MKT109	
IT131L	BC1	7:30 AM - 12:00 PM	T	MKT109	PROF. VEA
IT154L	BT1	7:30-1200 PM	S	MKT104	
IT150	CT2	6:00 PM - 9:00 PM	T	MKT220	PROF. SAN JOSE
IT153L	BT1	12:00 PM - 4:30 PM	S	MKT206	PROF. LAXAMANA
CS141	AC2	10:30 - 12:00 NN	MWF	MKT321	
MATH15-L	BT4	12:00PM-04:30PM	Th	MKT109	
CS135L	CT4	12:00PM-4:30PM	TH	MKT109	
IT181P	BT1	07:30AM-12:00PM	T	MKT109	
IT154	AT1	6:00-9:00 PM	F	MKT322	
IT181P	BT1	01:30AM-4:30PM	T	MKT109	
HUM15	AT3	3:00PM-4:30PM	MWF	MKT109	

Student table:

student.studno	student.lname	student.fname	student.mname	student.program	student.yearlevel	student.nationality	student.gender
098098	ioawjhdk	ikbnsejkadfl	a	CS	3	ARABO	M
1111111111	Test	Test	T	IT	2	Test	F
1122334455	Test	Test	T	IT	2	Test	M
1231231231	1231231	123123	2312312	CS	1	123123	M
1231231231	Test	Test	T	IT	2	Test	F
123412345	Velasco	A	A	IT	2	A	F
1234567890	Hello	Hi	H.	IT2	2	Hello	M
1234567891	test	test	test	IT	2	test	F
1234567892	test	tesdt	test	BA	2	test	F
1234567893	test	test	test	BSACT	1	dftferfhb	F
1241241241	sagsadgsadg	sadgsadgsadg	sadgsadgsadg	BSCS	2	sagsadg	M
1241241241	sadgsadgsdag	agsagsdag	sadgsadg	BSACT	1	gdgsadgsadg	M
1414141414	Hello	Hi	H.	IT	2	Filipino	F
2001118122	PULIDO	JOSEPH REINALD	AGLIBOT	IT	3	FILIPINO	M
2001140170	Mark	Florendo	Eduarte	IT	2	Filipino	M
2004105021	CARAS	MARLOW	GARCES	IT	3	FILIPINO	M
200415108	NOBLE	JOSE CARLOS	REYES	IT	3	FILIPINO	M
2005105725	RODRIGUEZ	JAN VINCENT	DRIDOCO	IT	3	FILIPINO	M
2005160716	CRUZ	JERICHO	JOSON	IT	2	FILIPINO	M
200545425	test	test	t	IT	2	tst	M
2006103119	DELA CRUZ	GLENN MARK	ABESAMIS	IT	3	FILIPINO	M
2006103129	DSFHSDFHSDFH	DSFHSDFHSDFH	DSFHSDFHSDFH	IT	1	DSFHSDFH	M
2006151614	PABUSTAN	KRIS BENEDICK	SARADOGAN	IT	3	FILIPINO	M
2007101181	GUINTO	PAUL ALVIN	INSIGNE	IT	3	FILIPINO	M
2007101736	NACPIL JR.	FERNANDO	RANER	IT	2	FILIPINO	M
2007103447	BAUTISTA	MARVIN ROYE	BACTONG	IT	3	FILIPINO	M
2007103483	LATINA	JOHN MICHAEL	ESTRERA	IT	3	FILIPINO	M
2007140232	CAMUA	CZARINA	MERCADO	IT	3	FILIPINO	F
2008101547	TAN	GLEN CLIFFORD	CHAN	IT	3	FILIPINO	M
