Design Document for DamCake project

Group#14

Milana Baisalbayeva: %20

Kupeyev Abay: %20

Nauryz Tagzym: %20

Mukhtar Temirlan: % 20

Yessenkeldi Miras: %20

Version	Date	Author	Change
0.1	20.03.16	MB	Initial Document
0.2	25.03.16	MB	Some changes commited
0.3	01.04.16	MB	Complete version

Table of Contents

1.1 PURPOSE

The purpose of this document is to describe the design and architecture of DamCake application

1.2 SCOPE

The scope of this documentation covers the architectural design phase of the software engineering lifecycle, identifying and dividing system into subsystem, their behavior and interfaces.

1.3 DEFINITIONS, ACRONYMS, ABBREVIATIONS

Term	Description
User	A person who uses application.(regular person who wants to make an order)
GUI	Graphical User Interface – graphical interaction between system and user
Database	A database is a collection of data for one or more multiple uses, where database tables are stored
Table	Table is a set of data elements (values) that is organized using a model of vertical columns (which are identified by their name) and horizontal rows
Query	Information that is understandable by Structured Query Language, that retrieves data on specific criteria
Server	Computer where database is located

1.4 DESIGN GOALS

1. Usability – The system should give easiness to use, even inexperienced users won't feel discomfort
2. Reliability – The systems processes should work uniformly, the loss of users information through network must be prevented

3. Extensibility – All parts in the application must assist in extension and adding new properties

4. Response Time - Short response time, users page update time must be very short including database processing time

5. Maintainability - Applications code should be well organized, so that it will be easy to change, provide bug fixes

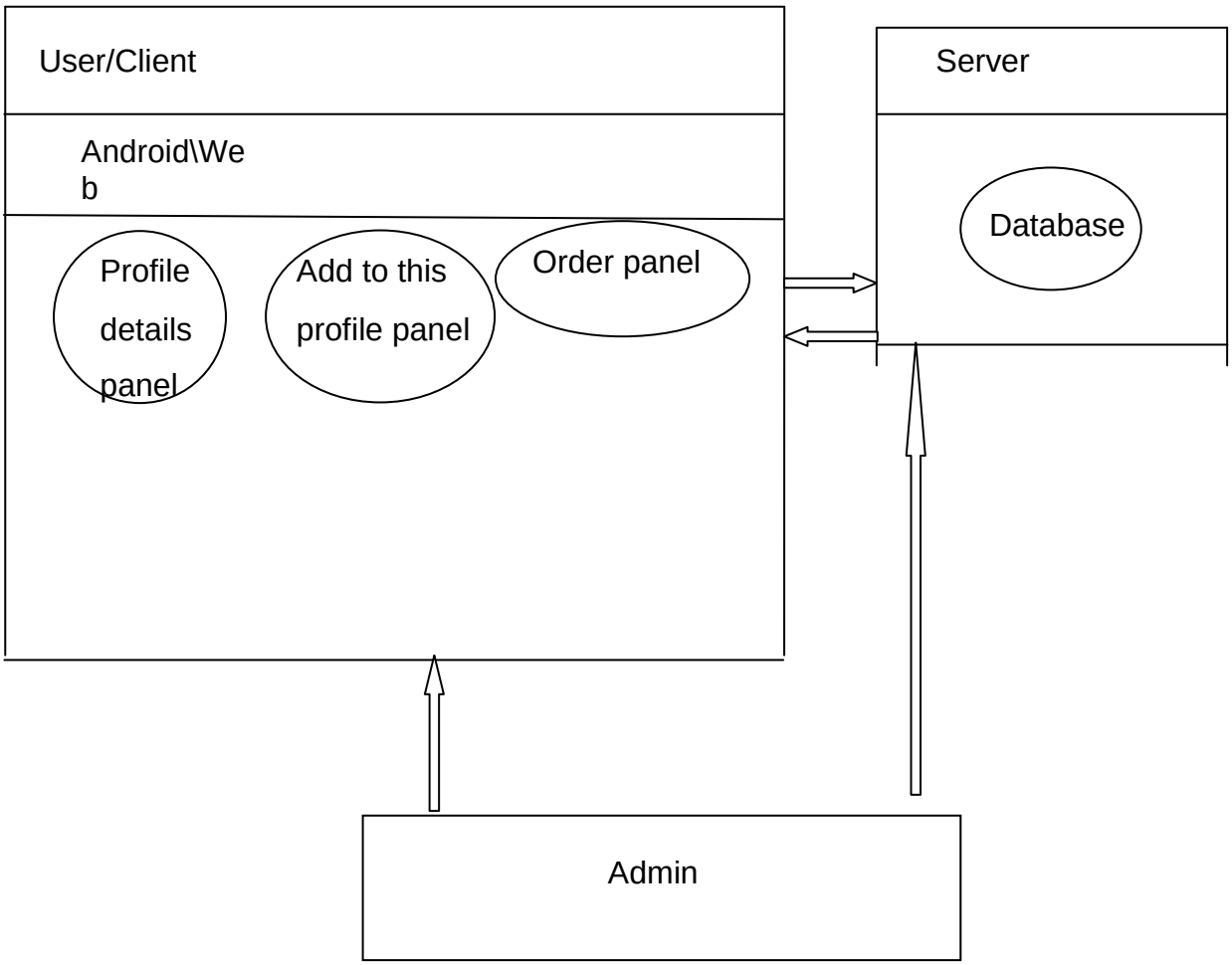
6. Security – The logging in process must be done using very powerful encryption and decryption techniques

