



Capstone Project 1

CMU-SE 450

Database Design Document

Version 1.0

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Green Big5 Information System

Submitted by

**Chinh, Thai Huu
Chung, Hoang Bao
Hau, Phuc Bui
Loc, Tien Nguyen**

Approved by Binh, Thanh Nguyen

Project Information

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Lead Institution	International School, Duy Tan University		
Project Mentor	Doctor. Habil. Binh, Thanh Nguyen		
Scrum master / Project Leader & contact details	Chinh, Huu Thai Email: huuchinhdev@gmail.com Tel: 0962545506 Student ID: 24211207534		
Team members	Student ID	Name	Email
1	24211207051	Chung, Bao Hoang	baochungal@gmail.com
2	24211206857	Hau, Phuc Bui	bphau121020@gmail.com
3	24211202217	Loc, Tien Nguyen	nguyentienloc18122000@gmail.com

Database Design Document

Document Title	Database Design Document		
Author(s)	Chinh, Thai Huu		
Team Information	Name	Role	
	Chinh, Thai Huu	Member	
	Chung, Bao Hoang	Member	
	Hau, Phuc Bui	Member	
	Loc, Tien Nguyen	Member	
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Document Approvals

The following signatures are required for approval of this document.


Doctor. Habil. Binh, Thanh Nguyen Mentor	Binh, Thanh Nguyen _____  31 - Nov- 2021
Chinh, Thai Huu Scrum master, DevTeam	10-Dec-2021
Chung, Hoang Bao Product Owner, DevTeam	14-Dec-2021
Hau, Bui Phuc DevTeam	14-Dec-2021
Loc, Tien Nguyen DevTeam	14-Dec-2021

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1. Introduction

1.1.Purpose

Place information system's database design document describes the structure of the database and file structure of the system. Database Design document will introduce all attributes of the System that will help developer and tester base on this design to implement and test.

1.2.Goal

To create database tables most accurate.

1.3.Scope

This Database Design Document provides the basis for "GB5 Database design.

It describes both logical and physical definition, non-functional issues, and the database interfaces; storage aspects are defined in the physical database design sections.

The tables performance considerations requirements. The following topics are covered in this document:

- Assumptions and decisions on database design.
- Table column definitions.
- Interfaces and dependencies with other components.

The database design is composed of definitions for database objects derived by mapping entities to tables attributes to columns, unique identifiers to unique keys and relationships to foreign keys.

During design, these initial definitions are enhanced to support the functionality described in the functional specification/ user stories and defined in the primary and supporting modules of the application high level design.

1.4.Data storage platforms

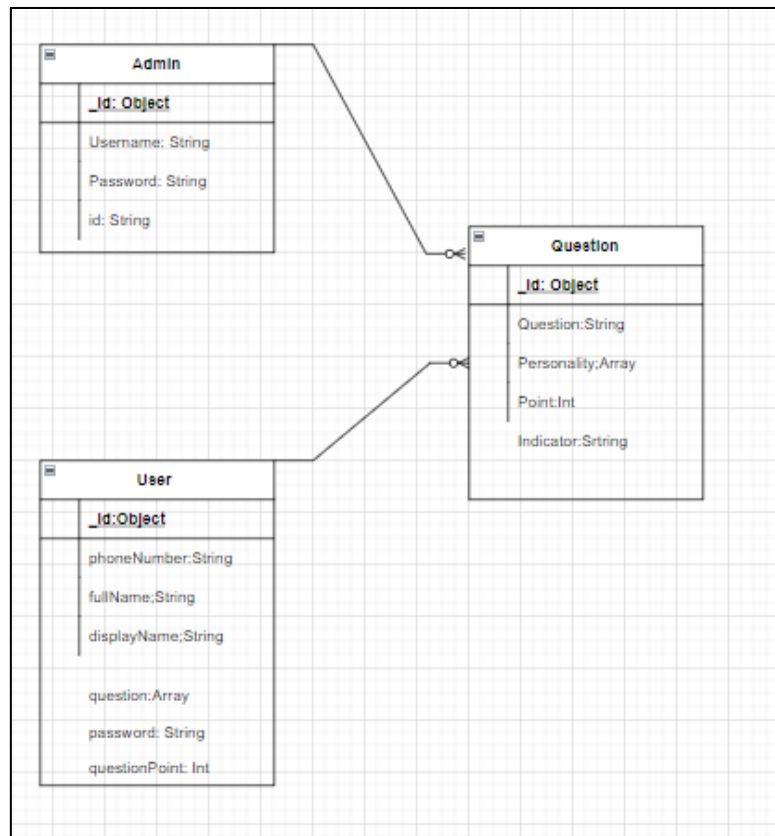
- Data of application is stored in MongoDB
- In MongoDB, data structure is stored as a file system that takes advantage of the above functions and acts as a way of delivering over sharding[1].