2008102122	DEVEZA	ALYSSA JANE	DE ROSAS	CS	3	FILIPINO	F
2008104186	EMESES	LOVELY	MENDOZA	IT	2	FILIPINO	F
2008104606	LUZON	LEONARD VINCENT	CABUNGCAL	IT	3	FILIPINO	M
2008106073	ANGGA	CLINTON CLARKE	NATALIEA	IT	2	FILIPINO	M
2008106411	ELVIN	VISDA	MANO	IT	2	FILIPINO	M
2008123123	asdasd	sdasdasd	a.	CS	3	daafdsfasd	M
2008140118	Miguel Luis	Aguila	A.	CS	2	Filipino	M
2008140170	FLORENDO	MARK	EDUARTE	IT	2	FILIPINO	M
2008140229	BABAO	JOSHUA	FIGUEROA	IT	3	FILIPINO	M
2008140434	BALLESTEROS	AARON JAY	SAPAD	IT	3	FILIPINO	M
2008140572	Jim Richard	Antonio	P	CS	3	Filipino	M
2008140590	FERNANDEZ	ANTONETTE MARIE	LIM	IT	3	FILIPINO	F
2008140833	GAVIOLA	JOMARIE	BARCE	CS	3	FILIPINO	F
2008141103	DOTIMAS	NICO ANGELO	AGULAY	CS	3	FILIPINO	M
2008150170	wqfeef	qeqfeqfe	feqfwfe	IT	1	efwefw	M
2008150511	MERCADO	ARIEL BERNICE	CUSTODIO	IT	2	FILIPINO	F
2008150809	CAPULONG	MARC LUTHER	CABUSAO	CS	3	FILIPINO	M
2008180219	PEREZ	HRELJIN	NADA	IT	2	FILIPINO	M
2008180610	GUSTAHAM	ALI ETSSA	TAHIR	IT	2	FILIPINO	M
200812121	asdasd	asdadas	sadsad	CS	1	sadasdas	M
2009100000	test	test	t	IT	2	test	F
2009100001	test	test	t	IT	2	test	F
2009100624	DAVID	PAOPAO JEAN	G.	IT	9	FILIPINA	F
2009101111	test	test	t	IT	2	test	F
2009102030	Lasangre	Mark Limuel	Pablo	IT	2	Filipino	M
2009102037	LASANGRE	MARK LIMUEL	PABLO	IT	2	FILIPINO	M
2009102897	ALCANSE	JORDAN PAUL	ROSETA	IT	3	FILIPINO	M
2009103032	CAPIO	MARNEL COLIN	BABAS	IT	2	FILIPINO	F
2009103159	HERMOSA	PATRICK	DEL ROSARIO	IT	2	FILIPINO	M
2009103514	SACMAR	XED	NERVEZ	CS	2	FILIPINO	M
2009105626	PAGUIDO	JANN ALEC	UMALI	CS	3	FILIPINO	M
2009105836	ORAPA	ADRIENNE JOY	A.	IT	2	FILIPINO	F
2009106452	VELASCO	ROSE ERIKA	MARINAS	IT	2	FILIPINO	F
2009106923	NOBLE	ANNE JOYCE	RAGUINI	IT	2	FILIPINO	F
2009106978	PESTILOS	EUNICE MARITRISH	JACINTO	IT	2	FILIPINO	F
2009107026	MAPANAO	MELCHOR TERENCE	ALCANTARA	CS	3	FILIPINO	M
2009107209	TALENS	IONAH SHERI	SERASTIAN	IT	2	FILIPINO	F
2009107256	AGAPITO	REMMI MAICO	BADUA	IT	2	FILIPINO	F
2009108814	IGNACIO	ANGELA PAULA	DELA CRUZ	IT	2	FILIPINO	F