7.Configurability – Application must provide configuring aspects like IP/TCP configuration, providing restriction for some functional of the system

2. References

NONE

3.1 MODULE DECOMPOSITION



3.1.1 Android\Web part is responsible for:

i. Displaying GUI part of project, scenes and stage
ii. Providing Listener(button press) events
iii. Acquiring datas from database to display for one user
iv. Inserting datas from panel to database

3.1.2 Database is responsible for:

i. Storing all the data
ii. On request it will return corresponding data
iii. It will allow new entries as the user create or adds new information

3.1.3 Administrator is responsible for:

i. Data and user management(change, add, delete, controll, sort and etc.)

3.2 CONCURRENT PROCESS

<Give an overall description of the different processes, threads, instantiations> Our System consist of 3 concurrently working processes:

1. Main thread – is used to display visually information acquired from DB. This thread is described more detail from 3.2.1 to 3.2.3 sections.
2. Database Listener – This thread is written in Java language.
3. Panel Updater – This thread is written in Java language

3.2.1 Profile Details Description

Profile Details is the main panel of the DamCake application. It displays the general information about the user. In this panel user can view information like: Name, contacts, age,city. Which all belong to View Personal Information use-case

View Personal Information: When user logs in to the system, all personal information of user is taken from database, and displayed in Profile Details Panel

3.2.2 Add to this Profile Description

This panel shows all the list of orders that are taken from the database. Initially add button is disabled. When you select one of cakes from the list , then add button would be enabled. When you press add button selected list of queries will be automatically inserted into database.

3.2.3 Order panel

In this panel user can see already made and delivered orders.

3.3 DATA DECOMPOSITION

3.3.1 `Profile details` database table.

user_id INTEGER AUTO_INCREMENT
first_name VARCHAR (255)
last_name VARCHAR(255)

3.3.2 `Orders` database table.

id INTEGER AUTO_INCREMENT NOT
NULL
content TEXT NOT NULL

3.4 STATES

3. 4.1 Intermodule Dependencies

User Java code module is dependent on Server Java code module as they are making socket connection with each other. Admin Java code module is also dependent on Server Java code module the same as User"s one. Database and Server modules are both dependent on Libraries module to be able to connect with each other.

3. 4.2 Interprocess Dependencies

See sequence diagrams in SRS document.