2. Database Design

2.1. Table Overview

No.	Table name	Short Description
1	Admin	This table shows all information of Administrator
2	Users	This table shows all information of user
3	Questions	This table shows all information of question

2.2. Table Relationship Diagram



2.3. Detail

2.3.1. Admin

```

_id: ObjectId("61b5e01509e1aa0aed2b9083")
username: "NguyenTienLoc"
password: "TienLoc20"
id: "ancoijas2412kj"
  
```

Attributes	Datatype	Null	Description	Extra
_id	objectId	Not	Id of one record admin data	
username	String	not	Login name	
password	String	Not	Login passwords	
id	String	not	ID of admin	

2.3.2. Users

```

> _id: ObjectId("61c3280838693b0023d50615")
  phoneNumber: "0912345678"
  fullName: "LazyCat"
  displayName: "LazyCat"
  Questions: Array
    0: Object
      id: "5iR24cbqru"
      dateTime: 2021-12-22T13:28:40.710+00:00
      questionsDate: Array
        pointOpenness: 60
        pointConscientious: 60
        pointExtraversion: 65
        pointAgreeable: 60
        pointNeuroticism: 60
        pointMultiplyNeurot_: 0
        pointMultiplyOpenne_: 2
        pointMultiplyConsci_: 0
        pointMultiplyExtrav_: 2
        pointMultiplyAgreea_: 2
    1: Object
    2: Object
    3: Object
  password: "$2b$10$ed92cCrH1f0sKb5LS5owPOT5sK85HU07wNcR1mM4WwPYs1EgyEK6"

```

Attributes	Datatype	Null	Description	Extra
_id	objectID	Not	Id of one record a user data	
phoneNumber	String	Not	Phone number of a user	
fullName	String	Not	Full name of a user	
displayName	String	not	Display name of a user	
Question	Array		List questions that a user receive	
id	String		Id of a object question	
dateTime	datetime		Datetime of a object question that user receives	
questionDate	Array		List of question are sent by the dashboard and by once	
answer	String		User's answer of a question	
pointOpenness	Int		user's Openness point of a object question	
pointConscientious	Int		user's Conscientious point of a object question	
pointExtraversion	Int		user's Extraversion point of a object question	
pointNeuroticism	Int		user's Neuroticism point of a object question	

pointArgeeable	Int		user's agreeable point of a object question	
pointMultiplyOpen ness	Int		Point multiply openness trait of a object question	
pointMultiplyCons cientious	Int		Point multiply conscientious trait of a object question question	
pointMultiplyExtra version	Int		Point multiply extraversion trait of a object question	
pointMultiplyNeur oticism	Int		Point multiply neuroticism trait of a object question	
pointMultiplyArge eable	Int		Point multiply argeeable trait of of a object question	
password	String		Password user's	

2.3.3. Question

```

_id: ObjectId("61c324a738693b0023d50610")
question: "Do you like playing logic games?"
indicator: "Logic game"
~ personality: Array
  ~ 0: Object
    Openness: "High"
  ~ 1: Object
    Conscientious: "Low"
  ~ 2: Object
    Extraversion: "Low"
  ~ 3: Object
    Agreeable: "Low"
  ~ 4: Object
    Neuroticism: "Low"
~ point: Object
  pointHigh: 20
  pointMedium: 15
  pointLow: 10

```

Attributes	Datatype	Null	Description	Extra
_id	ObjectId	not	Id of question	
indicator	String	not	Indicator of question	
question	String	not	Save string question of question	
personality	Array	not	List personality of question	
point	Object		The point of question	
pointHigh	Int		The point high of question	
ponitMedium	Int		The point medium of question	
pointLow	Int		The point low of question	
Openness	String	not	The trait opeenness of question	
Conscientious	String	not	The trait conscientious of question	
Extraversion	String	not	The trait extraversion of question	
Agreeable	String	not	The trait agreeable of question	

Neuroticism	String	not	The trait neuroticism of question	
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3. References

[1] [MongoDB: the application data platform | MongoDB](#)

[2] [diagrams.net](#)