StudentContact table:

studentcontact_studno	studentcontact_permanentaddress	studentcontact_emailaddress	studentcontact_telephone	studentcontact_email
2001118122	72 MADRAGON ST. SAN ANTONIO ZAMBALES	SAMPALCONILLA	9123056909	deadsea_04@yahoo.com
2004050120	BLK 19 L 7 KING SOLMON ST. DEL REY CARMIN CALOCAN CITY	BLK 19 L 7 KING SOLMON ST. DEL REY CARMIN CALOCAN CITY	9154776360	marlon_cars@yahoo.com
2005105008	1690 BAKER ST. MARAKAT CITY	1690 BAKER ST. MARAKAT CITY	9154776360	i_steven_1986@yahoo.com
2005105725	POBLACION PULLIAN BULACAN	PUBLACION PULLIAN BULACAN 3005	9157499003	jainvincent_rodriqued@yahoo.com
2005106119	1601 B. RAYMUNDI ST. MEXICO CITY	1601 B. RAYMUNDI ST. MEXICO CITY	9154776360	jeric_jrcruz@yahoo.com
2006151614	1423 LOTES 1014 PLA-PLA STREET Brgy LONGOS MALABON CITY	1 BLOCKS 1014 PLA-PLA STREET Brgy LONGOS MALABON CITY	9268101258	glenys_glenys@yahoo.com
2007101181	Brgy USUSAN TAGUIG CITY	LUNG OCCIDENTAL MINDORO	9154776360	kris_pubas@yahoo.com
2007101736	654 REGIMA ST. DE GUzman Street CABANATUAN CITY NUEVA ECZTA	1 Lang Liang Street, GUADALAJARA VIETNAM	9154776360	whitepig1591@live.com
2007103454	101 B. SANTO DOMINGO SUBDIVISION CAVITE CITY	101 B. SANTO DOMINGO SUBDIVISION CAVITE CITY	9154776360	spardo8@yahoo.com
2007103483	BLK 1 LOT 4 FIESTA SOUTH HOMES SALITRAN 2 DASMARINAS CAVITE	BLK 1 LOT 4 FIESTA SOUTH HOMES SALITRAN 2 DASMARINAS CAVITE	905315860	latinalatina@live.co.uk
2007140232	2 SALALILLA ST. PRO. 4 Q.C.	26 SALALILLA ST. PRO. 4 Q.C.	9154776360	czar_camu@yahoo.com
2008011247	101 B. SANTO DOMINGO SUBDIVISION CAVITE CITY	101 B. SANTO DOMINGO SUBDIVISION CAVITE CITY	9154776360	glenys_glenys@yahoo.com
2008012122	#004 V. CONSTANTINO ST. BROV. RAHOL SULIMAN UNSAN QUEZON CITY	2425B M. DELA CRUZ STA. CLARA PASAY CITY	9156981602	alyssa_devez@yahoo.com
2008104186	621 ANTIPLO ST. GAG. TONDE MLA.	621 ANTIPLO ST. GAG. TONDE MLA	9174364139	lovelynenes@hotmail.com
2008104303	B2 1420 AV. SANTO DOMINGO HOMES 2 SUCAT PARANAQUE CITY	1420 AV. SANTO DOMINGO HOMES 2 SUCAT PARANAQUE CITY	9239535002	leonard_luzon2000@yahoo.com
2008106411	101 B. SANTO DOMINGO ST. BANBALI MAKATI CITY	101 B. SANTO DOMINGO ST. BANBALI MAKATI CITY	9132957264	scifivikid@yahoo.com
2008140209	#247 HAVAZA ST. STA. ANA MLA.	247 HAVAZA ST. STA. ANA MLA.	9132957272	elvimer@yahoo.com
2008140209	#40 12TH AVE. QUEZON CITY	#40 12TH AVE. QUEZON CITY	9176196718	josh_siryo@yahoo.com
2008140209	#40 12TH AVE. QUEZON CITY	#40 12TH AVE. QUEZON CITY	9176196718	louis_malibay@yahoo.com
2008140209	7 HONTIVIROS ST. Brgy HOMES QUEZON CITY	7 HONTIVIROS ST. Brgy HOMES QUEZON CITY	9167365548	antonettef@yahoo.com
2008140303	309 MANGA STREET SAMPALOC SITE II PARQUE CITY	309 MANGA STREET SAMPALOC SITE II PARQUE CITY	9163448303	pariola_jomari@yahoo.com