3.4.3 Data Dependencies

[NONE]

5.1 MODULE INTERFACE

5.1.1 Android\Web interface

5.1.1.1 Interface between App\Web versions and Database connection libriary

1) public function createUser(var id:Integer,var name:String, var surname:String,):Boolean;

is used to create new user in database, Parameters:
id = the unique id of user, it will be gived automatically unique number,
name = the name of the user, surname = surname of the user,.
Return type: Boolean, in case of error returns false. 2)public function deleteUser(var id:Integer): Boolean; is used to delete the user from database,
Parameters:
id = the unique id of each user,
Return type: Boolean, in case of error returns false.

3)public function getGeneralInfo(var id:Integer):ResultSet; is used to get all important user's information from database, Parameters:
id = the unique id of each user,
Return Type: ResultSet – result from given query,

4)public function getOrder(var id:Integer) :ResultSet;
is used to get user's orders from database Parameters:
id = the unique id of each user,

Return Type: ResultSet – result from given query,

5.2 PROCESS INTERFACE

5.2.1 Android\Web Main process

Description: This process shows all graphical interface of the system

5.2.1.1 Process is created when the application started

5.2.1.2 Terminated when applications close button is pressed

5.2.1.3 All other threads will be killed if this main thread stops

5.2.2 Database Listener process

5.2.2.1 This thread is created after Main process acquires all information from Database

5.2.2.2 Database listener process interacts with panel Updater process

5.2.2.3 This process will be terminated automatically if Main thread of process is killed

6. Detailed Design

[NOT REQUIRED]

7. Design Rationale

7.1 DamCake

7.1.1 Description

-Server side of our application must connect to the database of any type.

7.1.2 Factors affecting issue

-The database type used by customer may be changed.

-Each database have its own syntax.

7.1.3 Alternatives and their pros and cons

-Write static connection type to each file that needs it.

-Write separate Database connection class

7.1.4 Resolution of Issue

-We decided to create separate database connection class in case to improve maintainability.

7.2 Database connection

7.2.1 Description

-Our application should provide one stable connection to the database.

7.2.2 Factors affecting the issue

-Too many opened connections may get server go down.

7.2.3 Alternatives and their pros and cons

-For each client create separate database connection.

-Server may go down when number of connected clients grows up.

7.2.4 Resolution of the Issue

- We decided to create one single connection object using Singleton Pattern.

7.3 Administration

7.3.1 Description

-Only administrator should be allowed to add new users, and change their privileges

7.3.2 Problems affecting the Issue

-Staff should not be allowed to add new users.

-Customer/user has a function(registration) which is responsible for that issue.

7.3.3 Alternatives and their pros and cons

-Limit Administrator privileges and functionality

7.3.4 Resolution of the issue

-We decided to change users table structure to reduce the work.

Minutes of Meeting Form

Team #:
Date:

	Student Name (Initials)	Present?	Late > 5 mins?	Informed about absence?	Scribe?
1	Miras	✓	✗		
2	Temirlan	✓	✗		
3	Abay	✓	✗		
4	Milana	✓	✗		
	Tagzym	✓	✗		✓

	Student Name (Initials)	Old Action Item	Status
1	Miras &Temirlan	Web page	proccessing...
2	Milana&Abay	Android app	proccessing...
3	Tagzym	manage the groups and collect all the results. Organize next meeting	done by meeting
4			

Agenda / Discussion Summary

On the meeting all the results were discussed, problems solved and the work is continuing.

Web and Android app are in the proccess.

	Student Name (Initials)	New Action Item	Due Date
1	Tagzym&Abay	Android work	due to next meeting
2	Milana&Temirlan	Web work	due to next meeting
3	Miras	manage the groups and organize next meeting	due to next meeting
4			

Team Work Distribution Form

Assignment #: 7
Team #: AMTechnics
Date: 30.03.1

	Student Name (Initials)	Signature	% of total effort (adds to 100)	Lots of extra work?	Description of what done
1	Abay	✓	20	×	android
2	Miras	✓	20	×	Web
3	Temirlan	✓	20	×	Web
4	Tagzym	✓	20	×	manager
	Milana	✓	20	×	android