StudyUP
Data Design Document

Submitted to:

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Unique Reference:

The documents are stored in the project repository referenced with "StudyUP - Data Design" in GitHub with filename 'StudyUP - Data Design.pdf'.

Document Purpose:

The purpose of this document is to show the data design of the application StudyUP. This document shows the data design model of our application, along with the list of Data Access Objects (DAOs) in the model.

Target Audience:

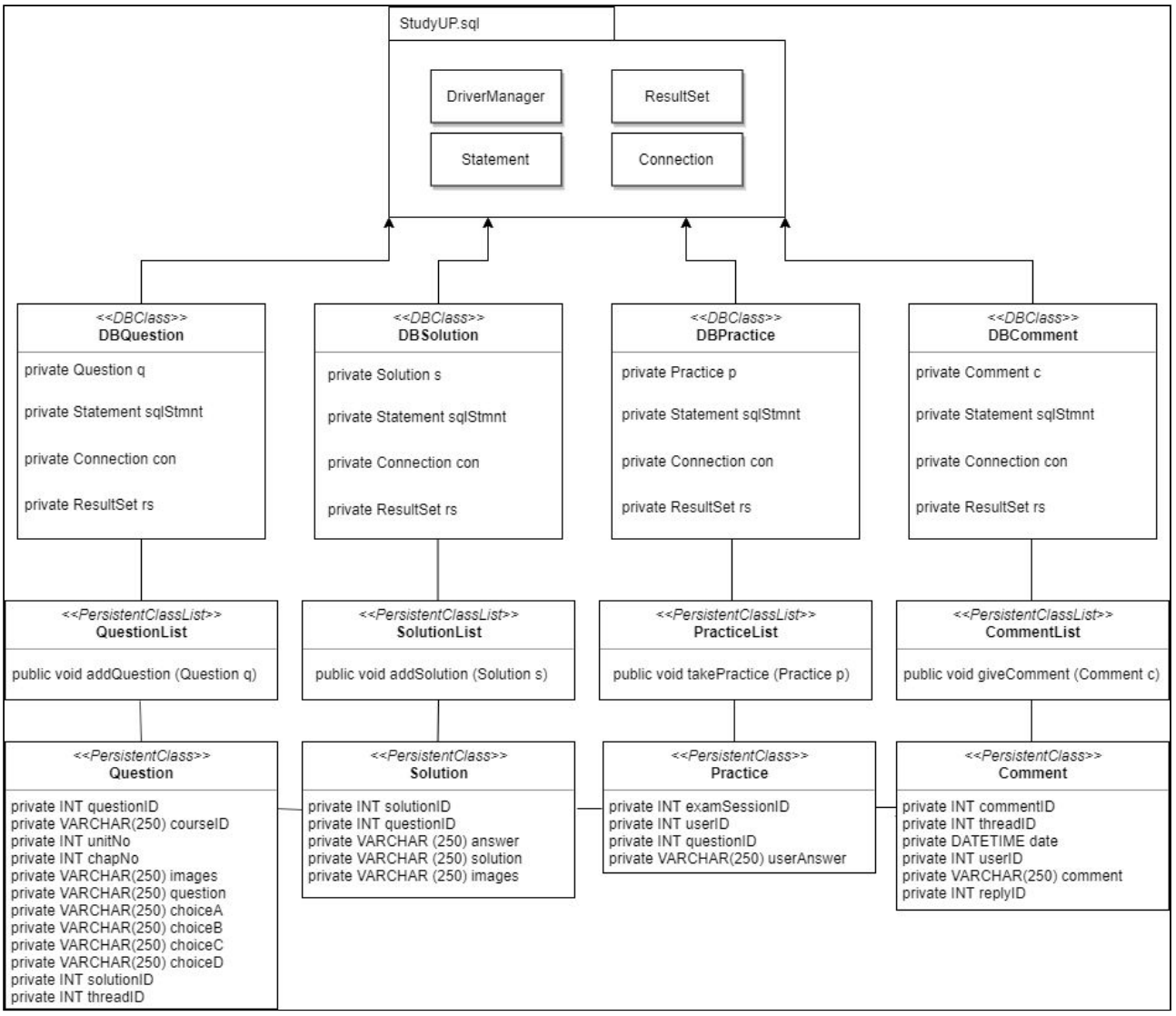
The target audience are: Prof. Solamo, University of the Philippines Diliman Computer Science students, and anyone else interested in the development process of the StudyUP application.

Revision Control

History Revision:

Revision Date	***Person Responsible***	***Version Number***	***Contribution/Modification***
10/18/19	Roberto D. Principio Jr.	1.0	Initial Document
10/24/19	Roberto D. Principio Jr.	1.1	Added Data Access Objects and descriptions
10/24/19	Roberto D. Principio Jr.	1.2	Added Transfer Objects and descriptions
10/24/19	Katrina Mae D. Kopio	1.3	Added Transfer Objects and descriptions
10/24/19	Katrina Mae D. Kopio	1.4	Added database description, tables, and data.
10/24/19	Karina Kylle L. Ang	1.5	Created Data Design
10/24/19	Karina Kylle L. Ang	1.6	Finalized DB Static view

Data Design:


StudyUP.sql
DriverManager
ResultSet
Statement
Connection
<<DBClass>>
DBQuestion
private Question q
private Statement sqlStmnt
private Connection con
private ResultSet rs
<<DBClass>>
DBSolution
private Solution s
private Statement sqlStmnt
private Connection con
private ResultSet rs
<<DBClass>>
DBPractice
private Practice p
private Statement sqlStmnt
private Connection con
private ResultSet rs
<<DBClass>>
DBComment
private Comment c
private Statement sqlStmnt
private Connection con
private ResultSet rs
<<PersistentClassList>>
QuestionList
public void addQuestion (Question q)
<<PersistentClassList>>
SolutionList
public void addSolution (Solution s)
<<PersistentClassList>>
PracticeList
public void takePractice (Practice p)
<<PersistentClassList>>
CommentList
public void giveComment (Comment c)
<<PersistentClass>>
Question
private INT questionID
private VARCHAR(250) courseID
private INT unitNo
private INT chapNo
private VARCHAR(250) images
private VARCHAR(250) question
private VARCHAR(250) choiceA
private VARCHAR(250) choiceB
private VARCHAR(250) choiceC
private VARCHAR(250) choiceD
private INT solutionID
private INT threadID
<<PersistentClass>>
Solution
private INT solutionID
private INT questionID
private VARCHAR (250) answer
private VARCHAR (250) solution
private VARCHAR (250) images
<<PersistentClass>>
Practice
private INT examSessionID
private INT userID
private INT questionID
private VARCHAR(250) userAnswer
<<PersistentClass>>
Comment
private INT commentID
private INT threadID
private DATETIME date
private INT userID
private VARCHAR(250) comment
private INT replyID

Data Access Object (DAO) or DBClasses:

Class Name	**Description**
DBQuestion	This data access object is responsible for getting question data from a database.
DBSolution	This data access object is responsible for getting solution data from a database.
DBPractice	This data access object is responsible for getting practice data from a database.
DBComment	This data access object is responsible for getting comment data from a database.

TransferObject or Persistent Classes:

Class Name	**Description**
Question	This transfer object or persistent class is responsible for holding a single question.
QuestionList	This transfer object or persistent class list is responsible for holding a list of questions.
Solution	This transfer object or persistent class is responsible for holding a single solution.
SolutionList	This transfer object or persistent class list is responsible for holding a list of solutions.
Practice	This transfer object or persistent class is responsible for holding the results of a single practice exam taken by a student.
PracticeList	This transfer object or persistent class list is responsible for holding a list of results of a practice exam taken by a student..
Comment	This transfer object or persistent class is responsible for holding a single comment.
CommentList	This transfer object or persistent class list is responsible for holding a list of comments.

Database Name: StudyUP Database
Description: This is the database that contains the data for the StudyUP application. The following are the list of tables:

Tables	Descriptions
Question	It contains the questions of all courses
Solution	It contains the solutions of all questions
Practice	It contains the results of all practice exams
Comment	It contains the comments of all threads

Logical Database Design:

PRACTICE			
examSessionID	userID	questionID	userAnswer
INT	INT	INT	VARCHAR (250)
PK, UA	**FK**	**FK**	**NN**
1	21	1	2.0 [m]
1	21	2	Distance is zero.
2	21	1	4.0 [m]

SOLUTION				
solutionID	questionID	answer	solution	images
INT	INT	VARCHAR (250)	VARCHAR (250)	VARCHAR (250)
PK, UA, ND	**FK**	**NN**		
11	1	4.0 [m]	Explanation is here	
12	2	Distance is zero.	Explanation is here	
13	3	An object moving in uniform circular motion has constant speed.	Explanation is here	

COMMENT					
commentID	threadID	date	userID	comment	replyID
INT	INT	DATETIME	INT	VARCHAR (250)	INT
PK, UA	**FK**		**FK**		
31	41	2019-10-13 8:03	21	Can someone explain the pythagoras theorem?	0
32	42	2019-10-15 9:18	22	Sure, it's just the formula a^2 + b^2 = c^2	31
33	43	2019-10-23 14:3	23	This is soooo confusing	32

QUESTION											
questionID	courseID	unitNo	chapNo	images	question	choiceA	choiceB	choiceC	choiceD	solutionID	threadID
INT	VARCHAR(250)	INT	INT	VARCHAR(250)	VARCHAR(250)	VARCHAR(250)	VARCHAR(250)	VARCHAR(250)	VARCHAR(250)	INT	INT
PK, UA, ND	**NN**	**NN**	**NN**		**NN**	**NN**	**NN**	**NN**	**NN**	**FK, NN**	**FK, NN**
1	Physics71	1	1		A dog is initially located at position(1.0 [m],2.0 [m])of themap. The dog then run directly towards(3.0 [m],2.0 [m]) before ending in(3.0 [m],4.0 [m]).What is the total distance traveled by the dog?	7.0 [m]	4.0 [m]	2.8 [m]	2.0 [m]	11	41
2	Physics71	1	2		It took Molly an hour to walk to the mall from her house and back. The distancefrom her house to the mall is4 [km]. Which of the following statements is FALSE?	Displacement is zero.	Distance is zero.	Average velocity is zero.	Speed is 8 [km/hr].	12	42
3	Physics71	1	3		Which of the following statements is TRUE about circular motion?	An object moving in a uniform circular motion has radial and tangential compo-nents of acceleration.	An object moving in uniform circular motion has zero acceleration.	An object moving in non-uniform circular motion has a_ {tan}= 0.	An object moving in uniform circular motion has constant speed.	13	43