2008140303	#2 PADO COR. ARATLES ST. PH. 3 VALLEYVIEW CAVALIER CITY	#2 PADO COR. ARATLES ST. PH. 3 VALLEYVIEW CAVALIER CITY	6582426	saifafqad@yahoo.com
2008140303	101 B. SANTO DOMINGO SUBDIVISION CAVITE CITY	101 B. SANTO DOMINGO SUBDIVISION CAVITE CITY	9154776360	dotinico90@yahoo.com.ph
2008150151	163 E 2 AVENUE EAST REMBO MAKATI CITY	163 E 2 AVENUE EAST REMBO MAKATI CITY	9154776360	saffafqad@yahoo.com
2008160809	51 SAINT BARTHOLOMEW ST. SACRED HEART VILL. LAGO Q.C.	51 SAINT BARTHOLOMEW ST. SACRED HEART VILL. LAGO Q.C.	9134776360	kwasi_areru_07@yahoo.com
2008160819	101 B. SANTO DOMINGO SUBDIVISION CAVITE CITY	101 B. SANTO DOMINGO SUBDIVISION CAVITE CITY	9154776360	m_lutherbrockets@mail.com
2008160819	101 B. SANTO DOMINGO SUBDIVISION CAVITE CITY	101 B. SANTO DOMINGO SUBDIVISION CAVITE CITY	9154776360	hrvjan_hrvjan@yahoo.com
2008160819	2422 CHET 3 DELA ROSA STA. MAKATI CITY	2422 CHET 3 DELA ROSA STA. MAKATI CITY	9156698981	alt_gustahandy@yahoo.com
2009120207	26 ROSA STREET MOTHER EARTH SUBDIVISION LAS PITAS CITY	26 ROSA STREET MOTHER EARTH SUBDIVISION LAS PITAS CITY	9175321455	marklasangsang7@gmail.com
2009120207	101 B. SANTO DOMINGO SUBDIVISION CAVITE CITY	101 B. SANTO DOMINGO SUBDIVISION CAVITE CITY	9154776360	jpsalvador1978@gmail.com
2009120302	113 LILY VILLA DE PRINCIPIA HABITAC. TUBIG NUTIBA ITAMI CAVITE	113 LILY VILLA DE PRINCIPIA HABITAC. TUBIG NUTIBA ITAMI CAVITE	9174-0521	lvn_gerald03@yahoo.com
2009120319	228 FATIMA LANE ILAGRODAS VILLAGE MARIKINA CITY	228 FATIMA LANE ILAGRODAS VILLAGE MARIKINA CITY	917232050	petrakristy@yahoo.com.ph
2009120414	13960 BLD. SAN LUIS ST. BAGONG BARrio CAVITE CITY	10104 BLD. DALES ST. SANTIAGO VILLAGE MARAKAT CITY	9162613968	carma@yahoo.com
2009120414	101 B. SANTO DOMINGO SUBDIVISION CAVITE CITY	101 B. SANTO DOMINGO SUBDIVISION CAVITE CITY	9154776360	papuojannalee@gmail.com
2009120526	1072 LAPU-LAPU ST. BACLAAN PARQUE-AZQUE CITY	1072 LAPU-LAPU ST. BACLAAN PARQUE-AZQUE CITY	9154776360	adrienne_paparazzi@yahoo.com
2009120536	204 GEN. TIRONA MATALONA ST. BAGONG BARrio CALOCAN CITY	204 GEN. TIRONA MATALONA ST. CALOCAN CITY	9165349003	euinecentertrish@gmail.com
2009120536	101 B. SANTO DOMINGO SUBDIVISION CAVITE CITY	101 B. SANTO DOMINGO SUBDIVISION CAVITE CITY	9154776360	luisa_malibay@yahoo.com
2009120814	183-L P. GUERRERA ST. SANTA CRUZ MANILA	105 ROOM 3 F HEDELINA BLD. J.P. RIZAL ST. MAKATI CITY	9054173208	ignacio_ang@yahoo.com
2009120911	13-8 SCKAPANTE ST. Brgy. BARANGA 17AAS MANDALUYONG CITY	13-8 SCKAPANTE ST. Brgy. BARANGA 17AAS MANDALUYONG CITY	9136483322	ratenkem@u2live.com
2009120911	101 B. SANTO DOMINGO SUBDIVISION CAVITE CITY	101 B. SANTO DOMINGO SUBDIVISION CAVITE CITY	9166909441	grdelesofreyes@mymail.mapus.edu.ph
2009110937	101 B. SANTO DOMINGO SUBDIVISION CAVITE CITY	101 B. SANTO DOMINGO SUBDIVISION CAVITE CITY	9154776360	albert_daniel123@yahoo.com
