Chapter 1

Introduction

- Project Summary
- Purpose
- Scope

1.1 PROJECT SUMMARY:

Project Title: 2 Liners

Project Definition:

A Microblogging type of Android application which allows users to socializes thorough quotes/thoughts.

Project Profile:

Project Title	2 Liners
Organization	U V Patel College Of Engineering
Team Size	Two
Team Member	Viral Intwala & Trupal Patel
User Interface	Android Phone/ Tablet
OS Platform	Android
Project Platform	Eclipse
Front End	Java with Android SDK libraries

Advantages:

1. Unlike other microblogging sites longer posts up to 200 characters.
2. Choosing own favorites.
3. Sharing with Facebook.
4. Easy Navigation.

Disadvantages:

1. Requirement of Internet.

2 Liners

1.2 PURPOSE:

Project Objective:

- Our Main objective is to create a very simple and cute application by which a user can express his thoughts/Quotes to the World.

Detailed Objectives:

- As it is based on microblogging concept, the user can post about a length of 200 characters or less.
- Giving a simple and cute experience.
- Allowing a user to choose their favorites for later use.
- Allowing a user to like or dislike a post to describe the attitude of the post.
- Allowing a user to Rate a Post, so as to able to define the popularity of a post.
- Allowing a user to delete his/her own quotes.

1.3 SCOPE:

- To provide facility of reading Incoming SMS without touching the device.
- Checks the device profile mode before reading the SMS.
- Does not read the message when device is on silent mode.

CHAPTER 2

Feasibility Analysis

- Technical feasibility
- Time schedule feasibility
- Operational feasibility
- Implementation feasibility
- Economic feasibility

Feasibility Study:

A feasibility study is conducted to select the best system that meets performance requirement. This entails an identification description, an evaluation of candidate system and the selection of best system for the job. The system required performance is defined by a statement of constraints, the identification of specific system objective and a description of outputs.

The key consideration in feasibility analysis are:

1. Economic Feasibility
2. Technical Feasibility
3. Operational Feasibility
4. Time Schedule Feasibility
5. Implementation Feasibility

2.1 Economic Feasibility:

It looks at the financial aspect of the project. It determines whether the management has enough resources and budget to invest in the proposed system and the estimated time for the recovery of cost incurred. It also determines whether it is worthwhile to invest the money in the proposed project. Economic feasibility is determines by the means of cost benefit analysis. The proposed system is economically feasible because the cost involved in purchasing the hardware and the software are within approachable. The personal cost like salaries of employees hired are also nominal, because working in this system need not required a highly qualified professional. The operating-environment costs are marginal. The less time involved also helped in its economic feasibility.

This project of ours doesn't require much of financial recourses. We found that the only cost that this project will cost is for the Domain Holding on a private Server. Fortunately Our Company has the facility of providing the Hosting Services so they will provide us this facility at a reasonable cost.
So the Cost is feasible.

2.2 Technical Feasibility:

It is a measure of the practically of specific technical solution and the availability of technical resources and expertise.

The proposed system uses the android SDK 2.2 which is easy to lean in. These android tools are open source and thus are easily available in market.
Another thing the Facebook API that is also open source and easily available. In fact both these are easy to use and are already used in the development market widely.

The backend requires MySQL Database scheme that is also easy to use and easily available. The Admin Panel proposed uses the PHP Language to provide a smooth interface to the admin.

2.3 Operational Feasibility:

The system will be used if it is developed well then be resistance for users that undetermined:

No major training and new skills are required as it is based on SPIRAL model.

It will help in the time saving and fast processing and dispersal of user request and application.

New product will provide all the benefits of present system with better performance.

User involvement in the building of present system is sought to keep in mind the user specific requirement and needs.

User will have control over their own information.

2.4 Time Schedule Feasibility:

We have the flexibility of 16 weeks maximum for the project. The project objective itself states that it should be simple enough to operate 16 weeks were manageable.
The requirement analysis of the project is not a lengthy process maximum of 3 weeks were enough.
The main concern was the designing part, which after proper management we have concluded that it can take up to 4 weeks.
After that Coding part which we assumed to have occupy 6 weeks.
And for the remaining 3 weeks were opted for the testing of application.

2.5 Implementation Feasibility:

Studying the feasibility of how the project will be implemented is contained in this part.
The main points that were required for the development are as following:

- Lazy Adapter Loading.
- Facebook Sharing / Connection coding.
- Android Accounts manager for Full Synchronisation and Easy Registration.

These were the concerned points for implementation , but as we analysed them we came to know with a little modification and effort they can be achieved.

CHAPTER 3

Project Plan

- Schedule for activities
- Time Line Chart

3.1 SCHEDULES FOR ACTIVITIES:

WEEK MONTH	WEEK 1	WEEK 2	WEEK 3	WEEK 4
1st MONTH	Introduction to Organization, Introduction to PHP. Read e-books of PHP, MYSQL	Setup Dreamweaver, MySQL server Learning Development in PHP. Example carried out.	Introduction to JavaScript, Ajax, Jquery. Learning Development on above Examples.	Connecting to server. Learning. Examples.
2nd MONTH	Discuss the Project title with external guide, Analysis of the project, Feasibility check for the project.	Designing Backend DB. Implementing DB. Fill Sample Data. Prepare DB.	Designing Admin Panel. Finalizing Admin Panel Flow. Connecting to Server.	Coding the Admin Panel Coding the Admin Panel. Testing the Admin Panel with Sample Data.

3rd MONTH	Introduction to Android.	Connecting Android with PHP.	Create DFD for the application,	Retrieving Data to App.
	Studying Building block of the project.	Retrieving Data from PHP and Server DB.	Finalizing the UI flow.	Adding operation to App and changes to DB.
	Implementing examples on Building blocks.	Sending Data to PHP and DB from android.	Started Implementing App.	Making the Registration Activity.
4th MONTH	Building the main Sliding Menu for App.	Making the New Quote Activity.	Testing the Activity.	Defining Test Cases.
	Testing the Menu. Remove flaws.	Testing the activity. Remove flaws.	Finalizing the UI for app.	Test the application on the device or simulator,
	Learning Risks on the New quote Activity and the Settings Menu.	Making the Settings Activity.	Resolving UI issues..	Complete the application.

3.2 TIME LINE CHART:

Task List	Week 1	Week 2	Week 3	Week 4
***1.*Initial Phase**				
1.1 Requirement Gathering				
1.2 Feasibility Study				
Milestone(I.P.) completed				
***2.* Requirement Analysis**				
2.1 Identify Flow Diagram				
2.2 Identify Constraints				
2.3 Finalize Requirements				
Milestone(R.A.) completed				
***3.* Project scheduling**				
***4.* Project Design**				
4.1 Conceptual Design				
4.2 Identify flow of project				
4.3 Identify Page layout				
Milestone(P.D.) completed				

Task List	Week 4	Week 6	Week 7	Week 8
***5.*Coding**				
5.1 Developing Admin Site				

Task List	Week 9	Week 10	Week 11	Week 12
5.2 Developing Client Site				

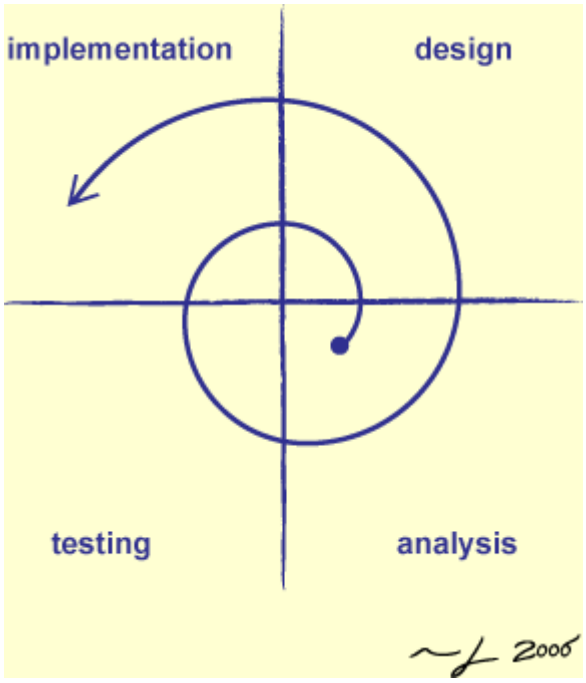
Task List	Week 13	Week 14	Week 15	Week 16
5.3 Developing css				
Milestone(Coding) achieved				
***6.* Testing**				
6.1 Unit testing				
6.2 Error Correction				
Milestone(Testing) achieved				

CHAPTER 4

PROCESS MODEL

4.0 PROCESS MODEL:

The ultimate objective of software engineering is to produce good quality maintainable software within reasonable time frame and at affordable cost. This is achievable only if we have matured processes to produce it. For a mature process, it should be possible to determine in advance how much time, cost and effort will be required to produce the final product. This can only be done using data from past experience, which requires that we must measure the software process.
A key component of any software development process is the life cycle model on which the process is based. Life cycle of the software starts from concept exploration and ends at the retirement of the software.



4.1 Spiral Model:

The spiral model is similar to the incremental model, with more emphases placed on risk analysis. The spiral model has four phases: Planning, Risk Analysis, Engineering and Evaluation. A software project repeatedly passes through these phases in iterations (called Spirals in this model). The baseline spiral, starting in the planning phase, requirements are gathered and risk is assessed. Each subsequent spiral builds on the baseline spiral. Requirements are gathered during the planning phase. In the risk analysis phase, a process is

undertaken to identify risk and alternate solutions. A prototype is produced at the end of the risk analysis phase. Software is produced in the engineering phase, along with testing at The end of the phase. The evaluation phase allows the customer to evaluate the output of the project to date before the project continues to the next spiral. In the spiral model, the angular component represents progress, and the radius of the spiral represents cost.

4.2 Spiral model sectors:

1. Objective setting: Specific objectives for the phase are Identified.

2. Risk assessment and reduction: Risks are assessed and Activities are put in place to reduce the key risks.

3. Development and validation: A development model For the system is chosen which can be any of the General models.

4. Planning: The project is reviewed and the next phase Of the spiral is planned

CHAPTER 5

System Requirements Study

- Requirements Analysis
- Functional Requirements
- Use Case Diagram
- Development Requirements

2 Liners

5.1 REQUIREMENT ANALYSIS:

Requirements analysis in systems engineering and software engineering, encompasses those tasks that determines the needs or conditions to meet for a new or altered product, taking account of the possibly conflicting requirements of the various stakeholders, such as beneficiaries or users.

Requirements analysis is critical to the success of a development project. Requirements must be documented, actionable, measurable, testable, related to identified business needs or opportunities, and defined to a level of detail sufficient for system design. Requirements can be architectural, structural, behavioral, functional, and non-functional.

Conceptually, requirements analysis includes three types of activity:

1. Eliciting requirements: the task of communicating with customers and users to determine what their requirements are. This is sometimes also called requirements gathering.

   After Gathering information from our customers, we conclude that people are more interested in other people that is what other people think, what others are doing. So we will provide a platform by which they can get this easily about the people they care about. We also concluded that not all the users are capable of handling complex designing and functions so this point has been taken as the prime objective of our project that is to keep it cute and simple.

2. Analyzing requirements: determining whether the stated requirements are unclear, incomplete, ambiguous, or contradictory, and then resolving these issues.

   As we decided to keep it simple silly the requirements we gathered are found to be legitimate and enough.

3. Recording requirements: Requirements might be documented in various forms, such as natural-language documents, use cases, user stories, or process specifications.

   The requirements are documented in the form of use cases and the project specifications. One can refer them in this project report.

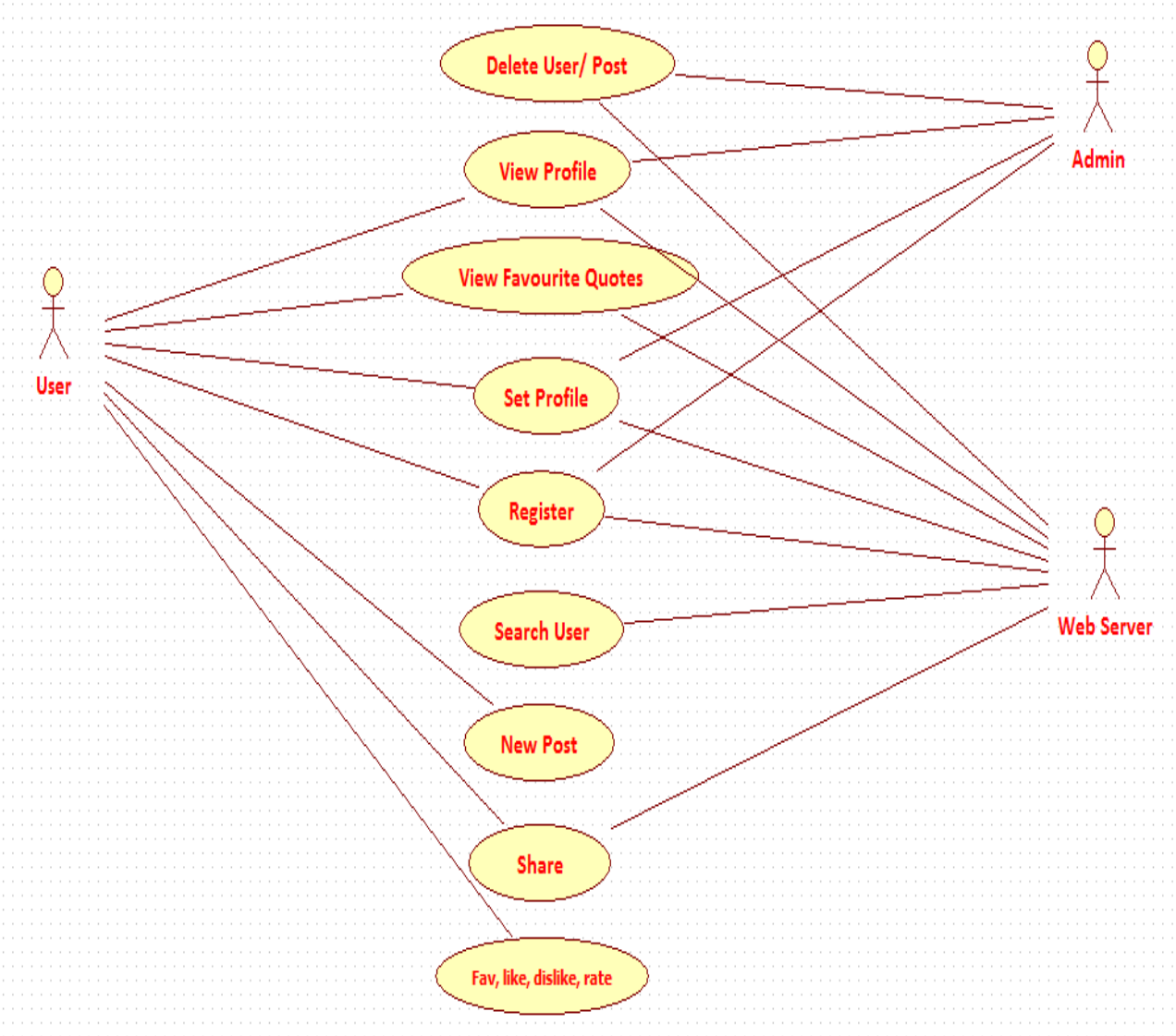
   After finalizing the requirements we have concluded that the project will require the following Basic tools and knowledge for the development:

   Knowledge: Developers – Android, Facebook API, Internet, PHP, MySQL.
   Tools: Eclipse, Dreamweaver, Xampp server, phpmyadmin.

5.2 FUNCTIONAL REQUIREMENTS:

	I/P	Functional Requirements	O/P
1	User Data.	Registration	New Account.
2	User Data	View Home Page	Data Requested
3	User Operation	Quote Operation	DB update.
4	User Data	Update Profile	DB Update.
5	Exit Request	Exit	Exit App.

5.3 USE CASE DIAGRAM:



5.4 DEVELOPMENT REQUIREMENTS:

1. Eclipse with ADT plugin.
2. Android SDK API level 8.

Back End Info:

Technology: MySQL Database.
Tools: PhpMyAdmin.

Admin Panel info:

Technology: PHP, Javascript, Ajax
Tools: Dreamweaver, Photoshop.

Front End info:

Technology: Android, PHP.
Tools: Dreamweaver, Photoshop, Eclipse, Youwave.

