

Project Description:

Write a java program to read and write to a database, this program will use MySQL and the JDBC MySQL driver.

- The program should use Logging, proper exception handling and proper formatting.
- Program must use csv library (mysql-connector-java)
- Submit repo in and eclipse & project files to GitHub
- Run the program in Linux (dev.cs.smu.ca)
- Submit result file to directory” Output” in repo
- Submit output log file from Linux to” output” directory

Required Methods

// Given a transaction object saves a row in the database (return success)

// fails if ID exists in DB and prompts user to use update

Boolean = createTransaction(Transaction txn)

// Given a transaction object saves a row in the database (return success)

// fails if ID does not exist in DB and prompts user to use create

Boolean = updateTransaction(Transaction txn)

// Given a transaction ID returns a transaction object

Transaction = getTransaction(in txnID)

// Given a transaction ID deletes a Transaction row in the DB

Boolean = removeTransaction(in txnID)

Main method should call and create log file with

create (output success Boolean with message)

get (prints object)

update (edit values)

get (prints object)

create (same object) – should fail based on Primary key

remove (based on primary key)

create (same object) – should succeed based on Primary key

Validation (in DB or Code)

- All fields required
- CreatedOn (current date time)
- CreatedBy System.getProperty("user.name");
- All varchars should not contain the following characters:
; : ! @ # \$ % ^ * + ? < >

TABLE NAME `Transaction`

`ID` int(11) - PRIMARY KEY

`NameOnCard` varchar(256)

`CardNumber` varchar(45)

`UnitPrice` decimal(10,0)

`Quantity` int(11)

`TotalPrice` decimal(10,0)

`ExpDate` varchar(16)

`CreatedOn` datetime

`CreatedBy` varchar(45)

Bonus Points - Add a Credit Card Type to DB and extra validation

- The type of the credit card must be selected.
- The credit card number should consist of digits only, and must have the following properties:

Credit Card	Prefix	Length
MasterCard	51-55	16
Visa	4	16
American Express	34 or 37	15

- The format of the expiration date should be MM/YYYY, where MM means month and YYYY means year. Both M and Y represent a single digit. The range of MM is between 01 and 12, and YYYY is between 2016 and 2031 (inclusively).

Submission:

Code must be submitted in your repo called "A#####_MCDA5510"

Code must be located under a directory called "Assignment2"

Output of program must be in a directory called "Assignment2\Output"

Log file of program must be in a directory called "Assignment2\logs"