2009111044	106 DAFODIL ST. GREENLAND SUD. CALMAZ CITY	106 DAFODIL ST. GREENLAND SUD. CALMAZ CITY	9135692718	lincodes@yahoo.com
2009111202	2506 TAFT AVENUE PASAY CITY	2506 TAFT AVENUE PASAY CITY	9154776360	migs_238@yahoo.com
2009111202	1811 M. DELAVENTURA ST. BRFR LAYA PETAS CITY	1811 M. DELAVENTURA ST. BRFR LAYA PETAS CITY	9154776360	derylb1993@yahoo.com
2009111202	101 B. SANTO DOMINGO SUBDIVISION CAVITE CITY	101 B. SANTO DOMINGO SUBDIVISION CAVITE CITY	9154776360	monspig18092030@yahoo.com
2009111458	246 - B VERGEL ST PASAY CITY	246 - B VERGEL ST PASAY CITY	889-0120	knherz@yahoo.com
2009111504	BLK. 31 LOT 24 TAGILARAN ST. SOUTH CITY HOMES Brgy. STD TOMAS BITAN LAGUNA	BLK. 31 LOT 24 TAGILARAN ST. SOUTH CITY HOMES Brgy. STD TOMAS BITAN LAGUNA	9154776360	jerome_fournier@hotmail.com
2009111539	101 B. SANTO DOMINGO SUBDIVISION CAVITE CITY	101 B. SANTO DOMINGO SUBDIVISION CAVITE CITY	9154776360	luisa_malibay@yahoo.com
2009111601	B 3 L 6 FLORANCE WEE TAGAO CITY OF SANTA ROSA LAGUNA	1763 PID DEL PABL DEL ROSA MAKATI CITY	9162337063	knherz@yahoo.com
2009111624	CP2 PALANCATE ST. BF HOMES PARAJAE CITY	CP2 PALANCATE ST. BF HOMES PARAJAE CITY	9154776360	netpatrick_montand@yahoo.com
2009111811	69 CORONADO ST. BAGONG MANDALUYONG CITY	69 CORONADO ST. BAGONG MANDALUYONG CITY	9128099091	don989@yahoo.com
2009111814	101 B. SANTO DOMINGO SUBDIVISION CAVITE CITY	101 B. SANTO DOMINGO SUBDIVISION CAVITE CITY	9154776360	luisa_malibay@yahoo.com
2009111974	3# NEICKEL ST. FINILLEST 2 BATASAN HILLS Q.C.	3# NEICKEL ST. FINILLEST 2 BATASAN HILLS Q.C.	9145578300	mayko_salazar@yahoo.com
2009112123	109 SHERWOOD HEIGHTS JERUSALEM ST MULTINATIONAL VILLAGE PARANAQUE CITY	109 SHERWOOD HEIGHTS JERUSALEM ST MULTINATIONAL VILLAGE PARANAQUE CITY	9154776360	jerome_fournier@hotmail.com
2009112127	101 B. SANTO DOMINGO SUBDIVISION CAVITE CITY	101 B. SANTO DOMINGO SUBDIVISION CAVITE CITY	9154776360	luisa_malibay@yahoo.com
2009112127	1465 A LABOREX EXT. PANDMAN MANILA	1465 A LABOREX EXT. PANDMAN MANILA	915485703	carla_ecclestone07@yahoo.com.ph
2009112127	19 SILANGAN STREET MANDALUYONG CITY	19 SILANGAN STREET MANDALUYONG CITY	9154776360	terence_torajig@mail.com
2009112201	101 VISAYAS AVE. EXT. QEZON CITY	101 VISAYAS AVE. EXT. QEZON CITY	9154776360	rafael_malibay@mapus.edu.ph
2009112201	1501 M. DELAVERA ST. QM PLAIN VIEK MANDALUYONG CITY	1501 M. DELAVERA ST. QM PLAIN VIEK MANDALUYONG CITY	9333107523	12_1111@yahoo.com
2009140180	RTRBRW	RTRBRW	14558989	@yahoo.com
2009140402	62 VILLA TECH Brgy. PALATAN PASIG CITY	62 VILLA TECH Brgy. PALATAN PASIG CITY	91267188454	wormpedi@yahoo.com
2009140402	401 B. SANTO DOMINGO SUBDIVISION CAVITE CITY	401 B. SANTO DOMINGO SUBDIVISION CAVITE CITY	9154776360	test@yahoo.com
2009341229	9A 11th Avenue Balfourman Quezon City	9A 11th Avenue Balfourman Quezon City	91320469	trx_ebz@yahoo.com
201064321	Test Manila	Manila Test	8501234	test@yahoo.com

