# Homework Assignment #4

| Introduction to Database System, CS352, Fall 2022 | | |
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| Class:資工 4B | Name:萬彥君 | ID:1081546 |

# 1.C++:

```
#include <stdlib.h>
#include <iostream>

#include "mysql_connection.h"
#include <cppconn/driver.h>
#include <cppconn/exception.h>
#include <cppconn/prepared_statement.h>

using namespace std;
const string server = "tcp://192.168.1.100:88888";
const string username = "Derek";
const string password = "123456";

int main()
{
	sql::Driver* driver;
	sql::Connection* con;
	sql::PreparedStatement* pstmt;
	sql::ResultSet* result;

	try
	{
		driver = get_driver_instance();
		//connect to database
		con = driver->connect(server, username, password);
	}
	catch (sql::SQLException e)
	{
		cout << "Could not connect to server. Error message: " << e.what() << endl;
		system("pause");
		exit(1);
	}

	con->setSchema("quickstartdb");
```

```
        //select
        pstmt = con->prepareStatement("select * from instructor ");
        result = pstmt->executeQuery();

        while (result->next())
                printf("Reading from table=(%d, %s, %d)\n", result->getInt(1), result->getString(2).c_str(), result->getInt(3));

        delete result;
        delete pstmt;
        delete con;
        system("pause");
        return 0;
}
```

# 2.C#:

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using MySql.Data;
using MySql.Data.MySqlClient;

namespace mysql
{
    class Program
    {
        static void Main(string[] args)
        {
            string dbHost = "192.168.1.100:88888";
            string dbUser = "Derek";
            string dbPass = "123456";
            string dbName = " mydatabase ";

            string connStr = "server=" + dbHost + ";uid=" + dbUser + ";pwd=" + dbPass + ";database=" + dbName;
            MySqlConnection conn = new MySqlConnection(connStr);

            try
            {
                conn.Open();
            }
```

```
            catch (MySql.Data.MySqlClient.MySqlException ex) {
                switch (ex.Number)
                {
                case 0:
                    Console.WriteLine("無法連線到資料庫.");
                    break;
                case 1045:
                    Console.WriteLine("使用者帳號或密碼錯誤,請再試一次.");
                    break;
                }
            }
            string SQL = "select * from instructor ";
            try
            {
                MySqlCommand cmd = new MySqlCommand(SQL, conn);
                MySqlDataReader myData = cmd.ExecuteReader();
                if (!myData.HasRows)
                {
                    Console.WriteLine("No data.");
                }
                else
                {
                    while (myData.Read())
                    {
                        Console.WriteLine("Text={0}", myData.GetString(0));
                    }
                    myData.Close();
                }
            }
            catch (MySql.Data.MySqlClient.MySqlException ex) {
                Console.WriteLine("Error " + ex.Number + " : " + ex.Message);
            }
        }
    }
}
```

# 3.Python:

```
import mysql.connector
from mysql.connector import errorcode
config = {
    "host": "192.168.1.100",
    "port" : 88888,
    "user" : "Derek",
    "password" : "123456",
    "db" : " mydatabase "
}

try :
    conn = mysql.connector.connect(**config)
    print("Connection established")
except mysql.connector.Error as err :
    if err.errno == errorcode.ER_ACCESS_DENIED_ERROR :
       print("Something is wrong with the user name or password")
    elif err.errno == errorcode.ER_BAD_DB_ERROR :
       print("Database does not exist")
    else :
       print(err)
else:
    cursor = conn.cursor()

# 讀取資料
cursor.execute("select * from instructor ")
rows = cursor.fetchall()
print("Read", cursor.rowcount, "row(s) of data.")

# Print 所有資料
for row in rows :
     print("Data row = (%s, %s, %s)" % (str(row[0]), str(row[1]), str(row[2])))

conn.commit()
cursor.close()
conn.close()
print("Done.")
```