

IskoExchange

Data Design Document

Submitted to:

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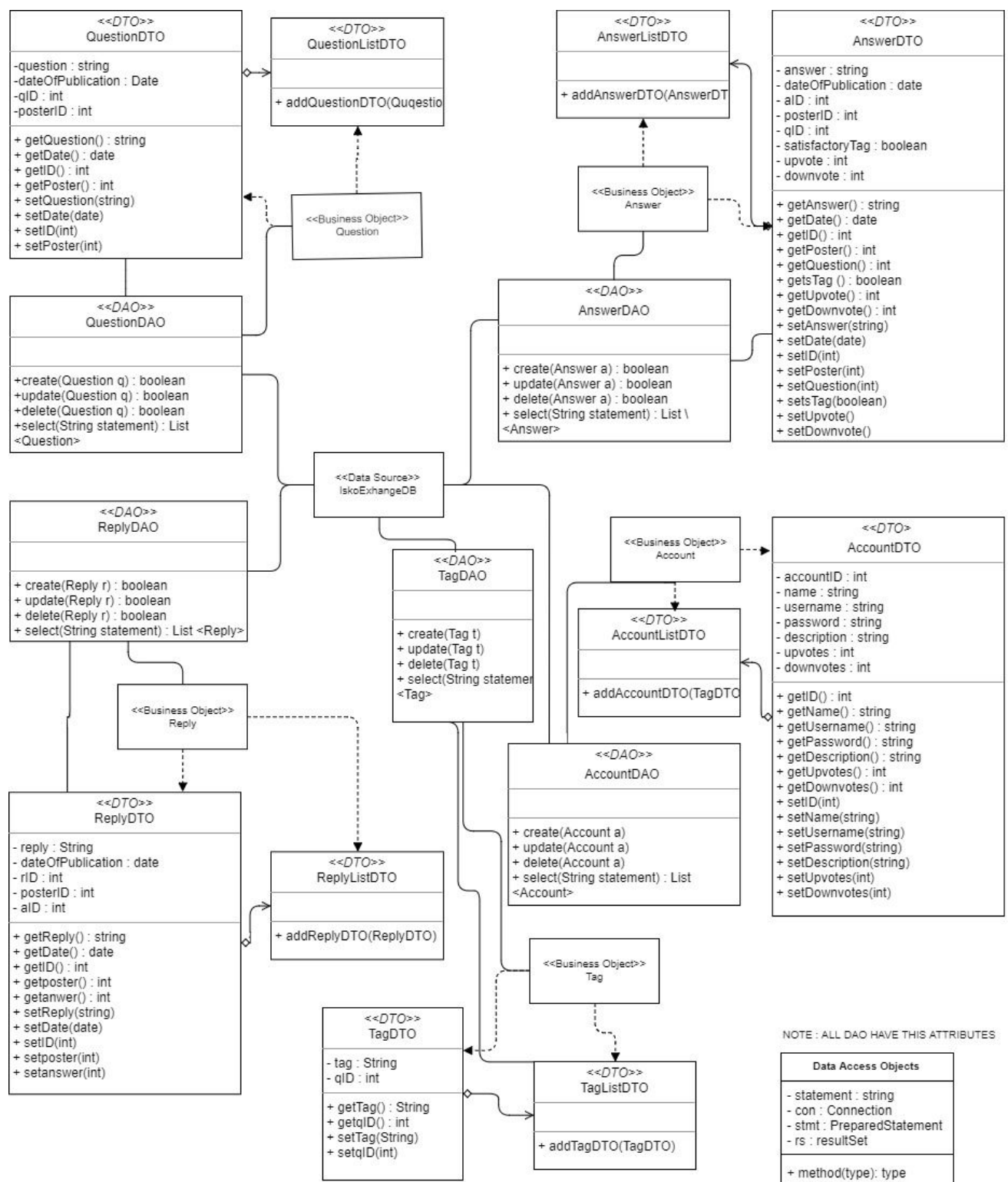
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Revision Control

History Revision:

<i>Revision Date</i>	<i>Person Responsible</i>	<i>Version Number</i>	<i>Modification</i>
11/20/17	Luis Carlos Tan	1.0	Initial Document; Class Diagram
11/20/17	Patricia Cajaljal	1.1	DAO Classes; TransferObject Classes
11/21/17	Ivan Carlo M. Balingit	1.2	Data source
11/22/17	Patricia Cajaljal	1.3	Sample tables