Note: Some of the fields in the StudentContact table mailing address column are too long, causing the table to break, but the data is correctly stored in Hive and in MySQL.

SubjectsEnrolled table:

subjectsenrolled.systerm	subjectsenrolled.student	subjectsenrolled.coursecode	subjectsenrolled.section	subjectsenrolled.Finalgrade	subjectsenrolled.cgrade	subjectsenrolled.remark
2010-2011 4	2009111504	CS135	BT1			
2010-2011 4	2009111504	CS135L		AT2		
2010-2011 4	2009111504	CS141		AC1		
2010-2011 4	2009111504	HUM101		AT4		
2010-2011 4	2009111504	IT131		BC3		
2010-2011 4	2009111504	IT131L		BC2		
2010-2011 4	2009111504	SS135		AT2		
2010-2011 4	2009111504	SS135T		AT2		
2010-2011 4	2008180219	CS135L		AT1		
2010-2011 4	2008180219	IT131		BC2		
2010-2011 4	2008180219	IT131L		BC2		
2010-2011 4	2008180219	IT137		BT1		
2010-2011 4	2008180219	IT137L		AT1		
2010-2011 4	2008180219	PHY10-1		AC4		
2010-2011 4	2008180219	MATH30		BC3		
2010-2011 4	2009111621	IT131		AT2		
2010-2011 4	2009111621	IT131L		BC2		
2010-2011 4	2009111621	CS135		AT1		
2010-2011 4	2009111621	CS135L		AT2		
2010-2011 4	2009111621	CS137		AT2		
2010-2011 4	2009111621	PHY10-1		AC4		
2010-2011 4	2009111621	CS137		CT1		
2010-2011 4	2009104642	IT131		BC3		
2010-2011 4	2009104642	IT131L		BC1		
2010-2011 4	2009104642	CS135		AT2		
2010-2011 4	2009104642	CS135L		AT2		
2010-2011 4	2009104642	PHY10-1		AC3		
2010-2011 4	2009104642	PHY10-1L		BT1		
2010-2011 4	2009109134	HUM13		AT2		
2010-2011 4	2009109134	IT131		AT2		
2010-2011 4	2009109134	IT131L		BC1		
2010-2011 4	2009109134	IT152L		BT5		
2010-2011 4	2009109134	IT153		BT2		
2010-2011 4	2009109134	IT156L		BT3		
2010-2011 4	2009112173	PHY10-1		AC1		
2010-2011 4	2008140434	CS135		AT2		
2010-2011 4	2008140434	CS135L		AT1		
2010-2011 4	2008140434	IT131		BC2		
2010-2011 4	2008140434	IT131L		BC2		
2010-2011 4	2008140434	IT137		BT1		
2010-2011 4	2008140434	IT137L		AT1		
2010-2011 4	2008140434	IT141		BC1		
2010-2011 4	2008140434	IT145L		AT2		
2010-2011 4	2008150809	BI0106L		AC2		
2010-2011 4	2008150809	CS141		AC2		
2010-2011 4	2008150809	IT131		BC2		
2010-2011 4	2008150809	IT150		AT2		
2010-2011 4	2008150809	IT154		AT2		
2010-2011 4	2008150809	CS192P		BC1		
2010-2011 4	2009111621	HUM13		AV02		
2010-2011 4	2009103514	IT131		BT1		
2010-2011 4	2009103514	IT131L		CT1		
2010-2011 4	2009103514	CS135		AT2		
2010-2011 4	2009103514	CS135L		AT2		
2010-2011 4	2009103514	CS141		AT2		
2010-2011 4	2009103514	IT160		BT3		
2010-2011 4	2009103514	IT160L		BT3		
2010-2011 4	2009110937	HUM13		AC1		
2010-2011 4	2009110937	CS141		AC2		
2010-2011 4	2009110937	CS135L		AT2		
2010-2011 4	2009110937	CS135		AT2		
2010-2011 4	2009110937	IT131		BC2		
2010-2011 4	2009110937	IT131L		BC2		
2010-2011 4	2009110937	HUM17		AT4		
2010-2011 4	2004113108	IT154		CT1		
2010-2011 4	2009112186	IT154		CT3		
2010-2011 4	2009112177	IT151		BT2		
2010-2011 4	2009112177	IT150		BT2		
2010-2011 4	2009103032	IT131		BC1		
2010-2011 4	2009103032	IT131L		BC1		

StudentLoad table:

Note: This is the table that contains the Student Number, Program, Year Level, Gender, and Load of each Enrolled Student.

REFERENCES

- Ravikiran, A. S. (2022, September 20). *MySQL Workbench Installation: A Step-by-Step Guide*. Simplilearn.com. Retrieved October 6, 2022, from <https://www.simplilearn.com/tutorials/mysql-tutorial/mysql-workbench-installation>
- Talend - Installation. (n.d.). Retrieved October 6, 2022, from https://www.tutorialspoint.com/talend_talend_installation.htm
- Thakur, A. (2019, July 30). *How to run SQL script in MySQL?* Tutorialspoint. Retrieved October 6, 2022, from <https://www.tutorialspoint.com/how-to-run-sql-script-in-mysql>