

CALAMITY: A Disaster Preparedness Application

Data Design Document

Submitted to:

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Unique Reference:

The documents are stored in the project repository: <https://github.com/geneaudrey/Disaster-Preparedness>.

File Reference in project repository:

<https://github.com/geneaudrey/Disaster-Preparedness/tree/master/03-Design%20Engineering> with the filename “Disaster Preparedness App - Data Design.pdf”

Document Purpose:

The purpose of this document is to illustrate the data design of the application through the use of diagrams. The Data Access Objects and DBClasses, along with the list of data sources are also elaborated within the document.

Target Audience:

The following are part of the target audience:

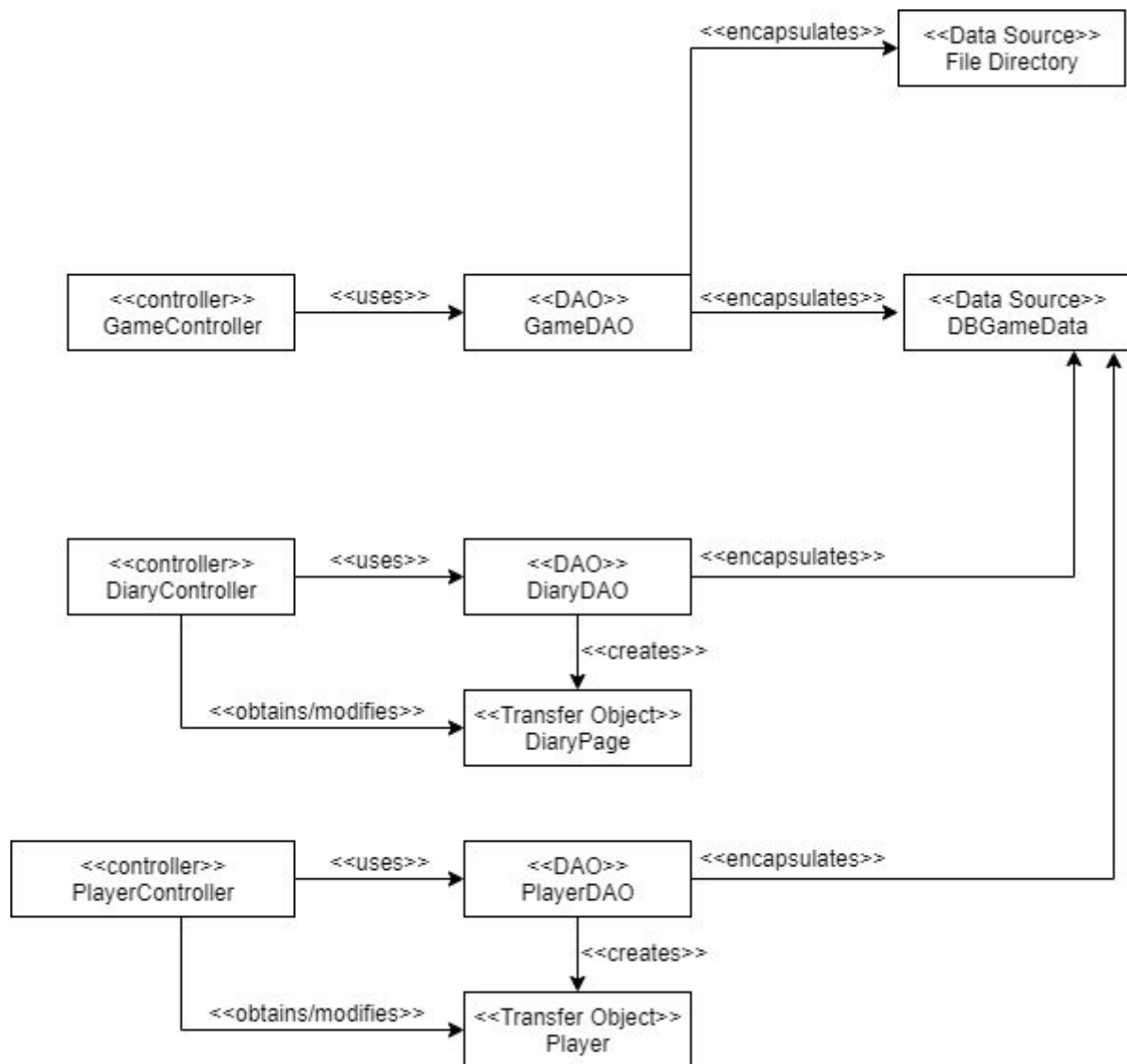
- People who like or are interested in playing games
- People who have little to average knowledge on disaster preparedness, or people who would like to refresh their knowledge on disaster preparedness
- People who are interested in the development of the application