Data Design:



Data Access Object (DAO) Classes:

Class Name	Description
QuestionDAO	Handles question related operations
ReplyDAO	Handles reply related operations
AnswerDAO	Manages answer related operations
TagDAO	Manages tag related operations
AccountDAO	Encapsulates account-specific information

TransferObject Classes:

Class Name	Description
QuestionDTO	A DTO to facilitate the transfer of question related information.
QuestionListDTO	A repository for multiple question DTOs.
ReplyDTO	A DTO to facilitate the transfer of reply related information.
AnswerDTO	A DTO to facilitate the transfer of answer related information.
AnswerListDTO	A repository for multiple answer DTOs.
AccountDTO	A DTO to facilitate the transfer of account related information.
AccountListDTO	A repository for multiple account DTOs.
TagDTO	A DTO to facilitate the transfer of tag related information.
TagListDTO	A repository for multiple tag DTOs.

List of Data Source: The data source contains the necessary information for handling accounts, questions, answers, replies and other data.

Data Source Name: IskoExchangeDB

Description: A database of all persistent information utilized by IskoExchange. The database contains 6 tables, namely: **AccountsTable**, **QuestionsTable**, **AnswersTable**, **RepliesTable**, **TagsTable**, and **TagsQuestionsTable**.

Sample Source File:

1. The **AccountsTable**: contains information for each user.
 - a. **account_id**: primary key, autoincrement, unique
 - b. **name**: varchar(255), unique, not null
 - c. **username**: varchar(255), unique, not null
 - d. **password**: varchar(255), not null
 - e. **description**: text
 - f. **upvotes**: int, default 0
 - g. **downvotes**: int, default 0
2. The **QuestionsTable**: contains information for each question.
 - a. **question_id**: primary key, autoincrement, unique
 - b. **account_id**: foreign key, not null
 - c. **question**: text, not null
 - d. **created_at**: timestamp
3. The **AnswersTable**: contains information for each answer of a question.
 - a. **answer_id**: primary key, autoincrement, unique
 - b. **account_id**: foreign key, not null
 - c. **question_id**: foreign key, not null
 - d. **answer**: text, not null
 - e. **satisfactory**: boolean, default false
 - f. **upvotes**: int, default 0
 - g. **downvotes**: int, default 0
 - h. **created_at**: timestamp
4. The **RepliesTable**: contains information for each reply of an answer.
 - a. **reply_id**: primary key, autoincrement, unique
 - b. **account_id**: foreign key, not null
 - c. **answer_id**: foreign key, not null
 - d. **reply**: text, not null
 - e. **created_at**: timestamp
5. The **TagsTable**: contains information for each tag.
 - a. **tag_id**: primary key, autoincrement, unique
 - b. **tag**: varchar(255), not null, unique
6. The **TagsQuestionsTable**: join table for tags of a question.
 - a. **tag_id**: foreign key, not null
 - b. **question_id**: foreign key, not null

Sample Tables from the Database:

ACCOUNTS table						
account_id	name	username	password	description	upvotes	downvotes
1	Juan Dela Cruz	jdlcrz	Q1W3E4U9	BS EEE Student	12	2
2	Ma. Katrina Reyes	mkreyes	dfr98TU	BA Pol. Sci. Student	27	6

QUESTIONS table			
question_id	account_id	question	created_at
1	1	How can I get my UP Mail account?	11:25 PM, November 22, 2017
2	1	How to print the elements of a char array in C?	8:36 AM, December 1, 2017

ANSWERS table							
answer_id	account_id	question_id	answer	satisfactory	upvotes	downvotes	created_at
1	2	1	You can refer to this site for instructions: https://itdc.up.edu.ph/uis/fags/	1	2	0	8:19 AM, November 23, 2017
2	2	1	Email helpdesk@up.edu.ph about your concern.	0	0	0	1:29 PM, November 23, 2017

REPLIES table				
reply_id	account_id	answer_id	reply	created_at
1	1	1	Thank you for the link!	1:40 PM, November 23, 2017
2	1	2	Will do, thank you!	1:41 PM, November 23, 2017

TAGS table	
tag_id	tag
1	mail
2	account
3	computer science

TAGS-QUESTIONS table	
tag_id	question_id
1	1
2	1
3	2