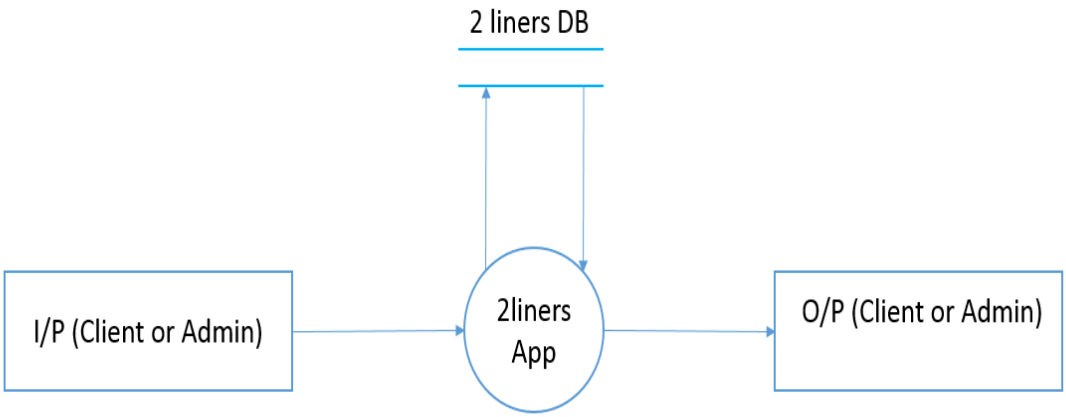
CHAPTER 6

SYSTEM DESIGN

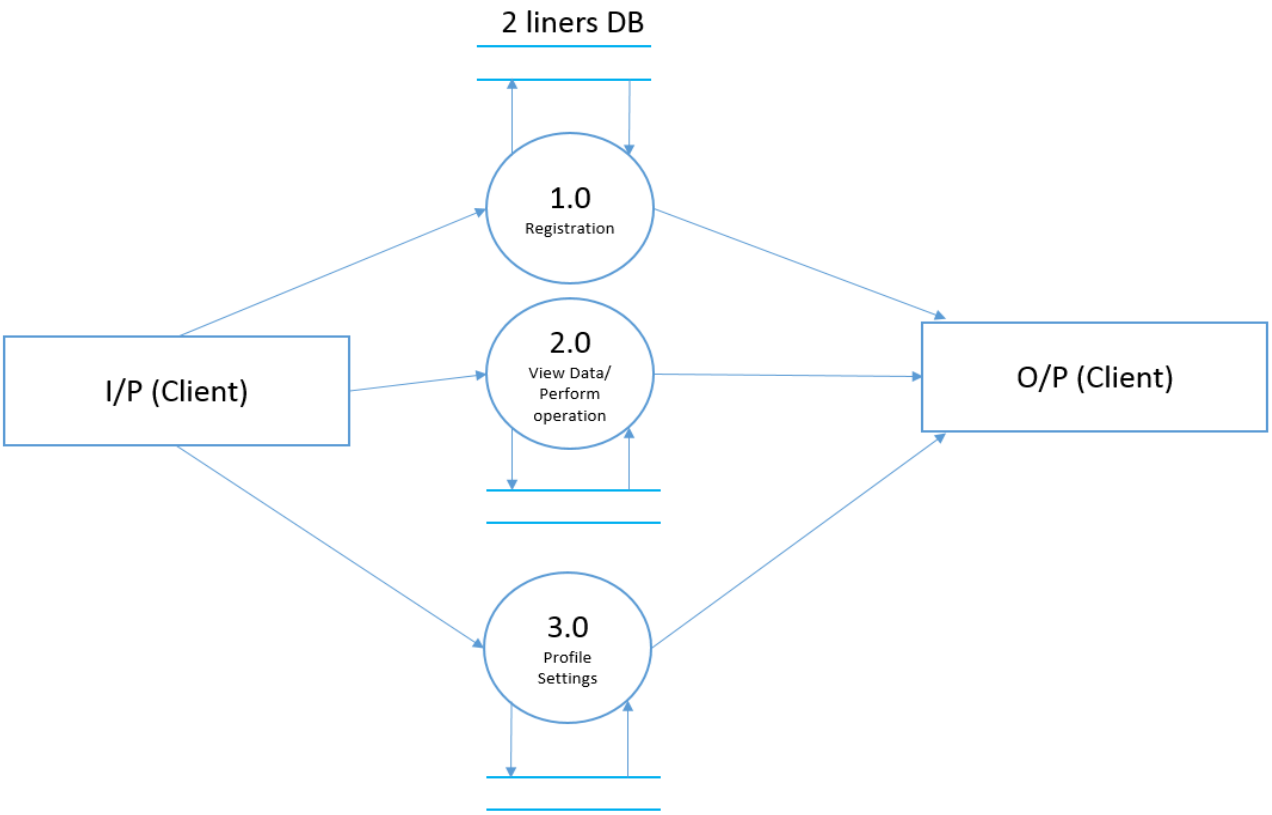
- Data Flow Diagrams
- Class Diagram, Sequence Diagram, Activity Diagram
- Data Dictionary
- UI Flow Diagram

6.1 DATA FLOW DIAGRAM:

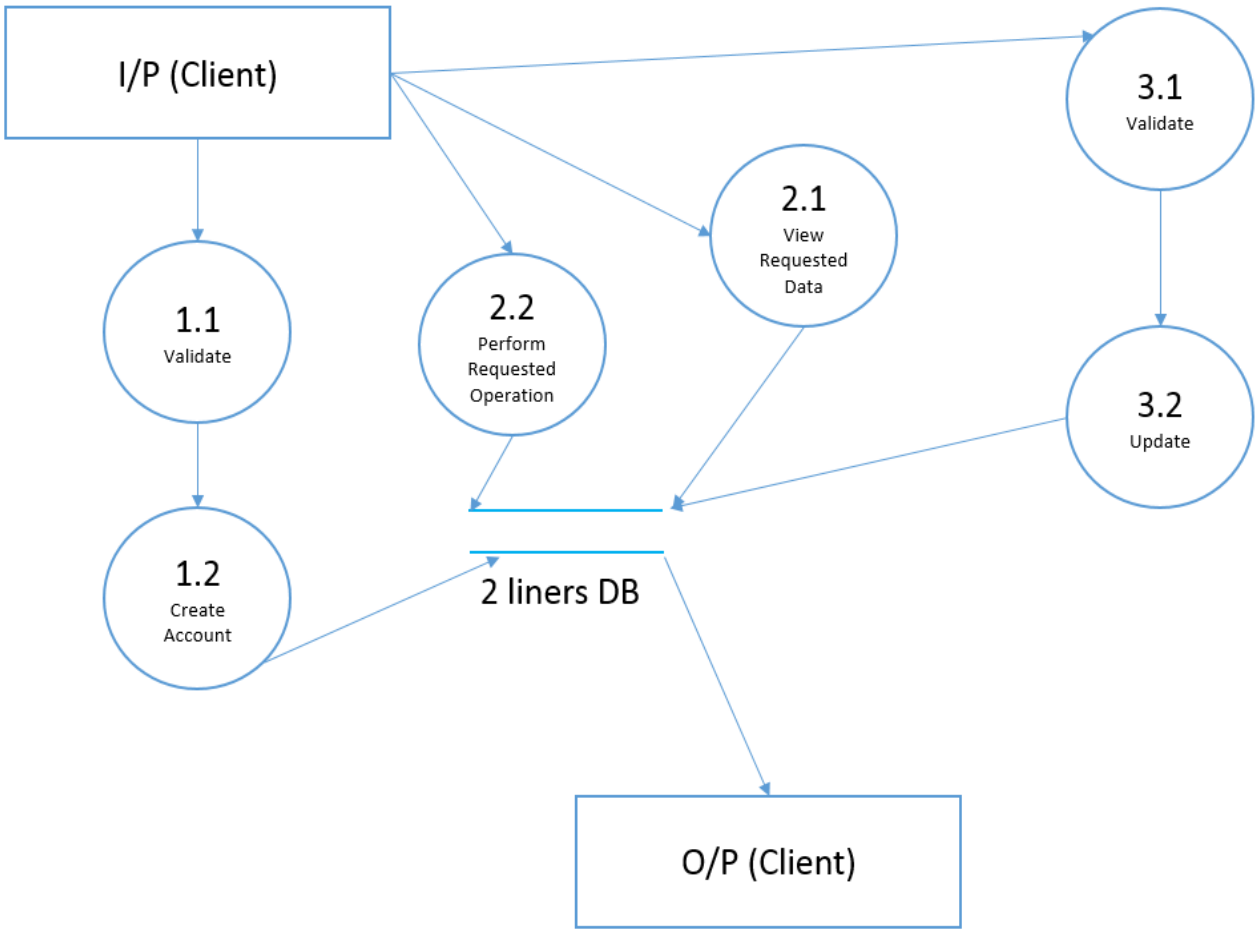
DFD Context Level:



DFD LEVEL 0

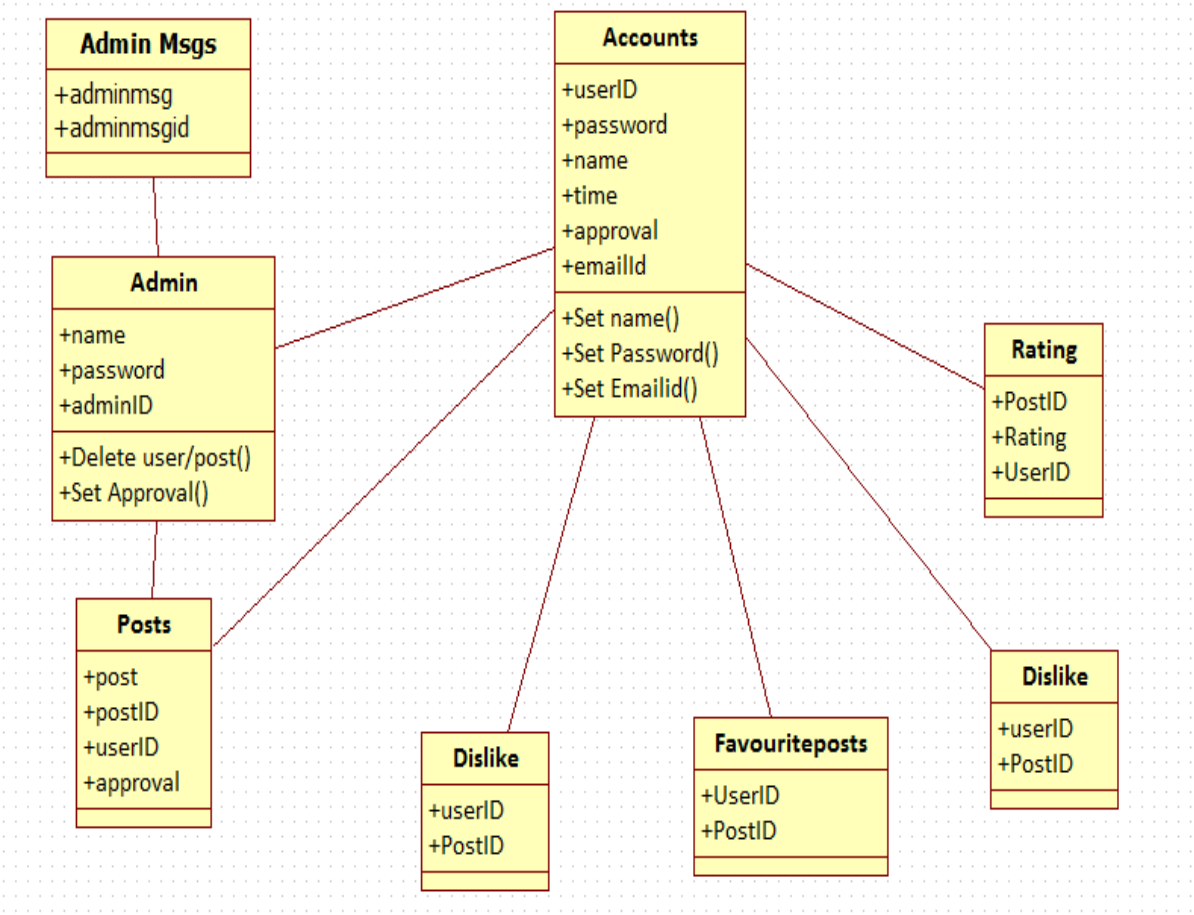


DFD LEVEL 1

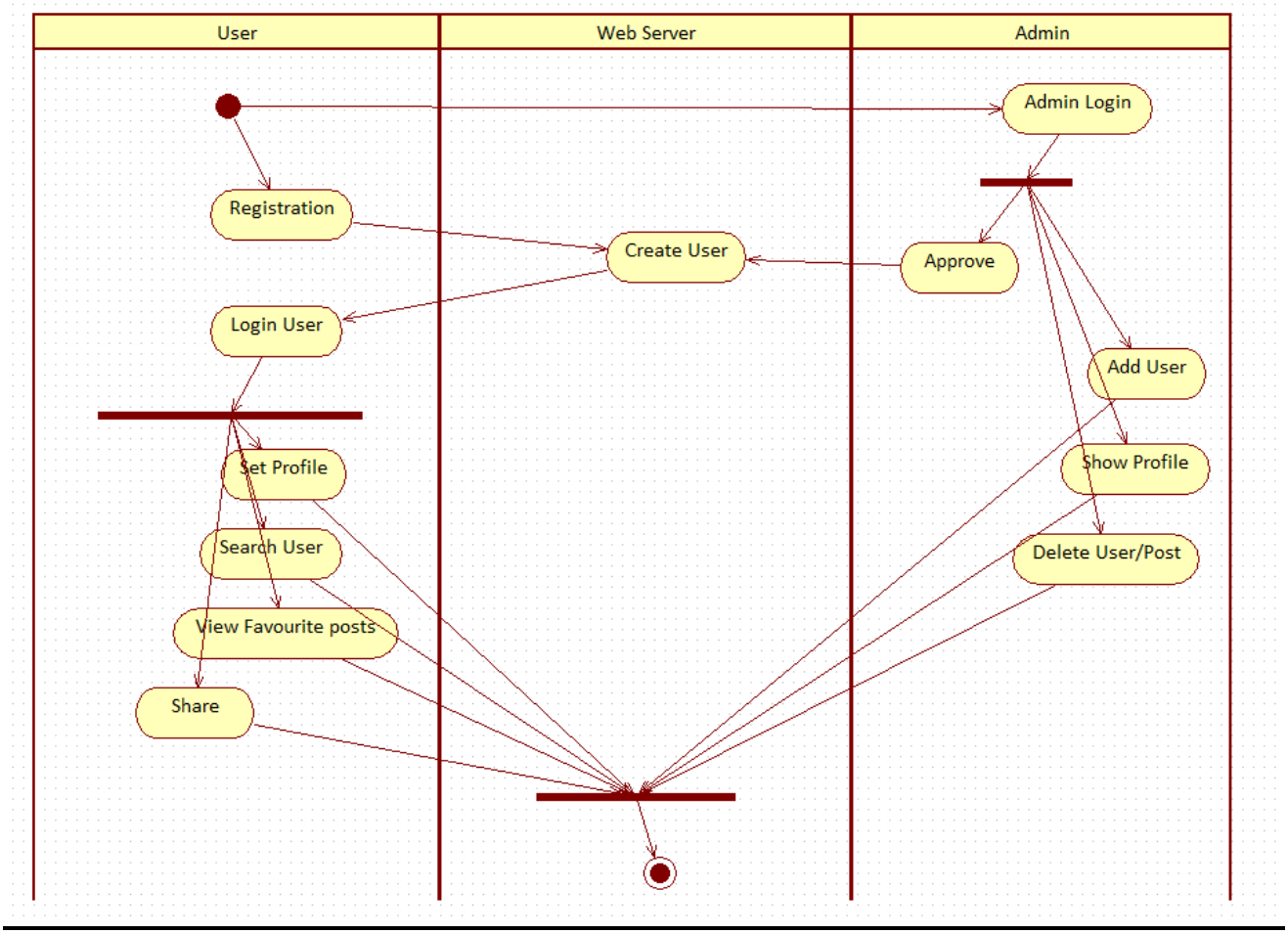

I/P (Client)
1.1
Validate
1.2
Create
Account
2.1
View
Requested
Data
2.2
Perform
Requested
Operation
3.1
Validate
3.2
Update
2 liners DB
O/P (Client)

6.2 CLASS, ACTIVITY, SEQUENCE DIAGRAMS:

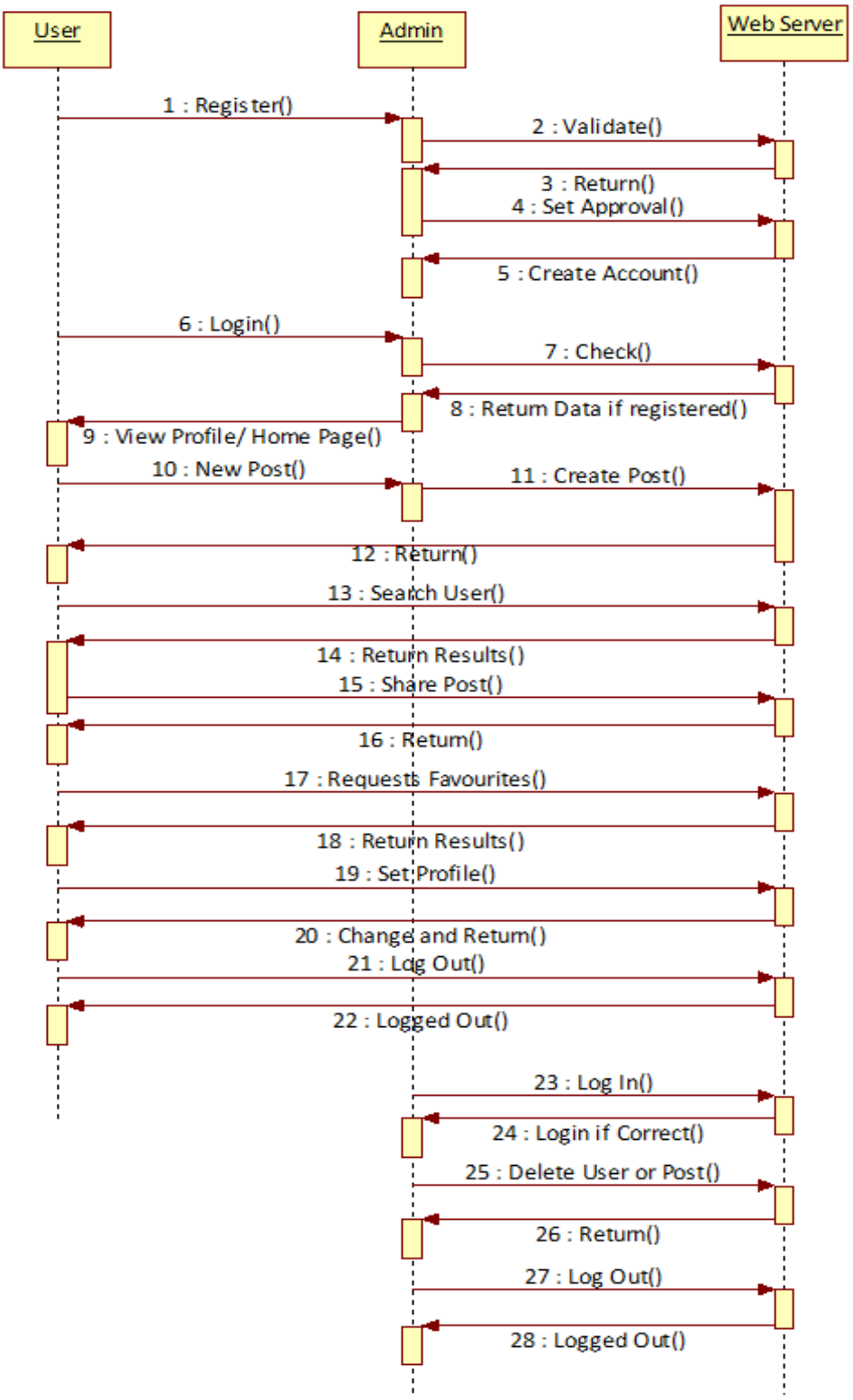
Class Diagram:



ACTIVITY DIAGRAM:



SEQUENCE DIAGRAM:

