

[iVolunteer Project]

DETAIL DESIGN DOCUMENT

Data design

**Project Code:**

**Document Code: IVSN-DD – v1.0**

**Hanoi, 05/05/2016**

Record of change

\*A - Added M - Modified D – Deleted

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Effective Date | Changed Items | A\* M, D | Change Description | New Version |
| 05/052016 | Add new | A |  | 1.0 |
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SIGNATURE PAGE

**ORIGINATOR:** <Name> <Date>

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# Introduction

## Purpose

This part will give general description of the document including:

* Purpose of document.
* What are contained in the doc
* Reader of document
* Other description about scope of document, limitation,...

Ex.

XXX data design document describes structure of database and file structure of system including internal file structure as well as interface file structure. Developer and tester will base on this design to implement and unit test.

## Definitions, Acronyms and Abbreviations

|  |  |  |
| --- | --- | --- |
| Abbreviations | Description | Comment |
| P/F Key | Primary/ Foreign key | Use to indicate that a field is a primary or foreign key in table |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

## References

List all the reference document such as: other document of the system, or the technical article,...

|  |  |
| --- | --- |
| Document Number | Title |
| Class design document |  |
| Screen design document |  |
|  |  |
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## Overview

General overview of the detail design such as what is the structure of the document

# Database

## ERDs

<Entity relation ship diagrams>



<List of tables and brief description>

|  |  |  |
| --- | --- | --- |
| No | Table Name | Description |
|  | CustomerMaster |  |
|  | Order | Order made by customer to buy one or more products |
|  | OrderDetail | Detail information of each products in order |
|  | ProductMaster | Contains all products of the store |

## SQL Database

### SQL\_Account

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| No | Field Name | Type | Length | Size | Null | Unique | P/F Key | Default | Description |
| 1 | Email | varchar | 50 |  |  | x |  |  | User's Email, use for login infomation |
| 2 | Password | varchar | 20 |  |  |  |  |  | User's Password, use for login infomation |
| 3 | UserID | varchar | 24 |  |  | x | P |  | User's ID, is mongoDB ObjectID convert to String |
| 4 | IdentifyID | varchar | 15 |  |  | x |  |  | User's IdentifyID, use to prevent a user have 2 account or fake account |
| 5 | IsAdmin | bit |  |  |  |  |  |  | Role of Account : true is Admin, false is user |
| 6 | IsConfirmed | bit |  |  |  |  |  |  | Account is activate or be banned |
| 7 | IsActivate | bit |  |  |  |  |  |  | Email confirmation, true is confirmed, false is not confirmed yet |

### SQL\_Project

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| No | Field Name | Type | Length | Size | Null | Unique | P/F Key | Default | Description |
| 1 | ProjectID | varchar | 24 |  |  | x | P |  | Project's ID, is mongoDB ObjectID convert to String |
| 2 | IsActivate | bit |  |  |  |  |  |  | Project is activate or is banned |

### SQL\_Group

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| No | Field Name | Type | Length | Size | Null | Unique | P/F Key | Default | Description |
| 1 | GroupID | varchar | 24 |  |  | x | P |  | Group's ID, is mongoDB ObjectID convert to String |
| 2 | IsActivate | bit |  |  |  |  |  |  | Group is activate or is banned |

### SQL\_Album

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| No | Field Name | Type | Length | Size | Null | Unique | P/F Key | Default | Description |
| 1 | AlbumID | varchar | 24 |  |  | x | P |  | Album's ID, is mongoDB ObjectID convert to String |
| 2 | ProjectID | varchar | 24 |  | x |  | F |  | Project's ID this album belong to, is mongoDB ObjectID convert to String |
| 3 | GroupID | varchar | 24 |  | x |  | F |  | Group's ID this album belong to, is mongoDB ObjectID convert to String |
| 4 | IsPublic | bit |  |  |  |  |  |  | Permission : true is public, private is only group or project member can access |

### SQL\_Posst

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| No | Field Name | Type | Length | Size | Null | Unique | P/F Key | Default | Description |
| 1 | PostID | varchar | 24 |  |  | x | P |  | Post's ID, is mongoDB ObjectID convert to String |
| 2 | DateCreate | datetime |  |  |  |  |  |  | Date create post |
| 3 | DateLastActivity | datetime |  |  |  |  |  |  | Date of newest comment |
| 4 | ProjectID | varchar | 24 |  | x |  | F |  | Project's ID this post belong to, is mongoDB ObjectID convert to String |
| 5 | GroupID | varchar | 24 |  | x |  | F |  | Group's ID this post belong to, is mongoDB ObjectID convert to String |
| 6 | AlbumID | varchar | 24 |  | x |  | F |  | Album's ID this post belong to, is mongoDB ObjectID convert to String |
| 7 | IsPublic |  |  |  |  |  |  |  | Permission : true is public, private is only group or project member can access |