Revision Control

History Revision:

| <i>Revision Date</i> | <i>Person Responsible</i> | <i>Version Number</i> | <i>Contribution/Modification</i> |
|-----------------------------|----------------------------------|------------------------------|---|
| 10/22/19 | Nephia Dalisay | 1.0 | Prepared Initial Document; |
| 10/22/19 | Filbert Wee | 2.0 | Added Data Design Diagram; Added DAO and DBClasses descriptions; Added TransferObject or Persistent Classes descriptions; Added list of Data Sources (file system, csv, database; |
| 10/24/19 | Gene Tan | 3.0 | Removed csv from list of data sources Removed csv files from the file system diagram Replaced csv files with a single db in the data design model Added PlayerSave controller, DAO, and Transfer Object Modified DAO and TransferObject descriptions Modified columns in the Logical Database Design |
| 10/25/19 | Nephia Dalisay | 4.0 | Edited Data Design Diagram Added Player table in the GameData database |

Data Design:



Data Access Object (DAO) or DBClasses:

| Class Name | Description |
|-------------------|---|
| GameDAO | This data access object is responsible for getting game data (dialogues, choices, etc) from the GameData database; as well as music files and images from the directory named “assets”. (See the following section for file format and sample). |
| DiaryDAO | This data access object is responsible for getting diary page data from the GameData database. (See the following section for file format and sample). |
| PlayerDAO | This data access object is responsible for getting the player progress (and ‘name’) data from the GameData database. (See the following section for file format and sample) |

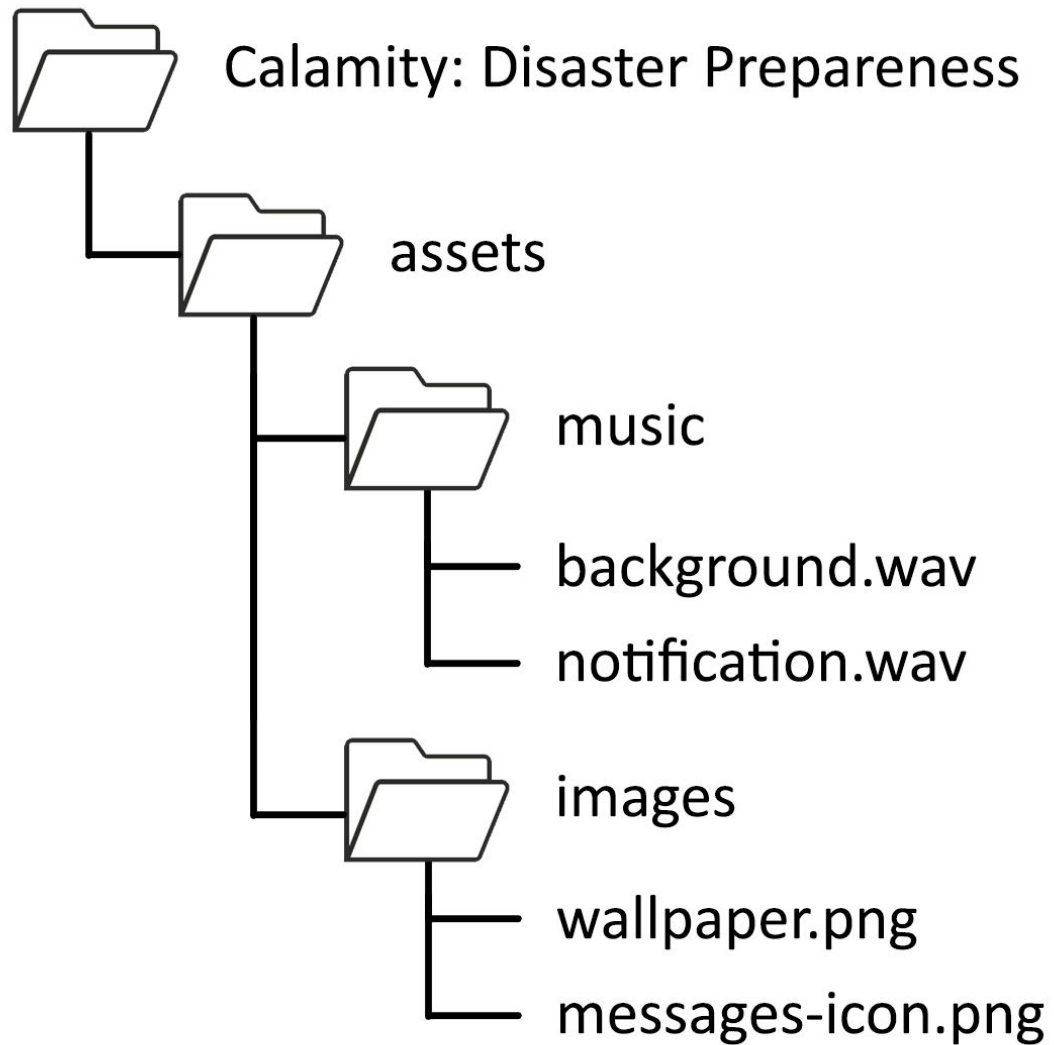
TransferObject or Persistent Classes:

| Class Name | Description |
|------------|--|
| DiaryPage | This transfer object is responsible for holding a single diary page or record. |
| Player | This transfer object is responsible for holding the details (name of the player) and progress (the current dialogue id the player is on) of a single player. |

List of Data Source:

File Directory:

Description: This is the directory contains the music and images for the game. The structure of the directory is as follows:



Database Name: GameData

Description: This is the database that contains the major data of the game as well as the progress of the player. The following are the list of tables that will be present in the database:

| Tables | Descriptions |
|-----------|---|
| Scenario | It contains the record of all scenarios in the game, including the starting dialogues. |
| Dialogue | It contains all the possible dialogues in the game, along with the choices that come after the dialogues. |
| Choice | It contains all the possible choices the players can make. |
| Ending | It contains all the possible endings the players can get, including the ending dialogues. |
| DiaryPage | It contains the progress of the player in the form of diary pages. |
| Player | It contains the saved progress of the player in the game. |

Logical Database Design:

Scenario

| scenarioID | scenarioName | startingDialogue |
|------------|-----------------------|--|
| INT | String(100) | String(9999) |
| 9 | X(100) | X(9999) |
| PK | NN | NN |
| 1 | Fire | [a]Hello, what are you doing?/[a]What's... |
| 2 | Earthquake | [b]Did you hear about the... |
| 3 | Storm Surge and Flood | [a]Hi, guys I'm bored/[b]Wh... |

Dialogue

| dialogueID | scenarioID | dialogueContent | choiceIDAfter | endingID |
|------------|---------------|---------------------------------|---------------|-----------|
| INT | INT | String(9999) | INT | INT |
| 999 | 9 | X(9999) | 999 | 999 |
| PK | FK, NN | NN | FK | FK |
| 001 | 3 | [a]Yeah, sure/[a]What... | 1 | NULL |
| 002 | 3 | [a]Yeah, sure/[a]What... | 2 | NULL |
| 003 | 3 | [b]Keep your secrets/[b]Fine... | 3 | NULL |

Choice

| choiceID | dialogueID | scenarioID | choiceContent |
|-----------|---------------|---------------|---------------|
| INT | INT | INT | String(9999) |
| 999 | 999 | 9 | X(9999) |
| PK | FK, NN | FK, NN | NN |
| 001 | 001 | 3 | Yes |
| 002 | 001 | 3 | No |
| 003 | 001 | 3 | What? |

Ending

| endingID | scenarioID | endingName | endingDialogue |
|-----------|---------------|--------------------------------------|--|
| INT | INT | String(900) | String(9999) |
| 9 | 9 | X(900) | X(9999) |
| PK | FK, NN | NN | NN |
| 1 | 3 | Good Ending 1: Storm Surge and Flood | [a]Thank you for helping me/[b]You're... |
| 2 | 3 | Good Ending 2: Storm Surge and Flood | [a]Things could have gone better but... |
| 3 | 3 | Bad Ending 1: Storm Surge and Flood | [b]Hey, have you heard from J?/[a]The last time... |

DiaryPage

| pageID | choiceID | scenarioID | pageTitle | pageContent | unlocked |
|-----------|---------------|---------------|-----------------------------|--------------------------------------|-----------|
| INT | INT | INT | String(9999) | String(9999) | BOOL |
| 999 | 9 | 9 | X(9999) | X(9999) | 9 |
| PK | FK, NN | FK, NN | NN | NN | NN |
| 001 | 3 | 3 | What is a storm surge? | A storm surge is a... | 1 |
| 002 | 9 | 3 | What is a RAM radio? | A RAM radio is a... | 0 |
| 003 | 4 | 3 | How to prepare for a flood? | To prepare for a flood, you must.... | 0 |

Player

| playerID | dialogueID | playerName |
|---------------|-------------------|------------|
| INT | INT | String(99) |
| 999 | 9 | X(9) |
| PK, NN | PK, FK, NN | NN |
| 1 | 001 | Anna |
| 1 | 002 | Anna |
| 1 | 003 | Anna |

*Note: This table will most likely contain only one row/entry since it is used as the player's 'save file'.