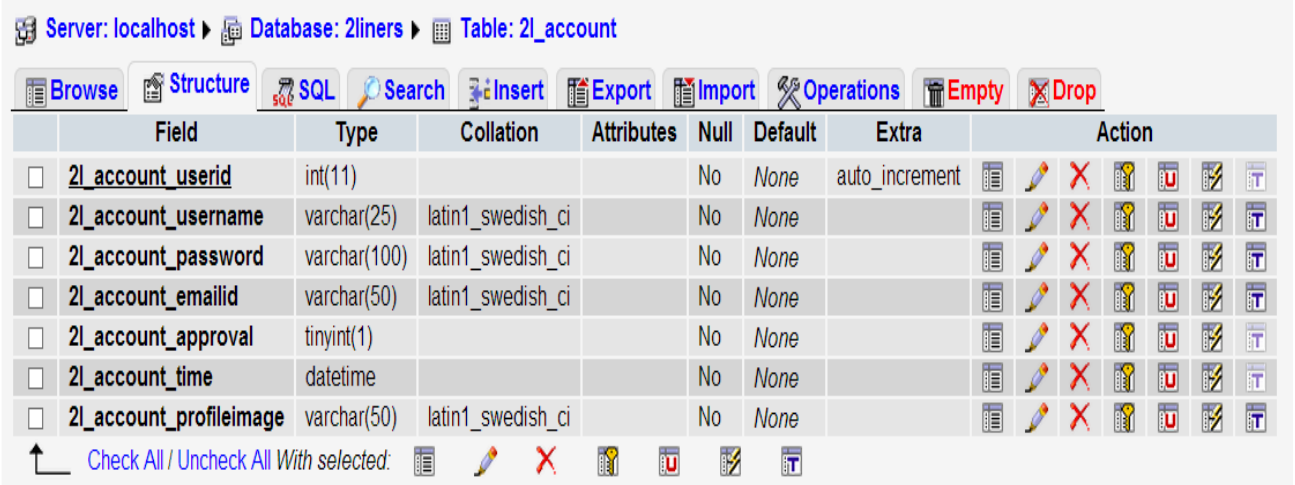


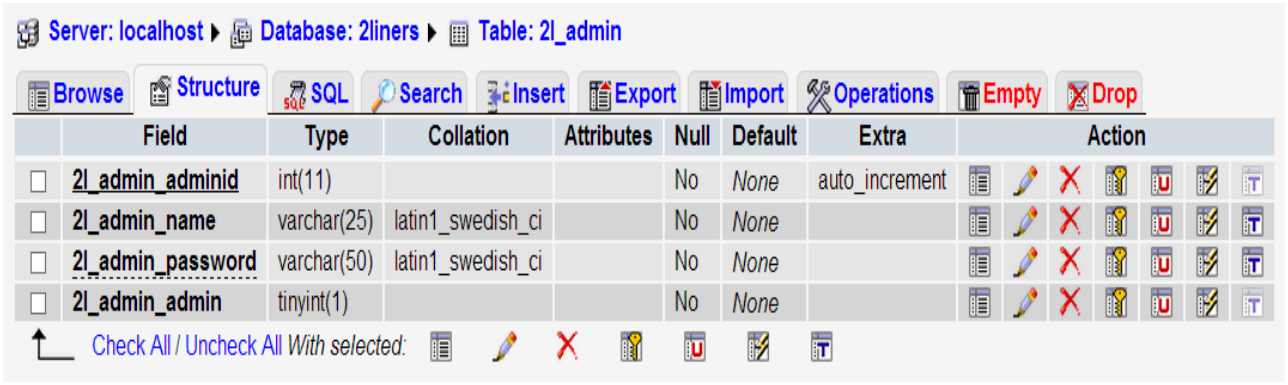
6.3 DATA DICTIONARY:

A data dictionary is a catalogue of the elements in the system. It includes list of all elements composing the data flowing through a system. The major elements are data flow, data stores, and processes. Data dictionary are data about data. It stores definitions and detail description of the data used in the system. It is important and useful because

- It is helpful to manage the details in large system.
- Helpful in communicating common meaning for all system elements.
- To document the feature of the system.
- To facilitate analysis of the details in order to evaluate characteristics and determine where system changes should be made.
- To locate error and omission in the system.

Data Dictionary Table:



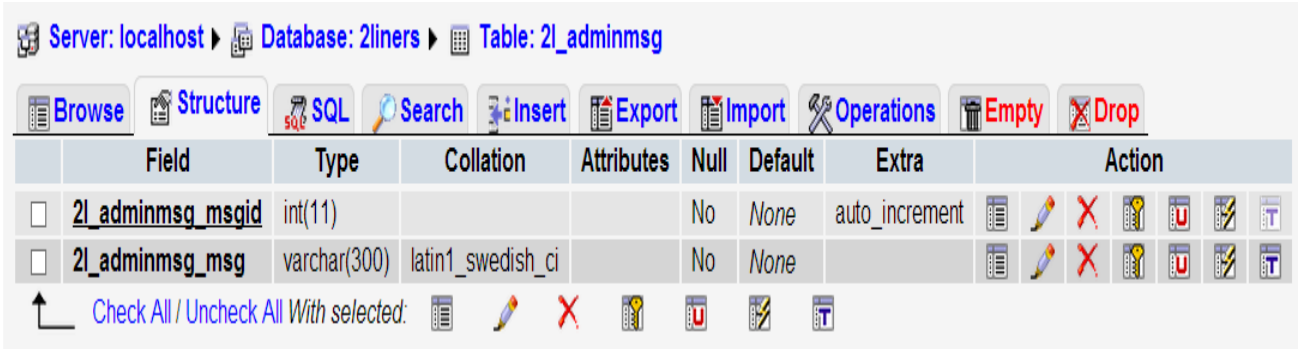


Server: localhost ▸ Database: 2liners ▸ Table: 2l_admin

Browse | Structure | SQL | Search | Insert | Export | Import | Operations | Empty | Drop

	Field	Type	Collation	Attributes	Null	Default	Extra	Action
☐	2l_admin_adminid	int(11)			No	None	auto_increment	
☐	2l_admin_name	varchar(25)	latin1_swedish_ci		No	None		
☐	2l_admin_password	varchar(50)	latin1_swedish_ci		No	None		
☐	2l_admin_admin	tinyint(1)			No	None		

Check All / Uncheck All With selected:



Server: localhost ▸ Database: 2liners ▸ Table: 2l_adminmsg

Browse | Structure | SQL | Search | Insert | Export | Import | Operations | Empty | Drop

	Field	Type	Collation	Attributes	Null	Default	Extra	Action
☐	2l_adminmsg_msgid	int(11)			No	None	auto_increment	
☐	2l_adminmsg_msg	varchar(300)	latin1_swedish_ci		No	None		

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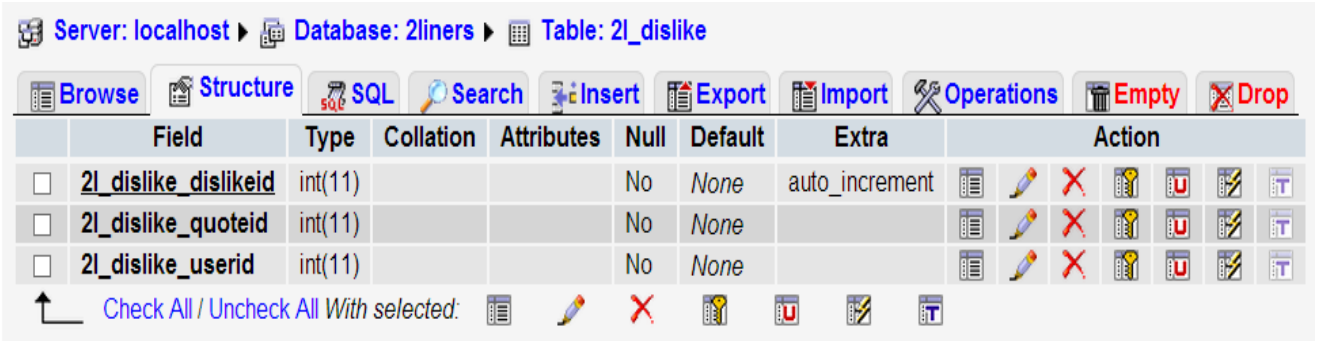
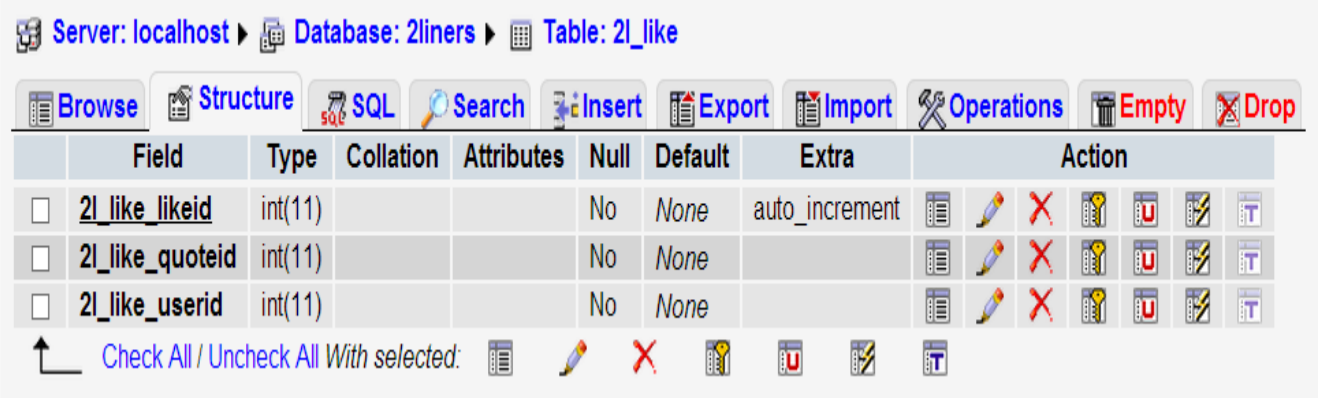


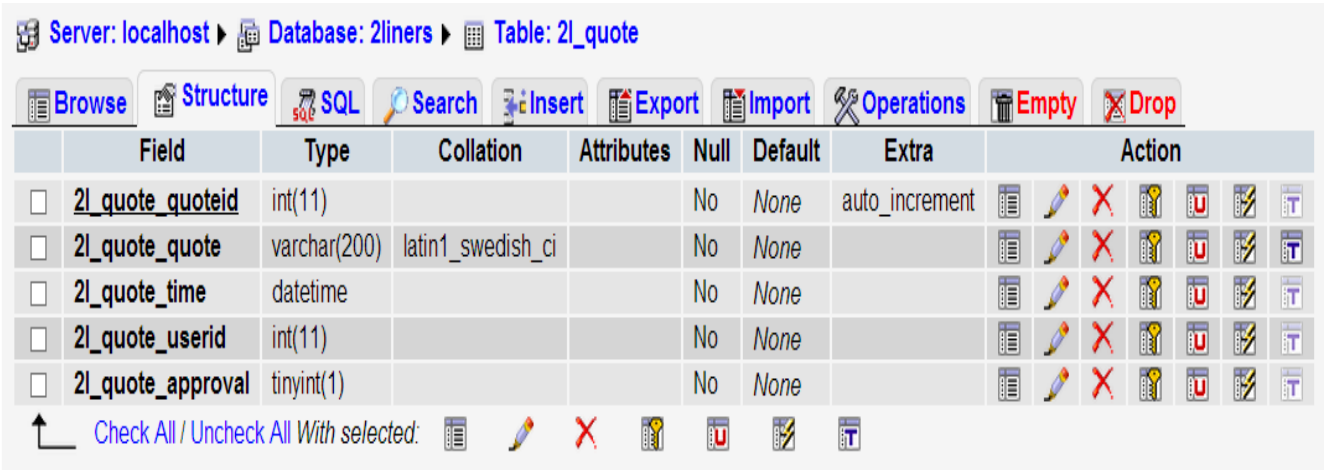
Server: localhost ▸ Database: 2liners ▸ Table: 2l_dislike

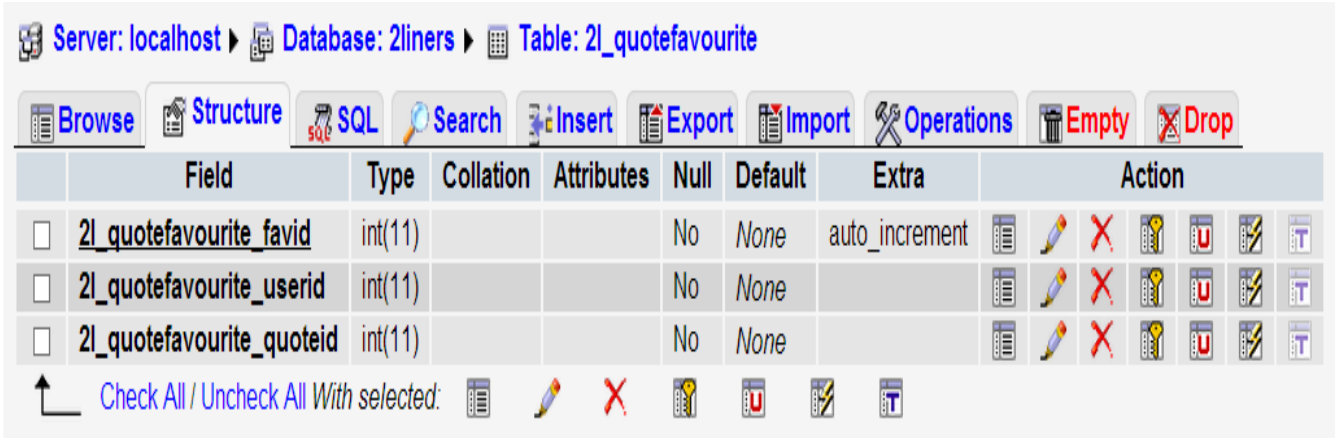
Browse | Structure | SQL | Search | Insert | Export | Import | Operations | Empty | Drop

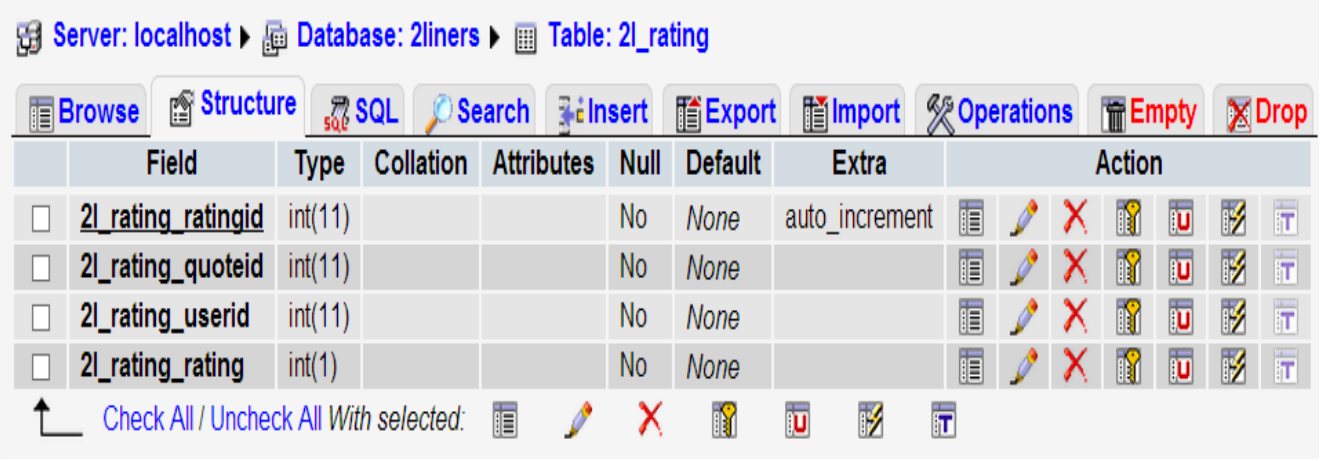
	Field	Type	Collation	Attributes	Null	Default	Extra	Action
☐	2l_dislike_dislikeid	int(11)			No	None	auto_increment	
☐	2l_dislike_quoteid	int(11)			No	None		
☐	2l_dislike_userid	int(11)			No	None		

Check All / Uncheck All With selected:

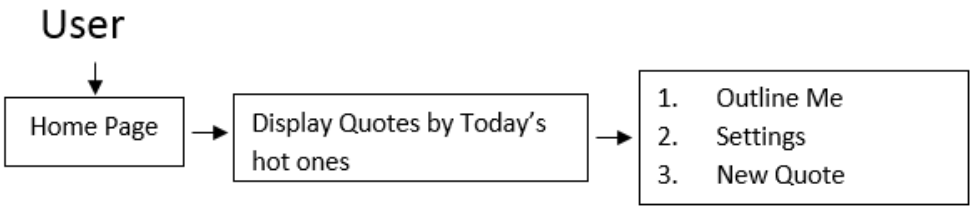

Server: localhost ▸ Database: 2liners ▸ Table: 2l_like
Browse
Structure
SQL
Search
Insert
Export
Import
Operations
Empty
Drop
Field
Type
Collation
Attributes
Null
Default
Extra
Action
2l_like_likeid
int(11)
No
None
auto_increment
2l_like_quoteid
int(11)
No
None
2l_like_userid
int(11)
No
None
Check All / Uncheck All With selected:

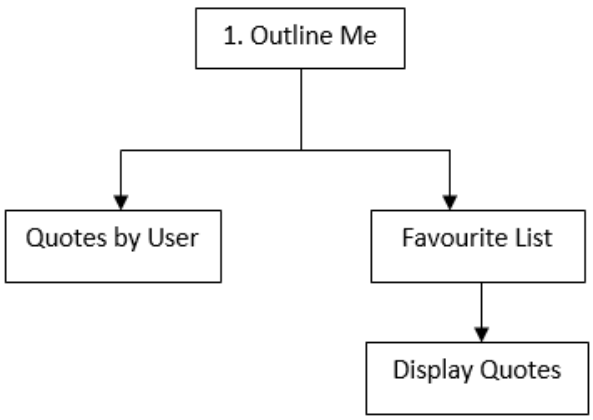

Server: localhost ▸ Database: 2liners ▸ Table: 2l_quote
Browse
Structure
SQL
Search
Insert
Export
Import
Operations
Empty
Drop
Field
Type
Collation
Attributes
Null
Default
Extra
Action
2l_quote_quoteid
int(11)
No
None
auto_increment
2l_quote_quote
varchar(200)
latin1_swedish_ci
No
None
2l_quote_time
datetime
No
None
2l_quote_userid
int(11)
No
None
2l_quote_approval
tinyint(1)
No
None
Check All / Uncheck All With selected:

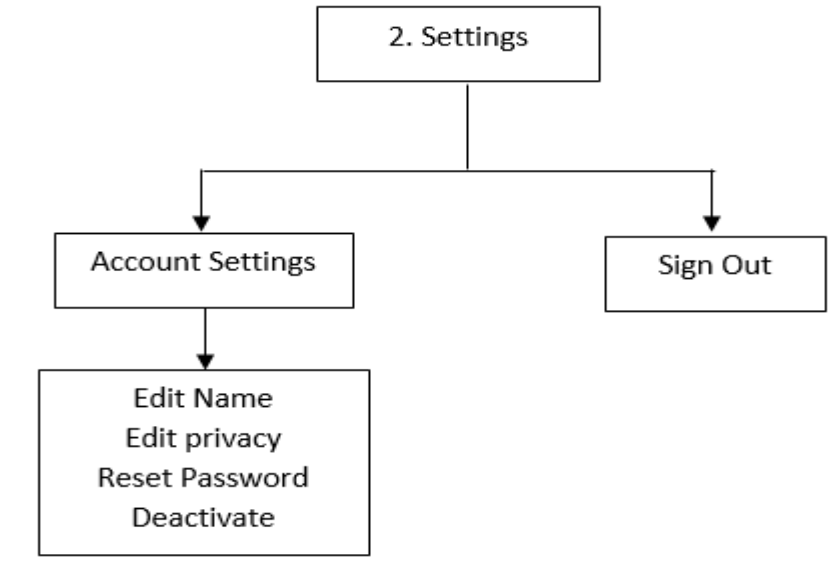

Server: localhost ▸ Database: 2liners ▸ Table: 2l_quotefavourite
Browse
Structure
SQL
Search
Insert
Export
Import
Operations
Empty
Drop
Field
Type
Collation
Attributes
Null
Default
Extra
Action
2l_quotefavourite_favid
int(11)
No
None
auto_increment
2l_quotefavourite_userid
int(11)
No
None
2l_quotefavourite_quoteid
int(11)
No
None
Check All / Uncheck All With selected:

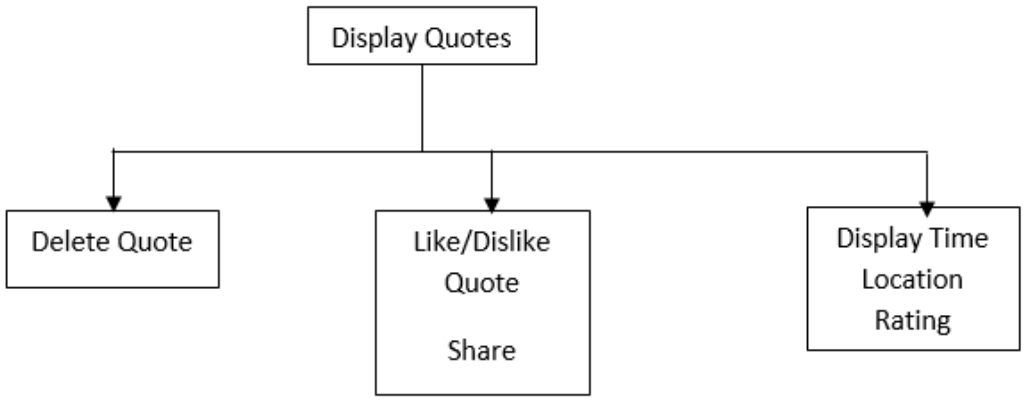


6.4 UI FLOW DIAGRAM:






2. Settings
Account Settings
Sign Out
Edit Name
Edit privacy
Reset Password
Deactivate


Display Quotes
Delete Quote
Like/Dislike
Quote
Share
Display Time
Location
Rating

CHAPTER 7

IMPLEMENTATION DETAILS

- Detail Explanation
- Building Blocks
- Algorithms

7.1 DETAIL EXPLANATION:

Steps carried out for implementing the Project.
The project Designing contains three major Milestones or Objective.

The Backend:

The Design of the database comes naturally first. The database is built upon the MySQL DB. As you will see further the tables finalised are in the Data Dictionary. Admin and client both are separate tables.

- MySQL is a database system used on the web
- MySQL is a database system that runs on a server
- MySQL is ideal for both small and large applications
- MySQL is very fast, reliable, and easy to use
- MySQL supports standard SQL
- MySQL compiles on a number of platforms
- MySQL is free to download and use
- MySQL is developed, distributed, and supported by Oracle Corporation

PHP combined with MySQL are cross-platform (you can develop in Windows and serve on a Unix platform)

The Admin Panel:

The admin panel is built on PHP language. The different code snippets in that are Login, Dashboard, View Users, and View Quotes.

PHP is a server scripting language, and is a powerful tool for making dynamic and interactive Web pages. PHP is a widely-used, free, and efficient alternative to competitors such as Microsoft's ASP.

- PHP stands for PHP: Hypertext Preprocessor
- PHP is a widely-used, open source scripting language
- PHP scripts are executed on the server
- PHP is free to download and use
- PHP files can contain text, HTML, JavaScript code, and PHP code
- PHP code are executed on the server, and the result is returned to the browser as plain HTML
- PHP files have a default file extension of ".php"
- PHP can generate dynamic page content
- PHP can create, open, read, write, and close files on the server
- PHP can collect form data
- PHP can send and receive cookies

- PHP can add, delete, modify data in your database
- PHP can restrict users to access some pages on your website
- PHP can encrypt data

The login of admin panel is based on session in php. Validations on the login page are done by AJAX script.
Call to AJAX script runs a php file which contains validations. Those validations can be implemented as for example if (username==null) -> // do this exit;

The Dashboard contains the main function that a admin can do. A simple image link is given to every function on the dashboard. A simple link can be given by an anchor tag.
Example View Users .

Users are shown to the Admin by running a php script to fetch data form the database. Every user has three operation that are given by a link. Links are given as shown in the above example.

Same for Quotes as done in the View for users.

To fetch data from the database from php to php we can use MYSQL functions.
Such as sqlconnect to create a connection with the database.
Mysqlquery can be used to run a query for desired operation. Operation includes ADD, DELETE, and UPDATE.

The Frontend:

As our application is based upon android. The Android SDK is used in the development of the application.
Android powers hundreds of millions of mobile devices in more than 190 countries around the world. It's the largest installed base of any mobile platform and growing fast—every day another million users power up their Android devices for the first time and start looking for apps, games, and other digital content.

Android gives you a world-class platform for creating apps and games for Android users everywhere, as well as an open marketplace for distributing to them instantly.

Android gives you everything you need to build best-in-class app experiences. It gives you a single application model that lets you deploy your apps broadly to hundreds of millions of users across a wide range of devices—from phones to tablets and beyond.

Android also gives you tools for creating apps that look great and take advantage of the hardware capabilities available on each device. It automatically adapts your UI to look its best on each device, while giving you as much control as you want over your UI on different device types.

For example, you can create a single app binary that's optimized for both phone and tablet form factors. You declare your UI in lightweight sets of XML resources, one set for parts of

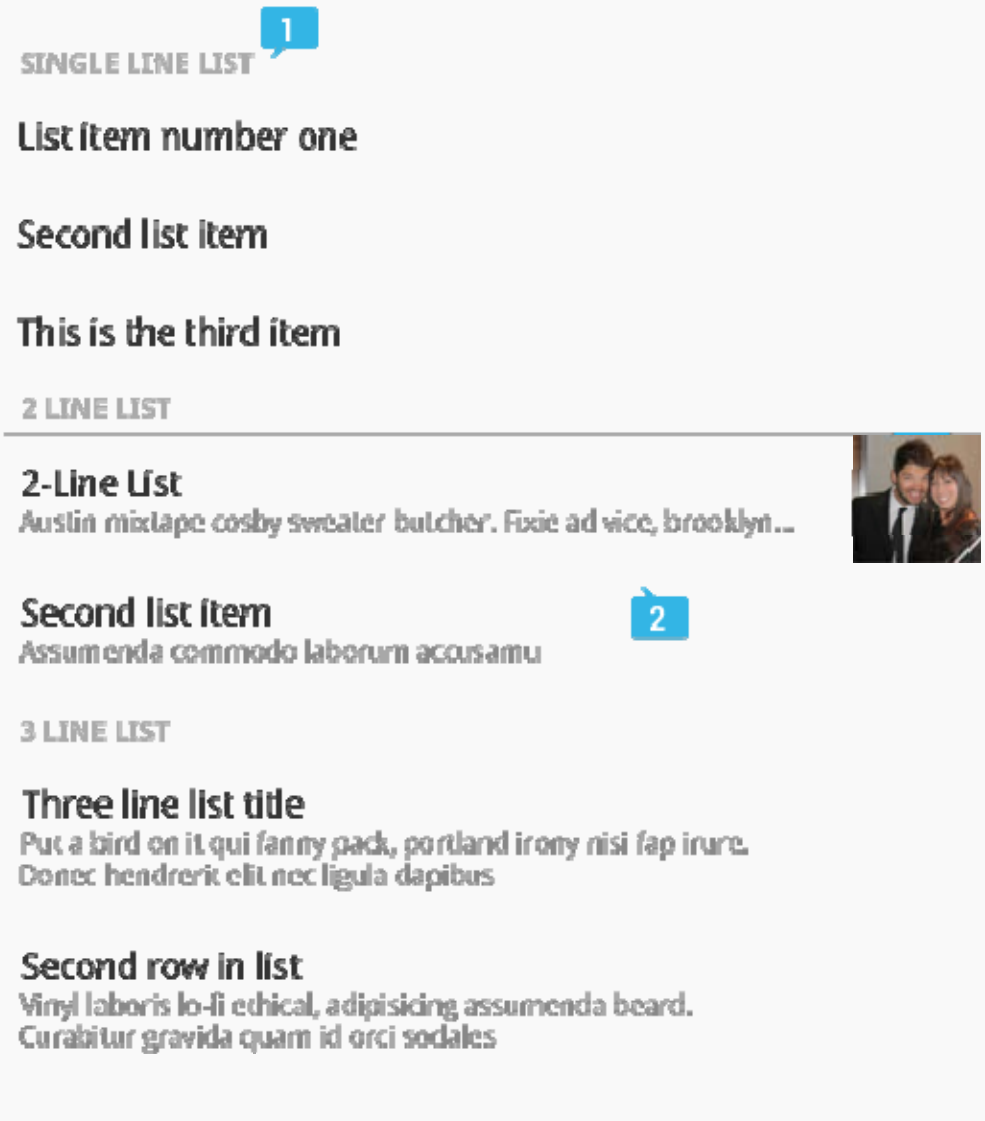
the UI that are common to all form factors and other sets for optimzations specific to phones or tablets. At runtime, Android applies the correct resource sets based on its screen size, density, locale, and so on.

To help you develop efficiently, the Android Developer Tools offer a full Java IDE with advanced features for developing, debugging, and packaging Android apps. Using the IDE, you can develop on any available Android device or create virtual devices that emulate any hardware configuration.

7.2 BUILDING BLOCKS :

1. **Lists**

Lists present multiple line items in a vertical arrangement. They can be used for data selection as well as drilldown navigation.



- Section Divider

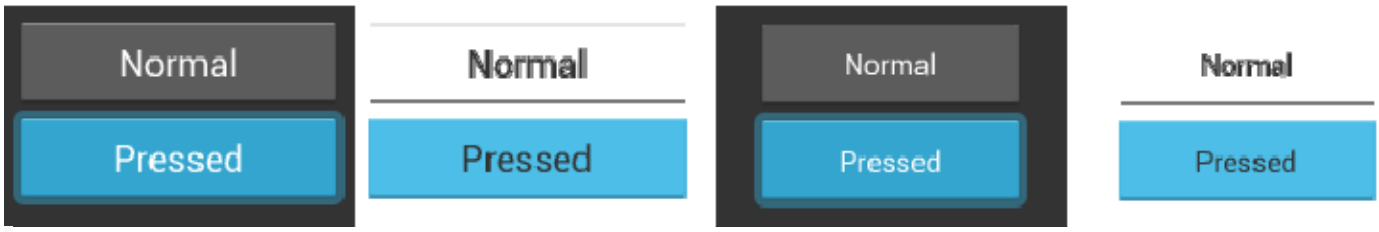
  Use section dividers to organize the content of your list into groups and facilitate scanning.

- Line Items

  List items can accommodate a wide range of data types in different arrangements, including simple single-line items, multi-line items, and custom items with icons, checkboxes, and action buttons.

2. Basic Buttons

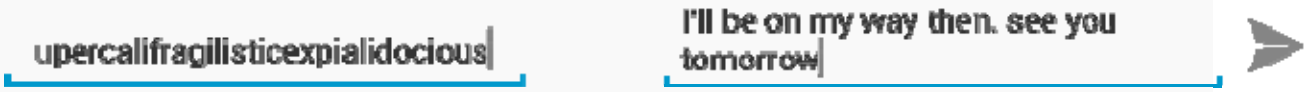
Basic buttons are traditional buttons with borders and background. Android supports two styles for basic buttons: default and small. Default buttons have slightly larger font size and are optimized for display outside of form content. Small buttons are intended for display alongside other content. They have a smaller font and smaller minimum height. Use small buttons in forms where they need to align with other UI elements.



Default buttons in Holo Dark & Light.
Small buttons in Holo Dark & Light.

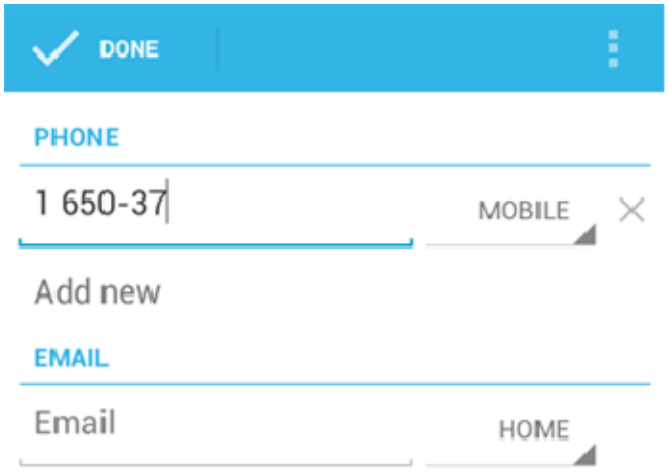
3. Text fields:

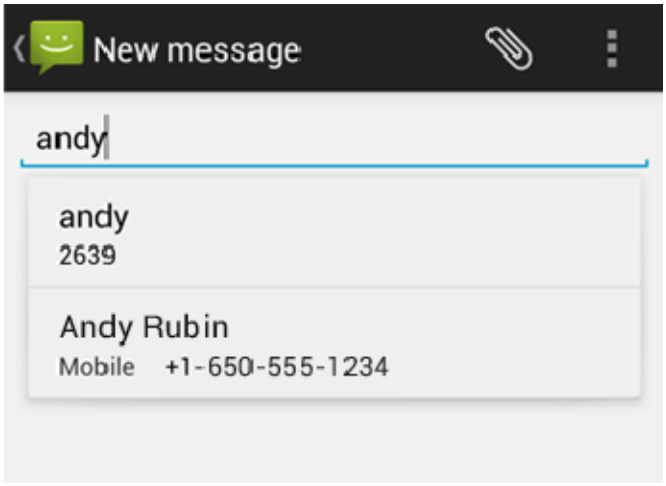
Text fields allow the user to type text into your app. They can be either single line or multi-line. Touching a text field places the cursor and automatically displays the keyboard. In addition to typing, text fields allow for a variety of other activities, such as text selection (cut, copy, paste) and data lookup via auto-completion.



Single line and multi line

Single-line fields automatically scroll their content to the left as the text input cursor reaches the right edge of the input field. Multi-line text fields automatically break to a new line for overflow text and scroll vertically when the cursor reaches the lower edge.

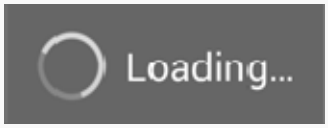




4. Activity circle

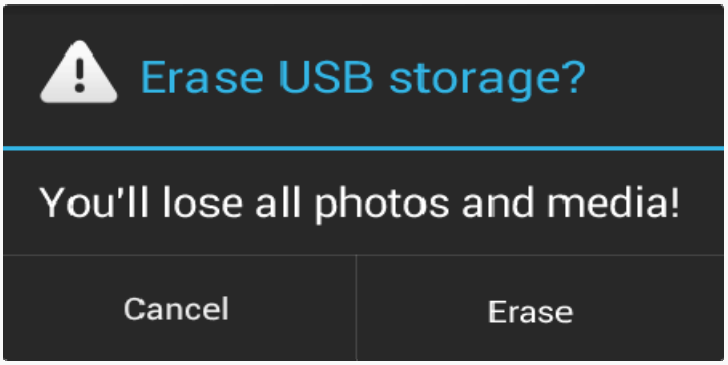
In this example, an activity circle (in Holo Light) is used in the Gmail application when a message is being loaded because it's not possible to determine how long it will take to download the email.

When displaying an activity circle, do not include text to communicate what the app is doing. The moving circle alone provides sufficient feedback about the delay, and does so in an understated way that minimizes the impact.



5. Alerts without title bars

Most alerts don't need titles. Usually the decision doesn't have a severe impact and can be summed up succinctly in a sentence or two. The content area should either ask a question (such as "Delete this conversation?") or make a clear statement whose relationship to the action buttons is obvious.

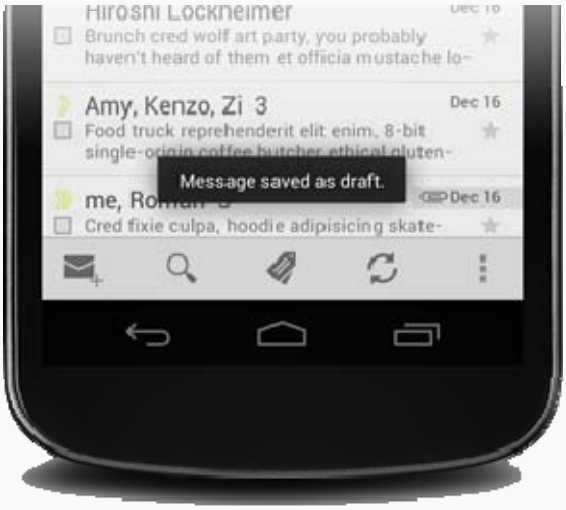


Alerts with title bars

Use alerts with title bars sparingly. They are appropriate only when a high-risk operation involving potential loss of data, connectivity, extra charges, and so on requires a clear question or statement (the title) and some additional explanation (in the content area).