### SQL\_Friend

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| No | Field Name | Type | Length | Size | Null | Unique | P/F Key | Default | Description |
| 1 | UserID | varchar | 24 |  |  |  | P |  | User's ID, is mongoDB ObjectID convert to String |
| 2 | FriendID | varchar | 24 |  |  |  | P |  | User's ID, is mongoDB ObjectID convert to String |

### SQL\_Project\_User

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| No | Field Name | Type | Length | Size | Null | Unique | P/F Key | Default | Description |
| 1 | UserID | varchar | 24 |  |  |  | P |  | User's ID, is mongoDB ObjectID convert to String |
| 2 | ProjectID | varchar | 24 |  |  |  | P |  | Project's ID, is mongoDB ObjectID convert to String |
| 3 | RelationType | int |  |  |  |  |  |  | Type of Relation : 1 = Direct relation(join, donate, create) 2 = Indirect relation (follow) |

### SQL\_Group\_User

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| No | Field Name | Type | Length | Size | Null | Unique | P/F Key | Default | Description |
| 1 | UserID | varchar | 24 |  |  |  | P |  | User's ID, is mongoDB ObjectID convert to String |
| 2 | GroupID | varchar | 24 |  |  |  | P |  | Group’s ID, is mongoDB ObjectID convert to String |
| 3 | RelationType | int |  |  |  |  |  |  | Type of Relation : 1 = Direct relation(join, donate, create) 2 = Indirect relation (follow) |

### SQL\_Message

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| No | Field Name | Type | Length | Size | Null | Unique | P/F Key | Default | Description |
| 1 | MessageID | varchar | 24 |  |  |  | P |  | Message's ID, is mongoDB ObjectID convert to String |
| 2 | UserID | varchar | 24 |  |  |  | P |  | Participate User’s ID, is mongoDB ObjectID convert to String |

## MongoDB Database

### User

# File design

<File List>

|  |  |  |  |
| --- | --- | --- | --- |
| No | File Name | File type | Description |
|  | name of file | <Fixed length>  <CSV> |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

### XXX file

#### Format of file

<Describe the file format with the sequential of field>

#### Fields

<if this file is CSV File>

|  |  |  |  |
| --- | --- | --- | --- |
| No | Field Name | Format | Description |
|  |  | special format such as date “mm/dd/yy” |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

<If this file is fixed length>

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No | Field Name | Format | Start | End | Description |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

# Code Design

<Design the format of codes ex. Customer codes, product codes that are complicated and contains meanings. These codes are fields in database or files. >

<List of code>

|  |  |  |
| --- | --- | --- |
| No | Code | Description |
| 01 | Customer code | Code of customer in the system. |
|  |  |  |
|  |  |  |
|  |  |  |

## Customer Code

Customer code has the form of AAAMMYYYY000 which

AAA: 3 required characters stand for Province of customer such as HAN: Ha Noi, DAN: Da Nang, HCM: Ho Chi Minh City

MM: The month that customer registers; can be 01 to 12

YYYY: The year that customer registers; it is in 4 character form: ex. 2004

000 is the sequential number start from 0; each customer has one number: “000”; “001”

example of customer code: HAN121999001

# Other considerations

[This section provides a description of other design elements that were considered as alternatives in selection process for the above database design, i.e. a brief explanation of advantages and disadvantages of the selected entity relationships and/or database implementation in comparison with others. It should be a clear answer to the question why the above data design is selected for this system, not the others.]

# Appendix

## Data format symbol

Following symbols are used to describe format of data field in files as well as in tables.

|  |  |
| --- | --- |
| Symbol | Description |
| # | Digit placeholder. |
| . | Decimal placeholder. |
| , | Thousands separator. |
| : | Time separator. |
| / | Date separator. |
| \ | Treat the next character in the mask string as a literal. This allows you to include the '#', '&', 'A', and '?' characters in the mask. This character is treated as a literal for masking purposes. |
| > | Convert all the characters that follow to uppercase. |
| < | Convert all the characters that follow to lowercase. |
| A | Alphanumeric character placeholder (entry required). For example: a – z, A – Z, or 0 – 9. |
| a | Alphanumeric character placeholder (entry optional). |
| 9 | Digit placeholder (entry optional). For example: 0 – 9. |
| 0 | Digit placeholder (entry required). For example: 0 – 9. |
| C | Character or space placeholder (entry optional). Valid values for this placeholder are ANSI characters in the following ranges: 32-126 and 128-255. |
| & | Character placeholder (entry required). Valid values for this placeholder are ANSI characters in the following ranges: 32-126 and 128-255. |
| ? | Letter placeholder. For example: a – z or A – Z. |
| Literal | All other symbols are displayed as literals; that is, as themselves. bound in “” like “ABC” |