



# CAPSTONE PROJECT 2

CMU-SE-451

## Database Design Document

v 1.1

### Green Big5 Information System

#### Submitted by

Loc, Nguyen Tien

Chung, Hoang Bao

Vinh, Do Quang

Kha, Ngo Van

#### Approved by

#### Capstone Project 2 - Mentor:

Name

Signature

Date

Nguyen Thanh Binh

A handwritten signature in blue ink, appearing to read 'Nguyen Thanh Binh', written over a horizontal line.

15.05.2022

## Project Information

<b>Project acronym</b>	GB5		
<b>Project Title</b>	GreenBig5		
<b>Start Date</b>	01 March 2022	<b>End Date</b>	16 May 2022
<b>Lead Institution</b>	International School, Duy Tan University		
<b>Project Mentor</b>	Doctor. Habil. Binh, Thanh Nguyen		
<b>Scrum master / Project Leader &amp; contact details</b>	Loc, Nguyen Tien Email: <a href="mailto:nguyentienloc18122000@gmail.com">nguyentienloc18122000@gmail.com</a> Tel: 0932478783 Student ID: 24211202217		
<b>Partner Organization</b>			
<b>Project Web URL</b>			
<b>Team members</b>	<b>Student ID</b>	<b>Name</b>	<b>Email</b>
	24211207051	Chung, Bao Hoang	baochunga1@ gmail.com
	24211208568	Vinh, Do Quang	doquangvinh0708co@gmail.com
	24211210573	Kha, Ngo Van	ngokha437@gmail.com

## Database Design Document

<b>Document Title</b>	Database Design Document		
<b>Reporting Period</b>			
<b>Author(s)</b>	Loc, Nguyen Tien		
<b>Team Information</b>	<b>Name</b>	<b>Role</b>	
	Loc, Nguyen Tien	Member	
	Chung, Bao Hoang	Member	
	Vinh, Do Quang	Member	
	Kha, Ngo Van	Member	
<b>Date</b>	04/04/2022	<b>Filename</b>	C2SE32_[GB5]_database_Design
<b>Access</b>	Project and CMU Program		

Document History		
Version	Date	Comments
V1.0	02/03/2022	Create Database Design
V1.1	04/04/2022	Update Question Table

### Document Approvals

The following signatures are required for approval of this document.

Doctor. Habil. Binh, Thanh Nguyen Mentor		Date 15/05/2022
Loc, Nguyen Tien Scrum master, DevTeam		Date 02/03/2022
Chung, Hoang Bao Product Owner, DevTeam		Date 03/03/2022
Vinh, Do Quang DevTeam		Date 03/03/2022
Kha, Ngo Van DevTeam		Date 03/03/2022

## TABLE OF CONTENT

<b>Project Information</b>	1
<b>Database Design Document</b>	2
<b>Document Approvals</b>	3
<b>Introduction</b>	5
Purpose	5
Goal	5
Scope	5
Data storage platforms	5
Definition, Acronyms and Abbreviations	6
<b>Database Design</b>	6
Table Overview	6
Table Relationship Diagram	6
Detail	7
<b>References</b>	9

# 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].

## 1.5. Definition, Acronyms and Abbreviations

Abbreviations	Description	Comment

## 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
4	Suggest question	This table shows all information of suggest question

### 2.2. Detail

#### 2.3.1. Admin

```

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

```

Attributes	Datatype	Null	Description	Extra
_id	objectId	Not		
username	String		Login name	
password	String		Login passwords	
id	String			

#### 2.3.2. Users

```

_id: ObjectId('627cef4032ca0300235e3a9d')
phoneNumber: "0889192933"
fullName: "Hoàng Bảo Chung"
displayName: "Bao Chung"
gender: 1
age: 2
location: 1
> addressMap: Array
keySeceret: "ANeto2Qhz"
~ Questions: Array
  ~ 0: Object
    id: "jByNLU9df"
    dateTime: 2022-05-12T11:28:01.205+00:00
    ~ questionsDate: Array
      ~ 0: Object
      ~ 1: Object
      ~ 2: Object
      ~ 3: Object
      ~ 4: Object
    pointConscientious: 50
    pointExtraversion: 50
    pointOpenness: 90
    pointAgreeable: 50
    pointNeuroticism: 50
    pointMultiplyOpenness: 6
  ~ 1: Object

```

```

    pointMultiplyOpenness: 0
  > 1: Object
  > 2: Object
  > 3: Object
  > 4: Object
password: "$2b$10$9amG/CnmSfVowubyNgIJQORcJipW41sgA3zuTJZ738kgG/WmIBcVC"
seen: false

```

Attributes	Datatype	Null	Description	Extra
_id	objectID	Not	Obecjt id in mongoDB	
phoneNumber	String	Not	Phone number of user	
fullName	String	Not	Full name of user	
displayName	String	Not	Display name of user	
addressMap	Array		List address of user	
Questions	Array		List question was send to user	
id	String		Id of list question was send follow list	
dateTime	datetime		Date and time list question was send	
questionDate	Array		Question are sent by the dashboard and by day	
answer	String		User's answer	
pointOpenness	Int		User's Openness point	
pointConscientious	Int		User's Conscientious point	
pointExtraversion	Int		User's Extraversion point	
pointNeuroticism	Int		User's Neuroticism point	
pointArgeeable	Int		User's Agreeable point	
pointMultiplyOpenness	Int		User's Openness Multiply point	
pointMultiplyConscientious	Int		User's Conscientious Multiply point	
pointMultiplyExtraversion	Int		User's Extraversion Multiply point	
pointMultiplyNeuroticism	Int		User's Neuroticism Multiply point	
pointMultiplyArgeeable	Int		User's Agreeable Multiply point	
password	String		Password of users that was encode	
seen	boolean		Check if the user answered or not?	



### 2.3.3. Question

```

_id: ObjectId('627b7841ee124db410bde580')
_v: 0
big5EnvIndicator: "Water Fruit Order"
facet: "Order"
keyword: "Water Fruit"
> personality: Array
> point: Object
question: "Is the order of things true or false?"
> tags: Array
trait: "Conscientiousness"
numberUser: 1
totalAnswer: 1

```

Attributes	Datatype	Null	Description	Extra
_id	ObjectId	not	Object Id mongodb	
big5Envindicator	String	Not	Big5 env indicator of question	
question	String	Not	Content of question	
personality	Array	Not	List of personality of question	
point	Object	Not	List point of question	
pointHigh	Int	Not	Point high of question	
ponitMedium	Int	Not	Point medium of question	
pointLow	Int	Not	Point low of question	
facet	String	Not	Facet of question	
keyword	String	Not	Keyword of question	
tags	Array	Not	List tag of question	
numberUser	Int		Create when send question to user	
totalAnswer	Int		Create when user answer question	

### 2.3.4)Suggest question

```

_id: ObjectId('625ea54faeea48ac93256f7d')
question: "Is there a difference between true and false smoke?"
big5EnvIndicator: "Smoke Ideas"
> tags: Array

```

Attributes	Datatype	Null	Description	Extra
_id	ObjectId	Nnot	Object Id mongodb	
big5Envindicator	String	Not	Big5 env indicator of question	
question	String	Not	Content of question	
tags	Array	Not	List tag of question	

### **3. References**

- [1] [MongoDB: the application data platform | MongoDB](#)
- [2] [diagrams.net](#)