Keep the question or statement short: for example, "Erase USB storage?" Avoid apologies. A user should be able to skip the content completely and still have a clear idea of what choices are available based on the title and the text of the action buttons.

Toasts provide lightweight feedback about an operation in a small popup. For example, navigating away from an email before you send it triggers a "Draft saved" toast to let you know that you can continue editing later. Toasts automatically disappear after a timeout.



7.3 ALGORITHMS :

1. The Lazy Adapter :

If you are dynamically adding content to your ListView then it is better to load things in pieces. If you are loading 100 row entries from the internet, then it would make sense to load 10 at a time. When the user scrolls to the bottom of the screen, then load another 10. Loading this way (called Lazy Loading) will save the user power on their phone as well as bandwidth. With tight phone plans, a user will be angry to download all 100 entries when they only read 15 of them!

2. The php and database connector:

This algorithm is used for retrieving and sending data to Database to php to android and vice versa. The main advantage of this algo is that it uses the namevalue pair that is used for posting data to the server. This method is similar to that In web development's POST. So data cannot be breached.
Now to retrieve the data the algo uses JSON Technology. Which helps manage the retrieved data very easily.

JSON is built on two structures:

- A collection of name/value pairs. In various languages, this is realized as an object, record, struct, dictionary, hash table, keyed list, or associative array.
- An ordered list of values. In most languages, this is realized as an array, vector, list, or sequence.

These are universal data structures. Virtually all modern programming languages support them in one form or another. It makes sense that a data format that is interchangeable with programming languages also be based on these structures.

CHAPTER 8

TESTING

- Testing Strategy
- Testing Methods
- Test cases and test results

8.1 TESTING STRATEGY

Software products are normally tested first at the individual component (or unit) level (called unit testing), also referred to as “Testing in the Small”. Then the components are slowly integrated and tested at each level of integration (known as Integration Testing).Finally, the fully integrated system is tested (called System Testing). Integration and system testing are known as “Testing in the Large”.
Thus, a software product goes through two levels of testing:

- Unit Testing
- System Testing

Unit Testing:

In unit testing the analyst tests the programs making up a system. For this reason, unit testing is sometimes called program testing. Unit testing gives stress on the modules independently of one another, to find errors. This helps the tester in detecting errors in coding and logic that are contained within that module alone. The errors resulting from the interaction between modules are initially avoided. For example, a hotel information system consists of modules to handle reservations; guest check in and check out; restaurant, room service and miscellaneous charges; convention activities; and accounts receivable billing. For each, it provides the ability to enter, modify or retrieve data and respond to different types of inquiries or print reports. The test cases needed for unit testing should exercise each condition and option.

Unit testing can be performed from the bottom up, starting with smallest and lowest-level modules and proceeding one at a time. For each module in bottom-up testing a short program is used to execute the module and provides the needed data, so that the module is asked to perform the way it will when embedded within the larger system.

System Testing:

The important and essential part of the system development phase, after designing and developing the software is system testing. We cannot say that every program or system design is perfect and because of lack of communication between the user and the designer, some error is there in the software development. The number and nature of errors in a newly designed system depend on some usual factors like communication between the user and the designer; the programmer's ability to generate a code that reflects exactly the systems specifications and the time frame for the design.

Theoretically, a newly designed system should have all the parts or sub-systems are in working order, but in reality, each sub-system works independently. This is the time to gather all the subsystem into one pool and test the whole system to determine whether it meets the user requirements. This is the last change to detect and correct errors before the system is

installed for user acceptance testing. The purpose of system testing is to consider all the likely variations to which it will be subjected and then push the system to its limits.

Testing is an important function to the success of the system. System testing makes a logical assumption that if all the parts of the system are correct, the goal will be successfully activated. Another reason for system testing is its utility as a user-oriented vehicle before implementation.

System testing consists of the following five steps:

- Program Testing
- String Testing
- System Testing
- System Documentation
- User Acceptance Testing

8.2 TESTING METHODS

Software Testing involves executing an implementation of the software with test data and examining the outputs of the software and its operational behavior to check that it is performing as required.

Statistical Testing:

Statistical Testing is used to test the program's performance and reliability and to check how it works under operational conditions. Tests are designed to reflect the actual user inputs and their frequency.

The stages involved in the static analysis for this system are follows.

- **Control flow analysis**
  - Unreachable code
  - Unconditional branches into loops
- **Data use analysis**
  - Variable used before initialization
  - Variables declared but never used
  - Variables assigned twice but never used between assignments
  - Possible array bound violations
  - Declared variables
- **Interface analysis**
  - Parameter type mismatches
  - Parameter number mismatches
  - Non-usage of the results of functions
  - Uncalled functions and procedures
- **Storage management faults**
  - Images not Stored in Resources
  - Out of Bound -Program's non-volatile memory

Black-Box Testing:

In Black-Box Testing also called as **Functional Testing**, Developer are concerned about the output of the module and software, i.e. whether the software gives proper output as per the requirements or not. The program just gets a certain input and its functionality is examined by observing the output.

In our project we have done the testing as follows:

- We have tested our functions of component to check the specification of our components.
- We selected input set to test the component like in query process we gave the different kinds of inputs to examine the output.
- We test software with sequences that have only single value.
- We used different sequences of different sizes in different tests.

White-Box Testing:

White Box Testing is also called 'Glass Box' or 'Structural' testing. The intention in white box testing is to ensure that all possible feasible flows of control paths through a subprogram are traversed while the software is under test.

We have done path testing to exercise every independent execution path through a component or program. If every independent path is executed then all statements in the components must have been executed at least once.

We checked graphics module and database access module, which have independent execution path. They are not related to each other. The structure of our program is also checked.

Integration Testing:

After our individual procedures of system ware tested out, we integrate them to create a complete system. This integration process involves building the system and testing the resultant system for problems that arise from component interactions.

We have applied top-down strategy to validate high-level components of a system before design and implementations have been completed. Because our development process started with high-level components, we worked down the component hierarchy.

Performance Testing:

Performance testing is designed to test the runtime performance of the system within the context of the system. These tests were performed module level as well as system level. Individual modules were tested for required performance.

- In performance testing we counted the processing time and response of operation.
- We also checked out the total execution time for intersection file creation.

Interface Testing:

Interface testing is integral part of Integration testing. Therefore Developer checked for the following:

- Interface misuse.
- Interface misunderstanding.

We examined the code to be tested and explicitly list each call to an external component. In the system, standards tests for GUIs have been performed, which are as follows.

- The position and related labels for all controls checked.
- All menu functions and sub functions verified for correctness.
- Validations for all inputs done.
- Each menu functions tested, whether it invokes the corresponding functionality properly.
- Whether the system prompts the user with appropriate message as and when invalid information is entered.

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Object Testing:

Object testing is to test object as individual components, which are often larger than single function. Here following activities have taken place,

- Testing the individual operations associated with object
- Testing individual object classes
- Testing cluster of objects
- Testing object-oriented system

CONDITION TESTING:-

Coding testing is a test case design method that exercises the logical conditions contained in a program module. If the condition is incorrect, then as least one component of the condition is incorrect. It may include

- Boolean operator error
- Boolean variable error
- Relational operator error
- Arithmetic expression error

VALIDATION TESTING:-

Validation Testing is completely associated with requirement satisfaction of customers. According to this test, the project is tested and found to be satisfactory for functional characteristics, behavioural characteristics and performance requirement. It is also found to have good documentation up to the last stage. So, the performance characteristics conform to specification and are accepted.

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8.3 TEST CASES AND TEST RESULTS:

Test Case ID	Scenario Name	Pre-Conditions	Steps to test along with data
TCI-1	Testing Registration.	Database clean slate.	Validation, Upload pic, Account Creation.
TCI-2	Testing Registration	Already A data similar to the data to be entered.	Same as Above but with no Account Creation.
TCI-3	Testing Operations.	Sample Quotes Data with already performed operations.	Update the view in app and Database both.
TCI-4	Testing Sharing Operation.	A quote in DB to Share	Connection to FB, Posting to FB.
TCI-5	Testing Update Profile Operation	A user who is already registered.	Update in the DB along with View on app.
TCI-6	Testing Admin Msgs View.	Admin Msgs in DB.	

CHAPTER 9

USER MANUAL

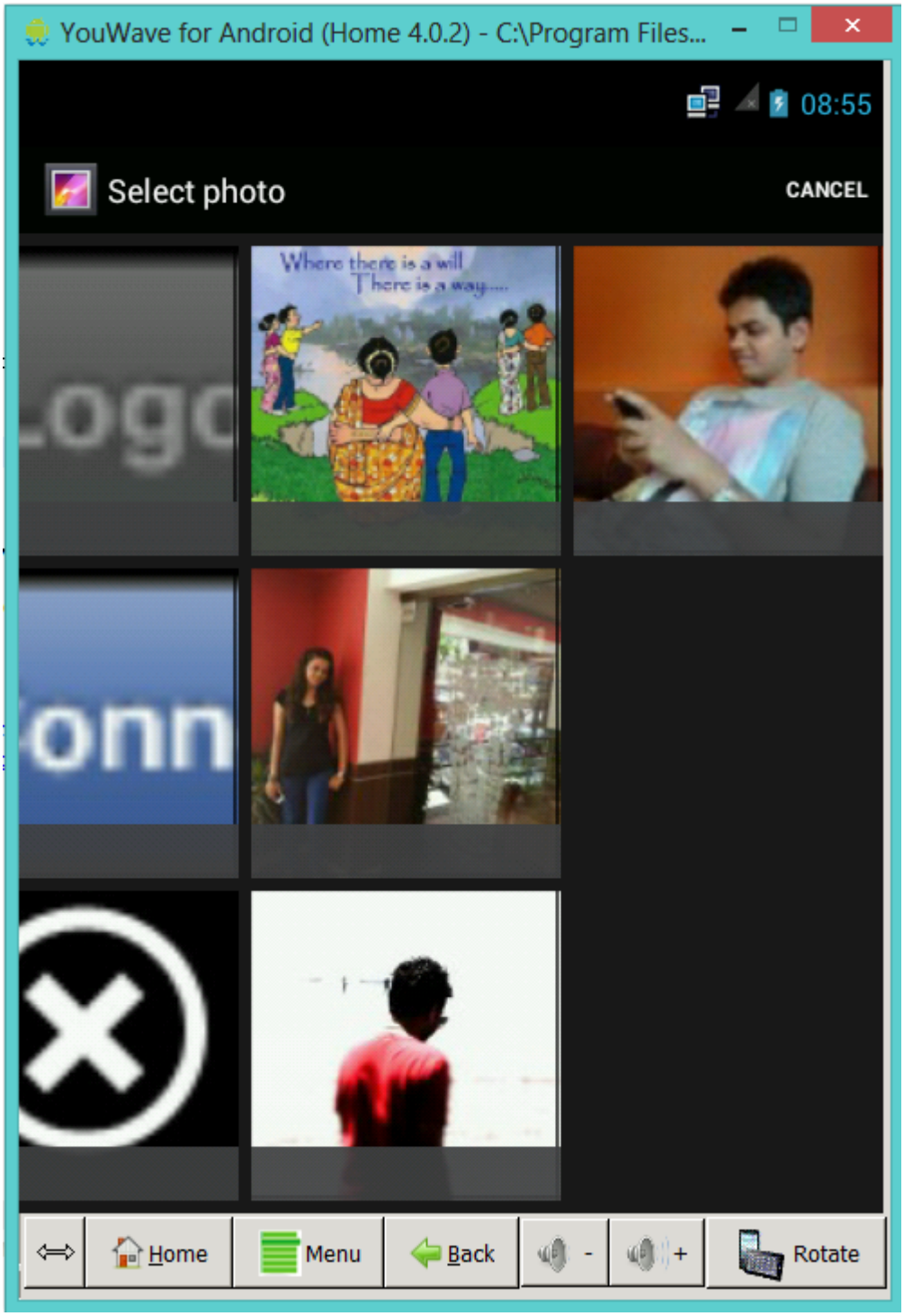
INSTALLATION STEP:

- Install the apk file of the application on your phone.

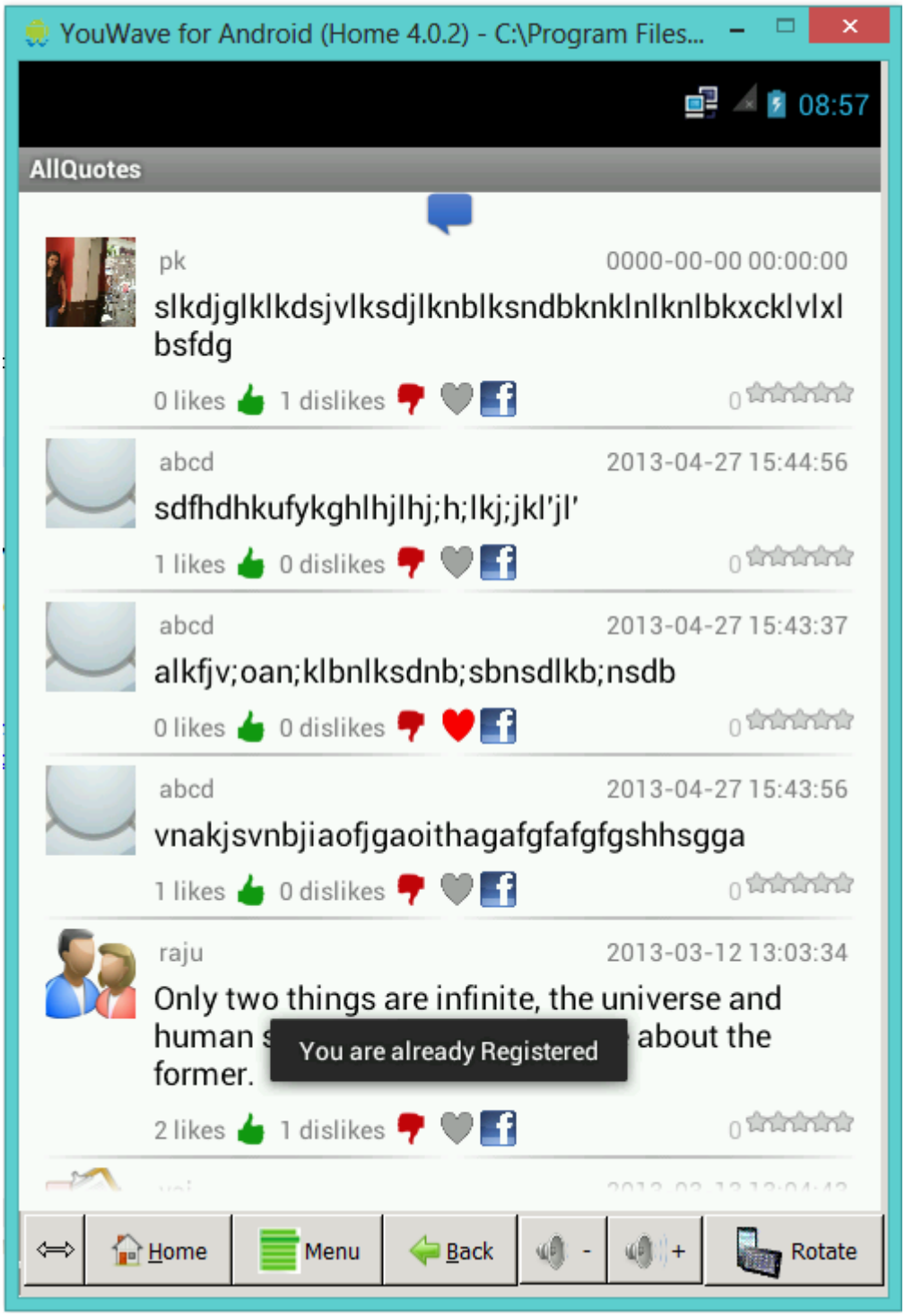
STEPS TO USE DIFFERENT FUNCTIONALITIES:

1. i. At the first startup of the application the app will open up the registration page.
   ii. The app will automatically fetch your email account (google) from Device.
   iii. Enter your Data as per Required.

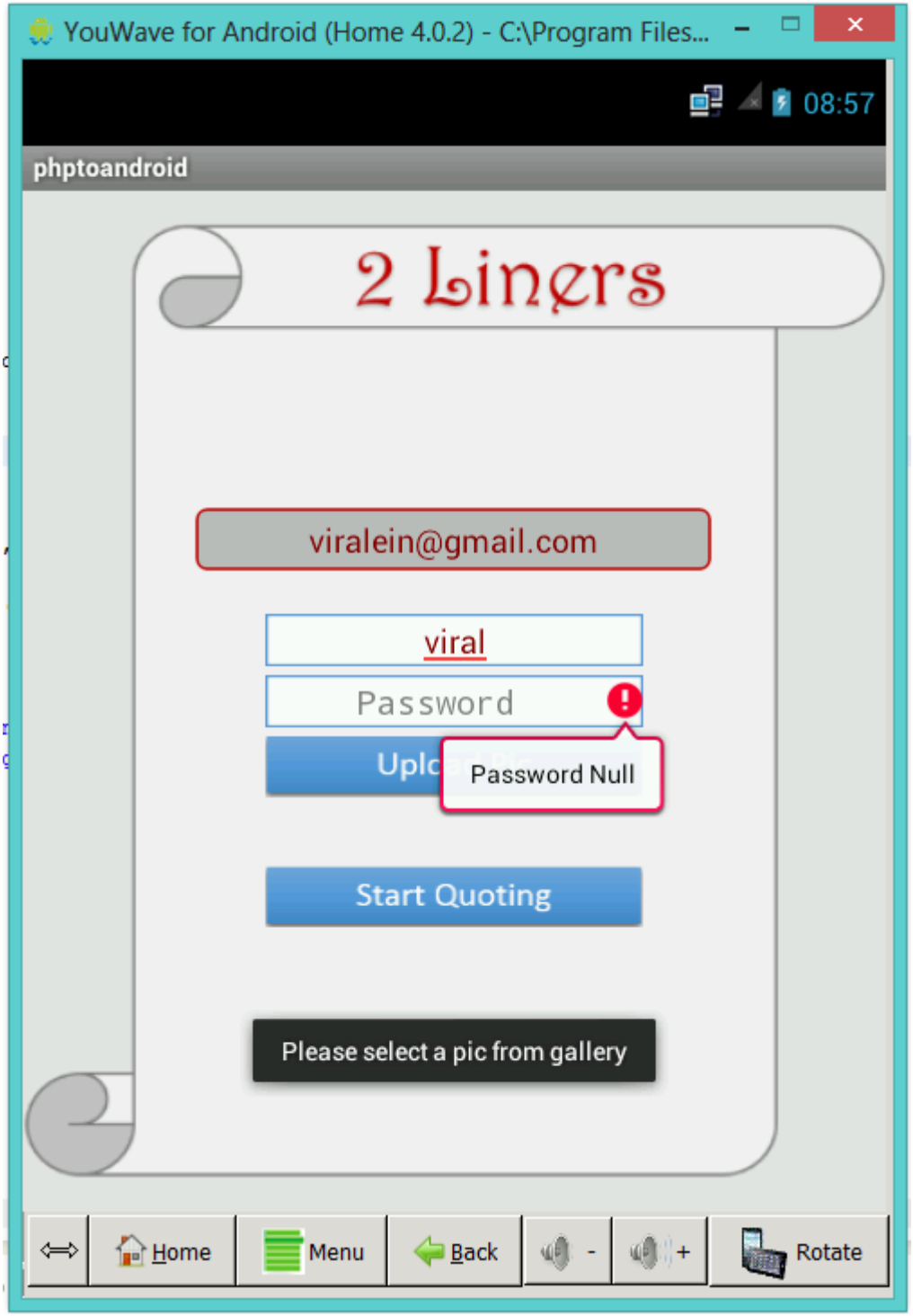
2. To choose a profile pic press the upload pic button, you will be asked to select a photo from gallery. Select one.



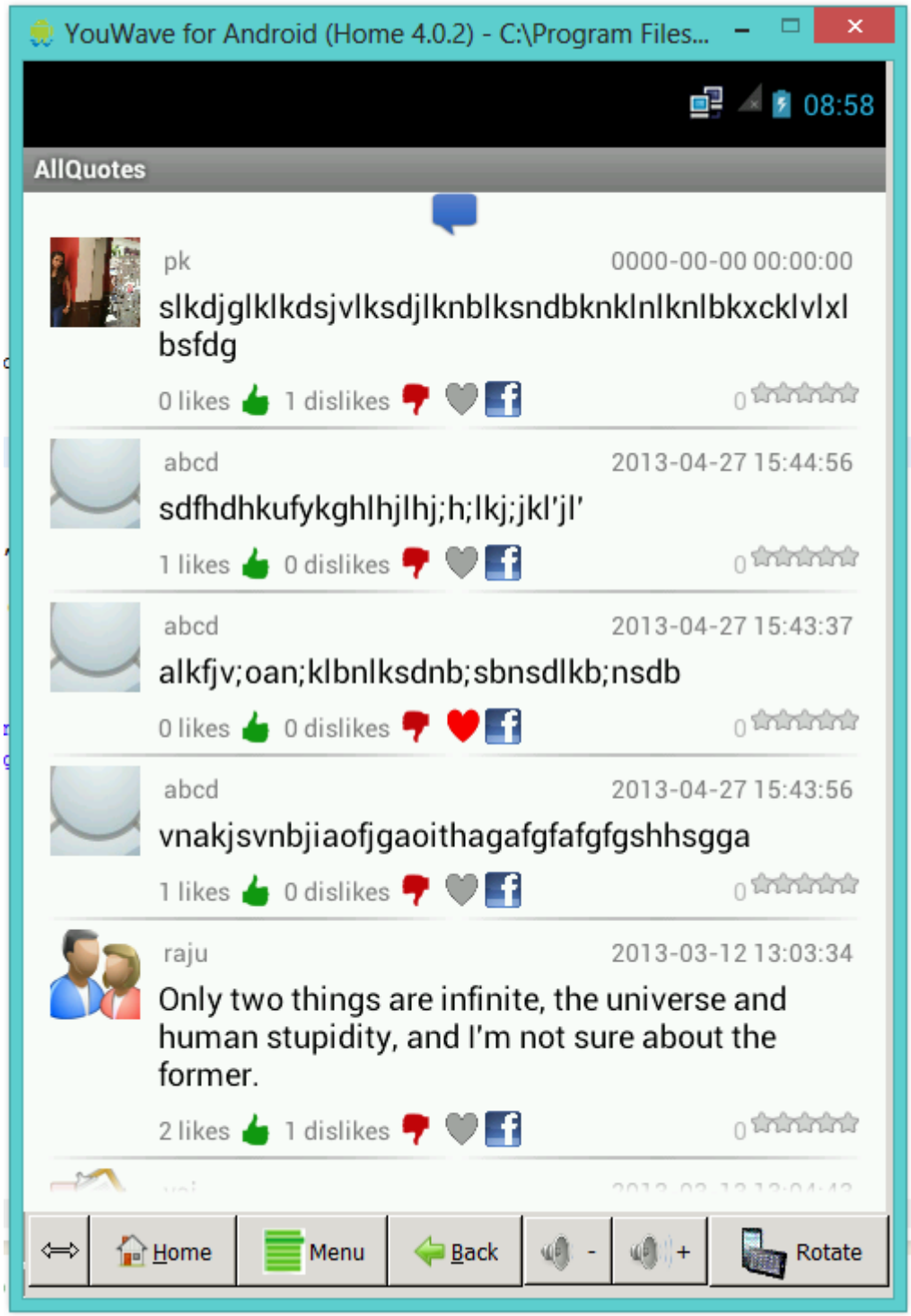
3. Click on the Start Quoting Button to Register Yourself.
   If You have already registered before in case you are installing app again, the app will notify you.



4. If you left any of the field while registering the validation will prompt you to reenter the data.



5. If login is successful you will be taken to home page where all the quotes sorted in descending time are shown.



6. The operations that can be done on a quote are as follows:
    i. Like
    ii. Dislike
    iii. Rate
    iv. Delete if yours
    v. Share to Facebook.
    vi. Mark as Favorite.

I,II) If you select like the counter will show you by incrementing 1.
If you have already liked, it will be decremented.

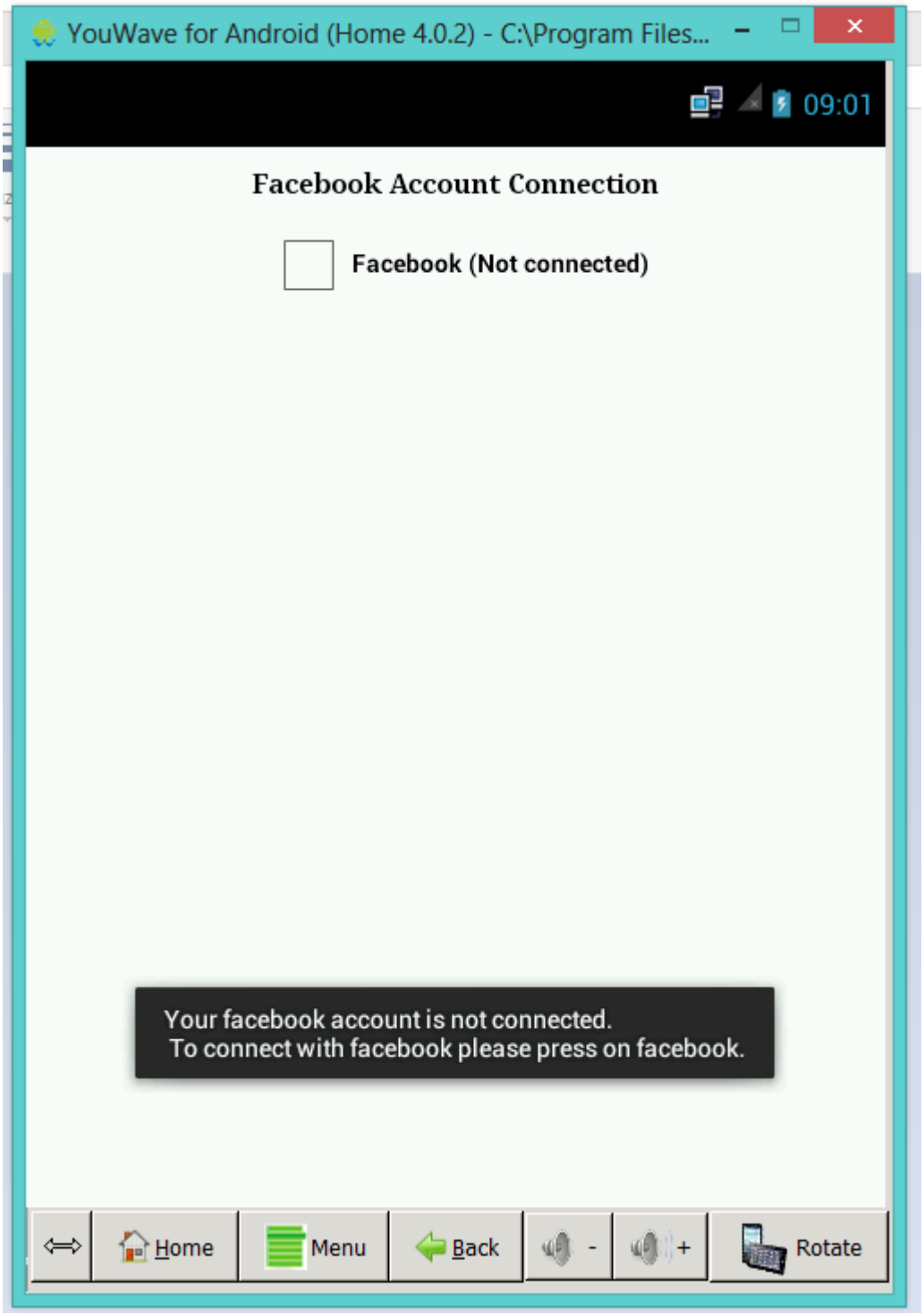
Same is for the dislike function.

III) Delete (x) button will delete your quote from the DB.

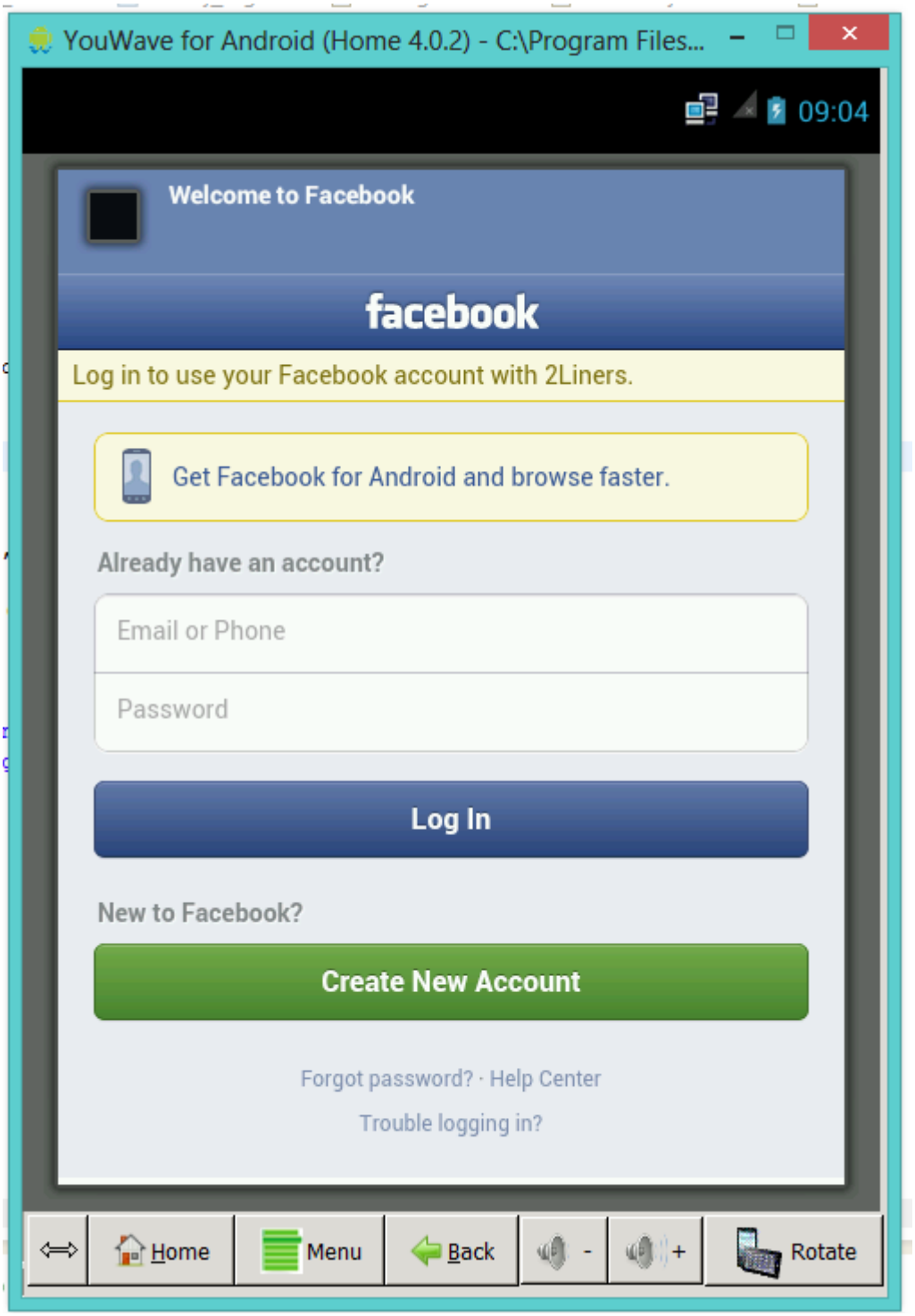
IV) If you want to mark a quote as your favorite, tap on the heart, it will turn to red.

If you have already favorite that quote then tap on the heart will remove it from your favorites.

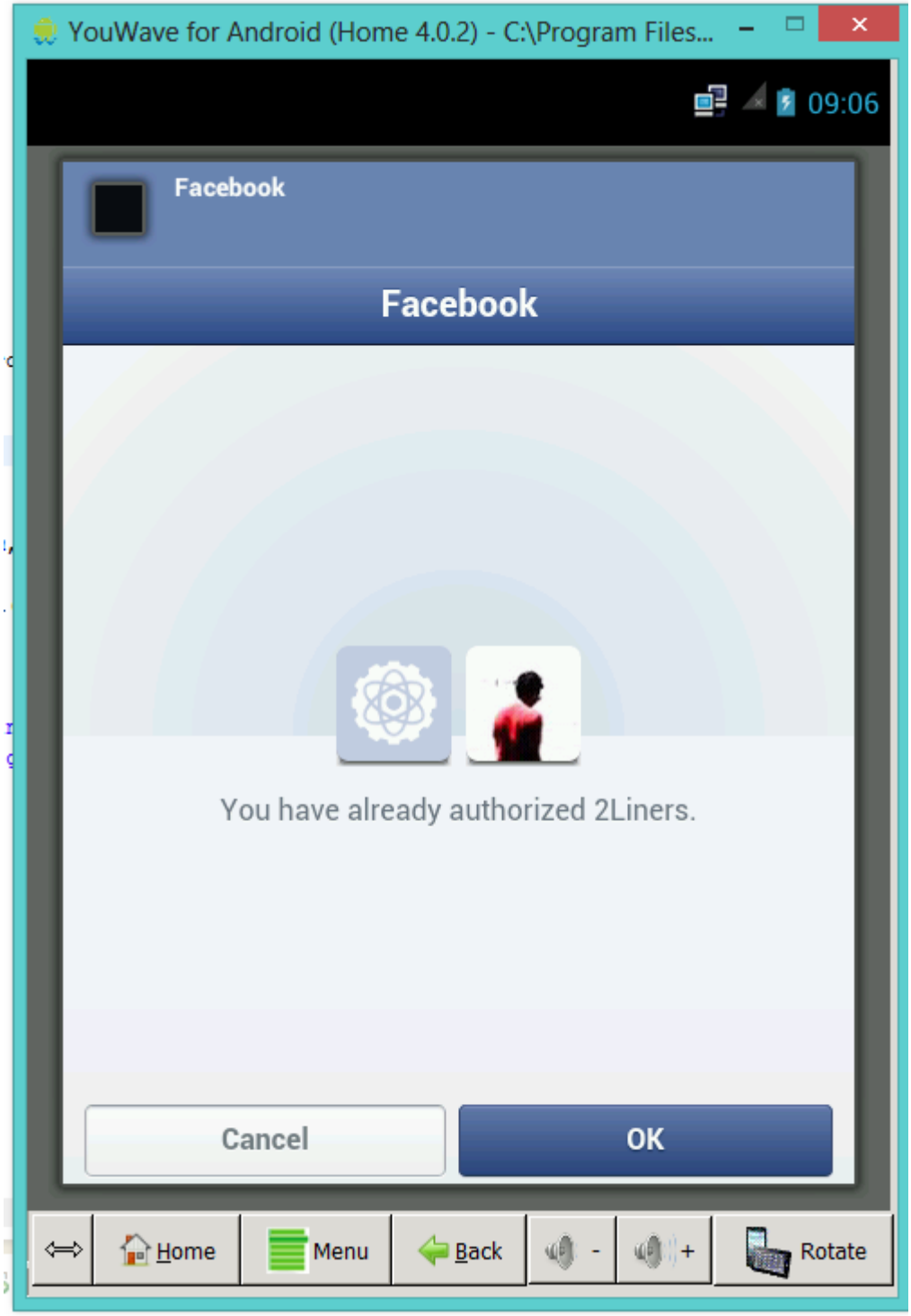
V) To share a quote on your Facebook page Tap on the FB button. It will prompt to say wether you are connected to FB or not.



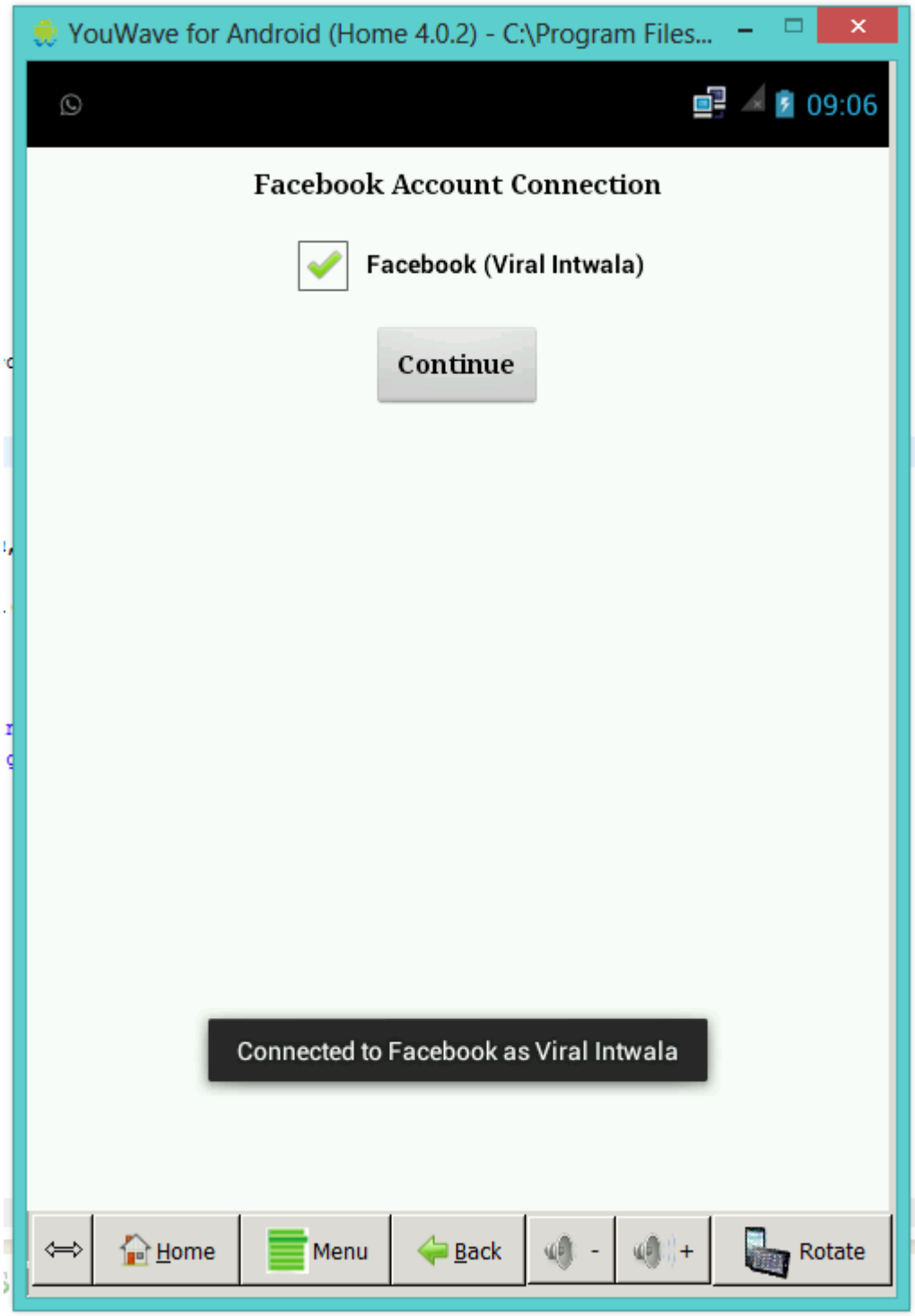
If you wish to connect to FB tick mark the connection, it will redirect you to FB Login.

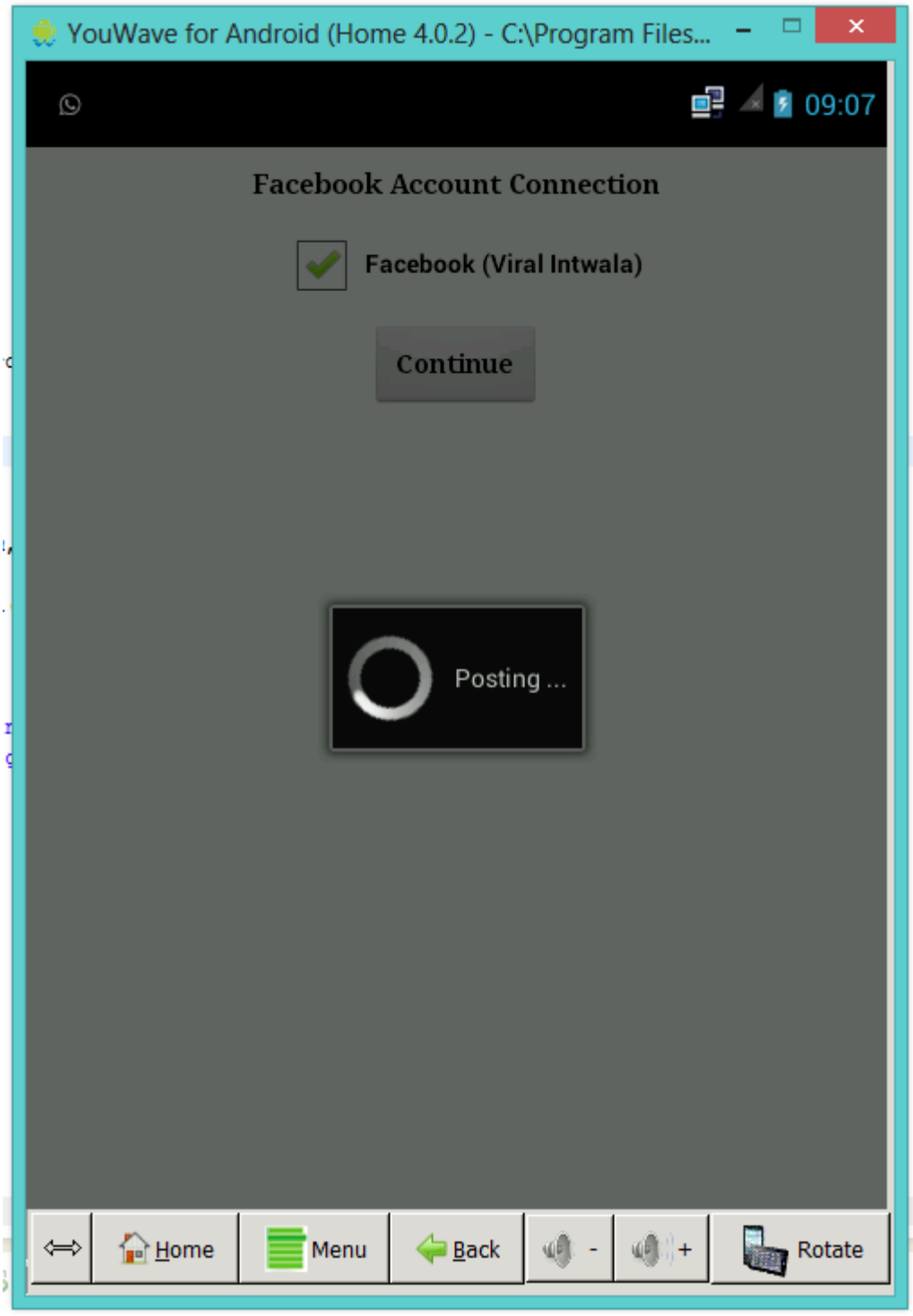


Then the app will ask for your permissions to upload a text from this app to your profile. Click on Ok.
If you have already given permissions then it will notify you.



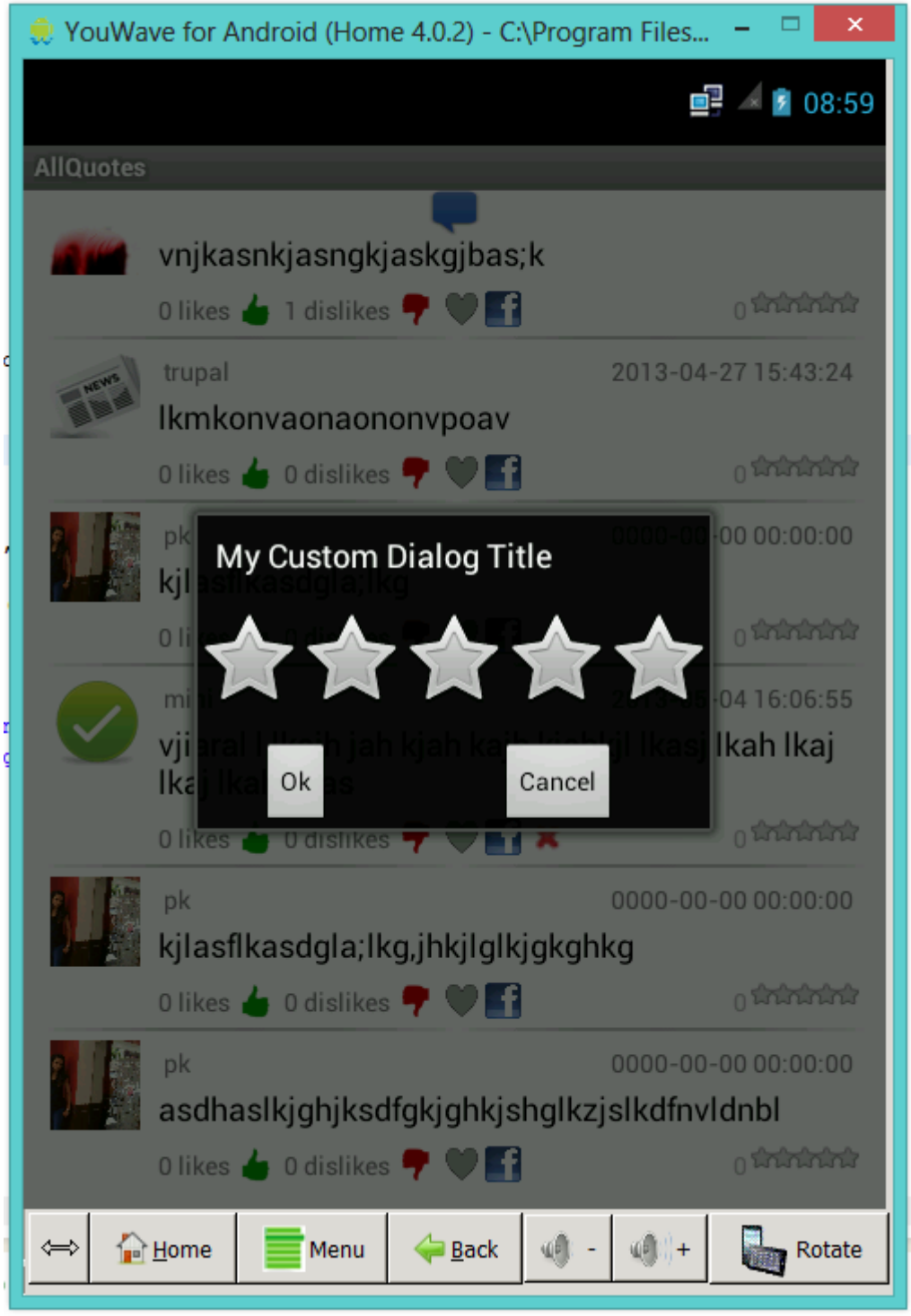
Once you are connected press on the continue button to Publish the quote to your timeline.

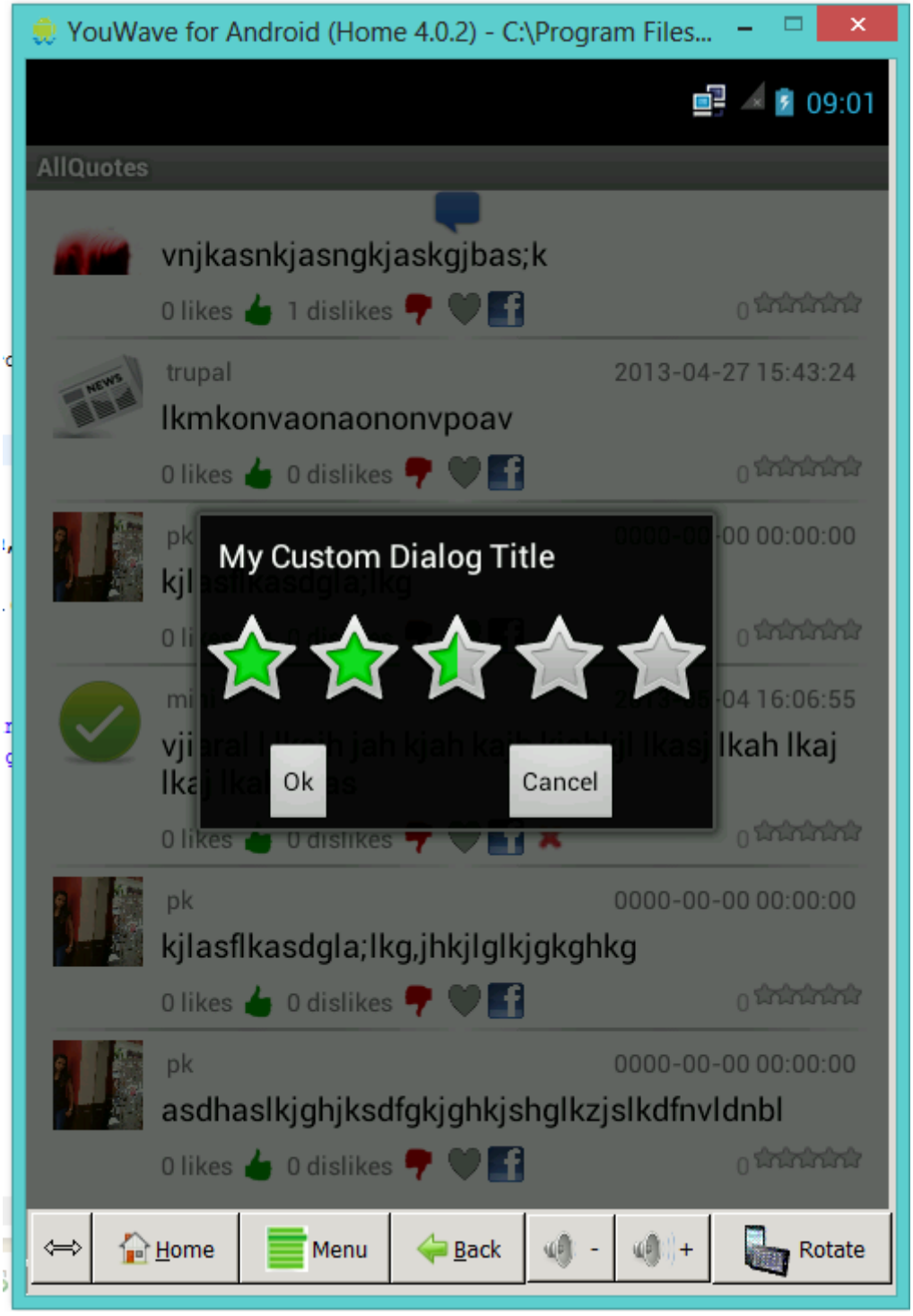



YouWave for Android (Home 4.0.2) - C:\Program Files...
09:07
Facebook Account Connection
Facebook (Viral Intwala)
Continue
Posting ...
Home
Menu
Back
-
+
Rotate

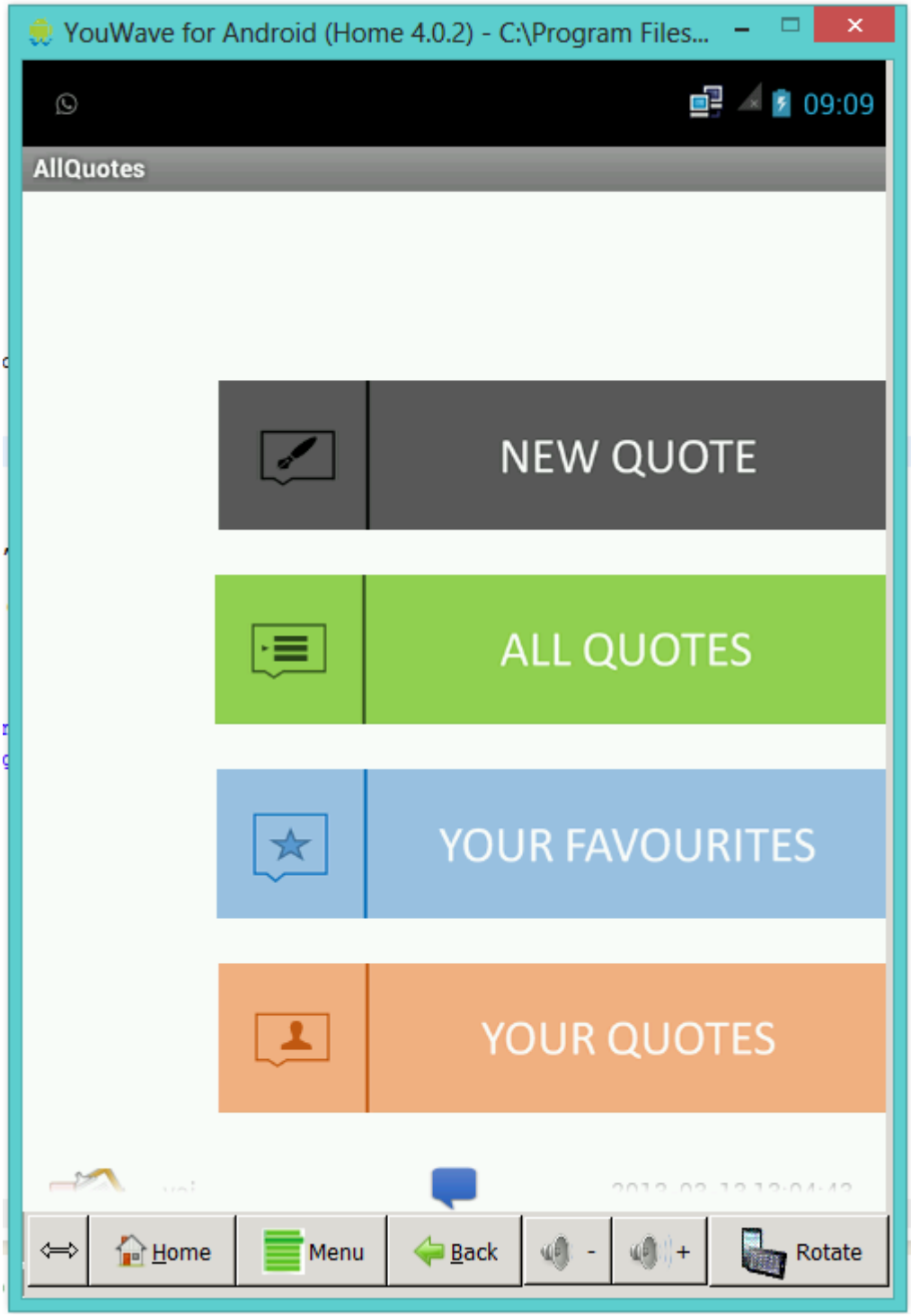
The Quote will be posted to FB with caption as Via “2 Liners”

VI) Rate a Quote. Tap on the rating bar to rate. A Dialog will appear slide through the bar as per your rating and click on OK.

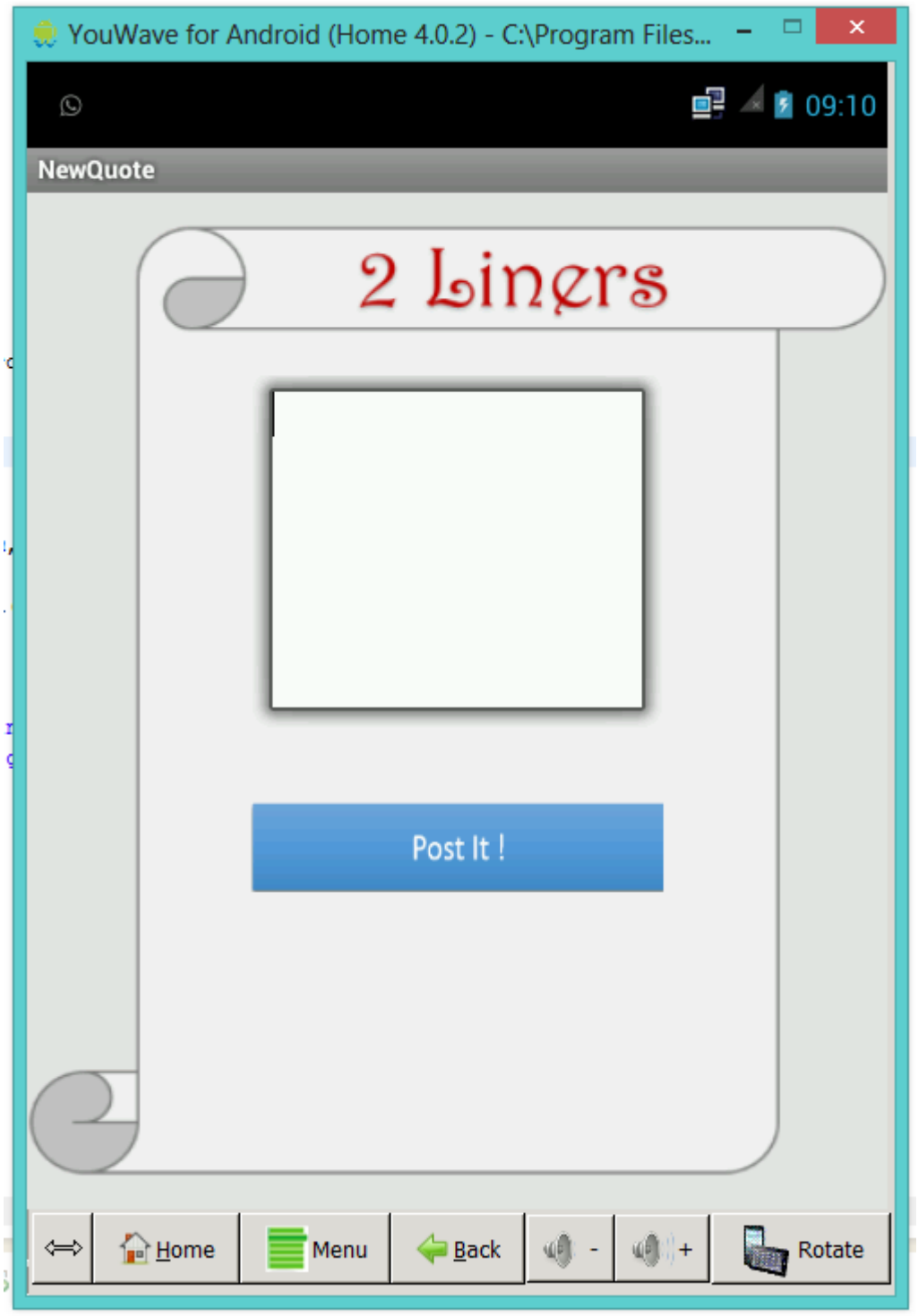



YouWave for Android (Home 4.0.2) - C:\Program Files...
09:01
AllQuotes
vnjkasnkjasngkjaskgjbas;k
0 likes
1 dislikes
trupal
2013-04-27 15:43:24
lkmkonvaonaononvpoav
0 likes
0 dislikes
My Custom Dialog Title
Ok
Cancel
pk
0000-00-00 00:00:00
kjlasflkasdgla;lkg,jhkjlglkjgkghkg
0 likes
0 dislikes
pk
0000-00-00 00:00:00
asdhaslkjghjksdfgkjghkjshglkzjslkdfnvldnbl
0 likes
0 dislikes
Home
Menu
Back
-
+
Rotate

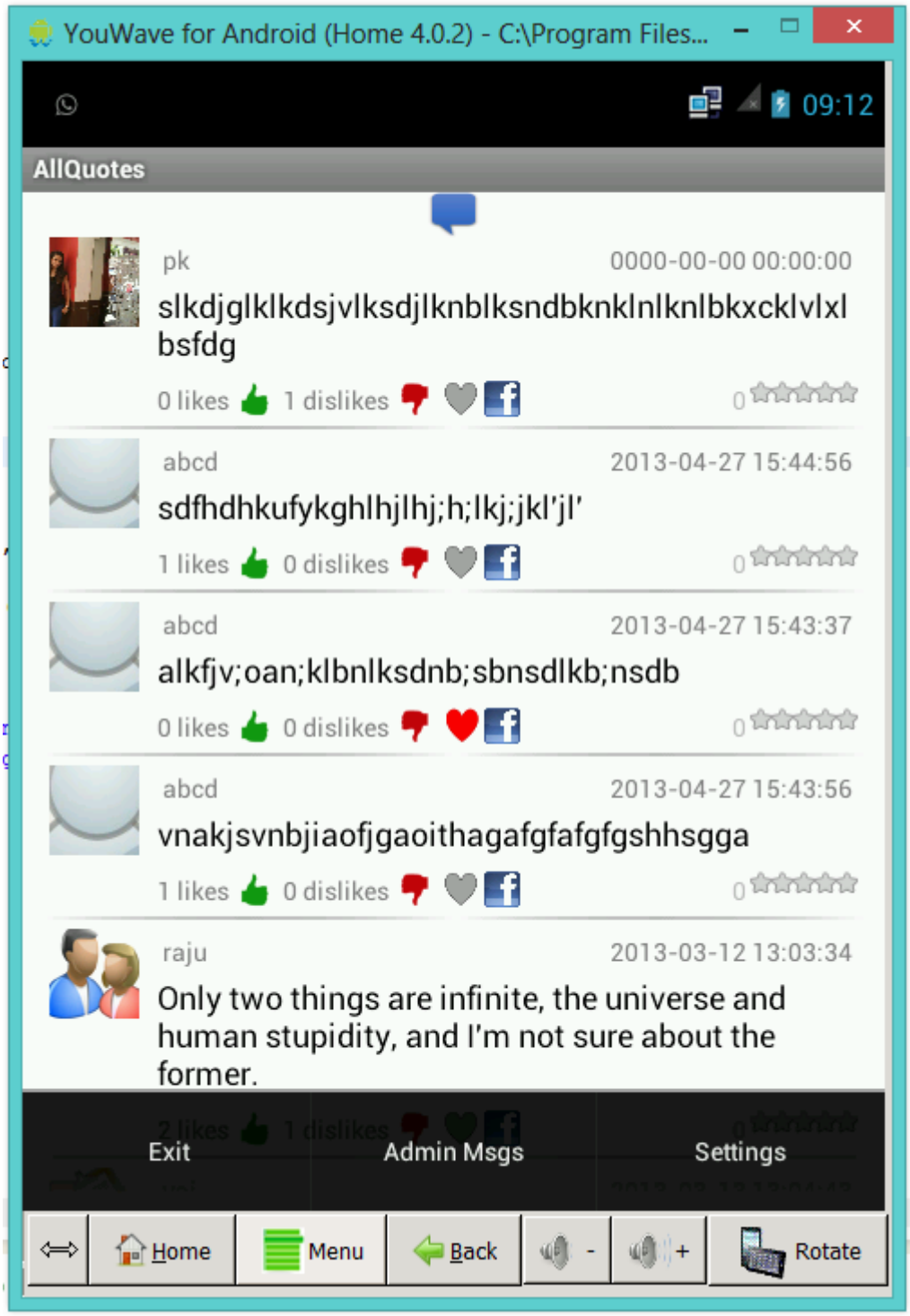
7. **A sliding menu is provided to easily navigate through the app.**
   Pull the Menu (Blue Tag on top) to open it.
   Select What you want to do and the App will Take to respective Screen.



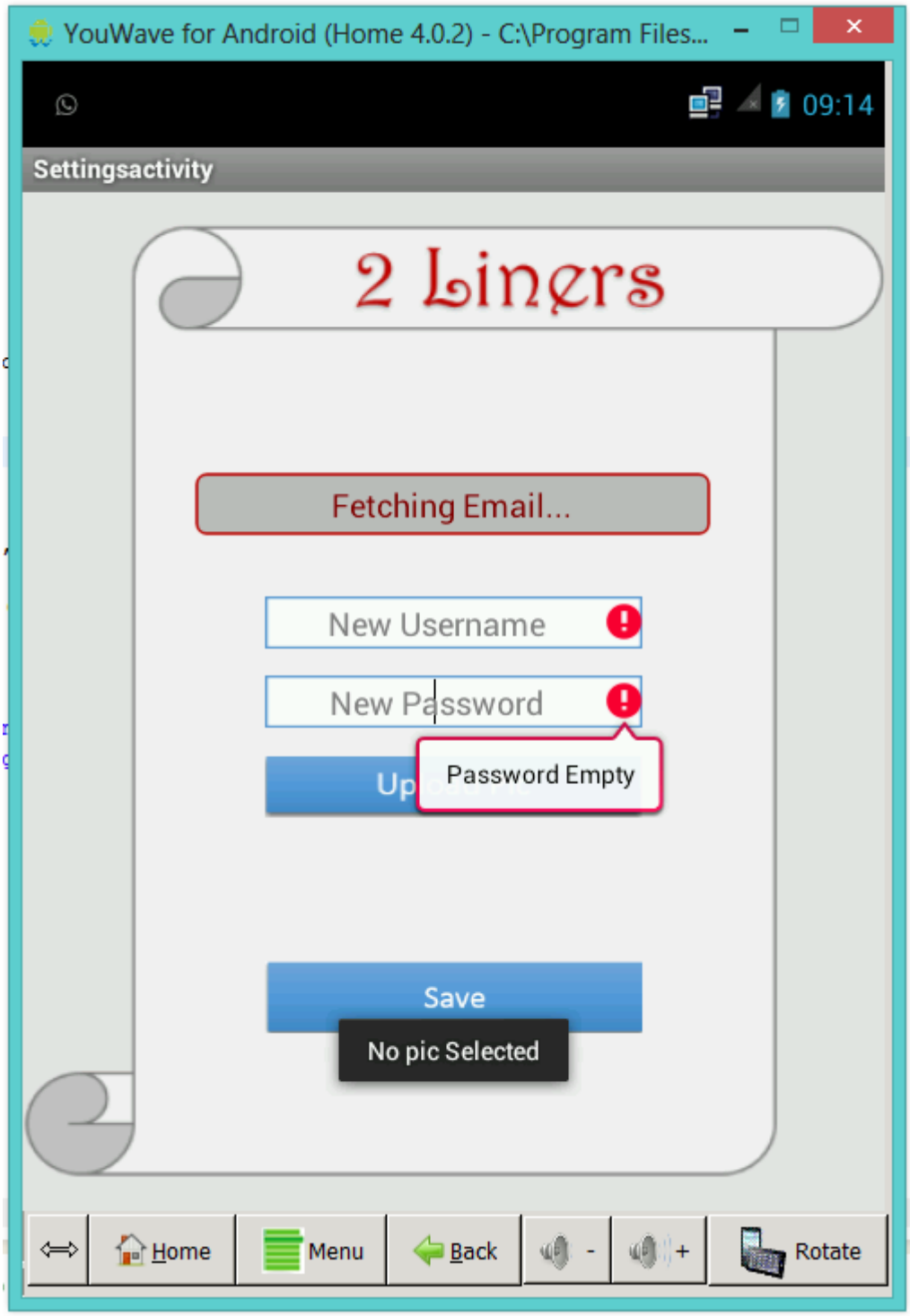
8. **To enter a new Quote Tap on the New Quote Button. Write A quote and Post it.**



9. **To Update your Profile Info Tap the Hard Menu button on the Device. Select Settings. Update Info and Save it.**



If You enter no changes you will be notified.



CHAPTER 10

CONCLUSION AND FUTURE WORK

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FUTURE WORK:

- The application Admin Panel is Already Equipped with Some Extra Features, that includes following people, creating own list other than Favorites.

- Renewing an Account meaning resetting an Account, Feature can be added.

CONCLUSION:

- Though I worked alone I was not really alone, my sir Mr. Nilesh Parghi was always there helping me and guiding me wherever I got stuck. It was like a team of two people.
- I would also like to thank my friends who were there when I needed them and had quires regarding my project.
- I also want to thank my parents for supporting me throughout the training period.
- Through this project I also learnt how to manage Time and to get things done within time.
- I learned a new Technology and Tool while working on the project i.e. XML, some Android SDK libraries and Java in a practical manner.
- Working under a corporate environment was also a learning experience where I tried to follow the discipline and rules laid by the organization. Overall this project is the foundation for all my future endeavors and I feel satisfied with the efforts that we have put in.

“Experience Makes Man Perfect”

CHAPTER 11

ANNEXURE

- Glossary of terms and abbreviations
- References
- About tools and technology
- About the organization
- About college

11.1 GLOSSARY OF TERMS AND ABBREVATIONS:

Abbreviations	Full Form
SDK	Software Development Kit
ADT	Android Development Tool
Ex	Example
i.e.	That is
FB	Facebook
GUI	Graphical User Interface
Fav	Favorite
DB	Database

11.2 REFERENCES:

- **Books as Reference in the development of Project:-**
  - Reto Meier, Professional Android 2, March 2010, Wrox Publication.
  - Zigurd Mednieks, Laird Dornin, G. Blake Meike, Masumi Nakamura, Programming Android, 2nd Edition, September 2012, OReilly Publication.
- **Web-Sites as Reference in the development of Project:-**
  - www.developer.android.com (Official website for android)
  - www.anddev.org
  - www.android.bigresourse.com
  - www.stackoverflow.com

11.3 ABOUT TOOLS AND TECHNOLOGY:

ANDROID:

Android is an operating system based on Linux with a Java programming interface.

The Android Software Development Kit (Android SDK) provides all necessary tools to develop Android applications. This includes a compiler, debugger and a device emulator, as well as its own virtual machine to run Android programs.

Android is currently primarily developed by Google.

Android allows background processing, provides a rich user interface library, supports 2-D and 3-D graphics using the OpenGL libraries, access to the file system and provides an embedded SQLite database.

Android applications consist of different components and can re-use components of other applications. This leads to the concept of a task in Android; an application can re-use other Android components to archive a task. For example you can trigger from your application another application which has it registered with the Android system to handle photos. In this other application you select a photo and return to your application to use the selected photo.

The Android system uses a special virtual machine, i.e. the Dalvik Virtual Machine to run Java based applications. Dalvik uses an own byte code format which is different from Java byte code. Therefore you cannot directly run Java class files on Android, they need to get converted in the Dalvik byte code format.

ECLIPSE:

Google provides the Android Development Tools (ADT) to develop Android applications with Eclipse. ADT is a set of components (plug-ins) which extend the Eclipse IDE with Android development capabilities.

ADT contains all required functionalities to create, compile, debug and deploy Android applications from the Eclipse IDE.

The Android Development Tools (ADT) provides specialized editors for resources files, e.g. layout files. These editors allow switching between the XML representation of the file and a richer user interface via tabs on the bottom of the editor.

11.4 ABOUT THE ORGANIZATION:

V3+ Web Solutions is an IT solutions provider that is passionate about creating web & mobile based solutions for end users.

Being a leading custom web development company we have set an industry high standard in providing custom web design and web development service to our clients.

"Discover & develop user friendly web & mobile applications and educate clients to use them as an integrated part of their business & life"

Long term business relationship and client growth are key factors at V3+ Web Solutions. With realistic goals, highly experienced team & affordable rates, we are capable of satisfying vast range of client objectives.

Customer satisfaction is on the highest priority of our business. Every single task of our company is devoted to client's satisfaction. We care about ease of client during project execution process. Flexibility plays vital role in successful project execution. We have adaptability to remain committed to the quality and output considering your needs.

Primary objective : Mutual satisfaction & Openness during the execution

Our Management

Masud Vorajee (Founder & CEO), is an entrepreneur by passion and web technology expert by profession. His areas of specialization are web consulting, portal development & management, social media marketing & server technologies.

ShabbirAhmad Vorajee (CFO), takes all the headache of managing the company accounts. In addition, Shabbir also oversees the capital structure of the company.

Nirav Patel (Operations, Development) is an operations specialist with 4 years experience in developing & managing large portals.

11.5 ABOUT THE COLLEGE

U.V.Patel. College of Engineering

- **Mission**

  "It shall be the constant endeavour of the Mehsana District Education Foundation to meet the educational needs of the youth in the area of professional studies and provide state-of-the-art learning opportunities along with inculcation of values of professional commitment and uprightness."

- **Vision**

  "Seek, Search and offer programs those lead to symbiotic emergence of 'academic excellence' and 'industrial relevance' in education and research in the field Engineering and Technology."

- **Overview**

  U.V.Patel College of Engineering (UVPCE) situated in Ganpat University campus was established in September-1997 under the aegis of Mehsana District Education Foundation with a view of educating and training young talented students of Gujarat at the field of engineering and technology to meet the needs of industries in Gujarat and beyond for the growth of the industries.

  The College is name after Shri Ugarchandbhai Varanasibhai Patel, a leading industrialist of Gujarat, for his generous donation of Rs. 1.25 crores. It is a self-financed institute approved by All India Council For Technical Education (AICTE), New Delhi, the Government of Gujarat and North Gujarat University, Patan.

  The College is spread over 25 acres of land and is a part of Ganpat Vidyanagar Campus and is well equipped with different departmental laboratories, several computer labs with internet connectivity through 1Mbps wireless link, satellite link education centre with two-way audio and one-way video link with Gandhinagar etc.