COP 290 Assignment 2
TODO: Write name

Aditi
2014CS10205

Ayush Bhardwaj
2014CS10091

Nikhil Gupta
2014CS50462

March 2016

Contents

1 Objectives

Design an App which is :

- Complaint Management System for IIT Delhi

- The Users of the App would be the people of the institute such as faculties, students, and institute employees

- Addresses three levels of complaints:

  1. Indiviual Complaint
  2. Hostel-level Complaint
  3. Institute-level complaint

- The users can submit their grievance to the the concerned authorities

2 Overall Design

TODO: Add a basic description of main classes as in previous design doc

1. The server side will be programmed in Web2py

2. The android app will be made using Java

3. The app would be extended to other phones as well as web clients

4. Volley will be used to send requests and receive responses

5. Doxygen will be used to create HTML documentation of the entire code base.

6. Users can select their preferred topics.Only complaints related to selected topics will be visible to the user.

7. The entire code will be split up in multiple files to ensure modularity in code.

3 User Interface

TODO

4 Features

4.1 Individual Complaints

- The end user's complaint will be visible to the concerned authority only.

- Once the complaint is addressed,the user should be able to mark it as resolved

- The user can mark the complaint as resolved or take the complaint to the higher authority

4.1.1 Options for the user

The person filing the complaint can fill in the following options:

1. Name

2. Entry Number or Employee Number

3. Phone Number

4. Complain category

5. Address/Hostel Name

6. Content of the Complain

7. Extra details

4.1.2 Options for the receiver

1. See all details

2. Request user to mark as completed

3. Take to higher authority

4.1.3 Follow up options

1. Mark the complain as completed

2. Take to higher authority

4.2 Hostel Level Complaints

- The end user's complaint would be visible to all the hostel residents who will be affected by the complaint.

- The concerned authority would have the right to mark the complaint as resolved.

- The complaint will be referred to a higher authority in a hierarchical order if

    1. Authority has marked the complaint as resolved but majority of users are not satisfied
    2. The time taken to resolve the complaint has exceeded a given time

- The Warden will be the highest authority.Veto powers will be given to the Warden

4.2.1 User Options

1. Name or Anonymous
2. Entry Number or Anonymous
3. Phone Number or Anonymous
4. Complain category
5. Contents
6. Additional Information

4.2.2 Other's Options

1. People can Upvote, Downvote or be neutral to the complain.
2. If the problem is not resolved in 7 days according to the majority, then the complain gets sent to the higher authority.
3. People can add comments to the complain.

4.2.3 Receiver's Options

1. Mark as resolved.
2. Send to higher authority

4.2.4 Follow Up options

1. Mark as resolved based on majority
2. Send to higher authority based on majority

4.3   Institute Level Complaints

- The end user's complaint would be visible to all the institute residents who will be affected by the complaint.

- The concerned authority would have the right to mark the complaint as resolved.

- The complaint will be referred to a higher authority in a hierarchical order if

    1. Authority has marked the complaint as resolved but majority of the users are not satisfied
    2. The time taken to resolve the complaint has exceeded a given time

- The Concerned Dean will be the highest authority possessing Veto powers

4.3.1   User Options

1. Name or Anonymous
2. Entry Number or Anonymous
3. Phone Number or Anonymous
4. Complain category
5. Contents
6. Additional Information

4.3.2   Other's Options

1. People can Upvote, Downvote or be neutral to the complain.
2. If the problem is not resolved in 7 days according to the majority, then the complain gets sent to the higher authority.
3. People can add comments to the complain.

4.3.3   Receiver's Options

1. Mark as resolved.
2. Send to higher authority

4.3.4   Follow Up options

1. Mark as resolved based on majority
2. Send to higher authority based on majority

Table 1: My caption

S.No.	Fields	Type	Description
1	Name	String	Name of the person
2	Unique Id	String	Entry Number for students or Employee Code for staff and faculty
3	User Type	Int	Information regarding user being a student or staff or faculty
4	Contact Number	String	Phone Number
5	Hostel	String	Hostel if any
6	Other Details	String	Any other details
7	Password	String	Password in hashed form

Table 2: My caption

S.No.	Fields	Type	Description
1	User Id	String	Entry Number for students or Employee Code for staff and fa
2	Hostel Preference	String	Bit string to represent interest in Hostel activities
3	Institute Level Preference	String	Bit string to represent interest in Institute activities
4	Extra Preferences	String	Bit String to represent interest in Other activities

5 Sub Components

5.1 Server Back End

The back end has been divided into further sub components to facilitate the development process.

Table 3: My caption

S.No.	Fields	Type	Description
1	User Id	String	Entry Number for students or Employee Code for staff and faculty
2	Complaint Area	Int	Integer code for complaint area
3	Level	Int	Priority level for person
4	Description	String	Extra information

Table 4: My caption

S.No.	Fields	Type	Description
1	User Id	String	Entry Number for students or Employee Code for staff and faculty
2	Complaint Id	Int	Integer code for complaint area
3	Response	Int	Int corresponding to Upvote, Downvote or being neutral

Table 5: My caption

S.No.	Fields	Type	Description
1	Hostel Id	Int	Integer for a hostel
2	Hostel Name	String	String for hostel

Table 6: My caption

S.No.	Fields	Type	Description
1	Category Id	Int	Integer for a complaint category
2	Category Description	String	String for a complaint category

Table 7: My caption

S.No.	Fields	Type	Description
1	Complaint Id	String	Unique Id for Complaint
2	User Id	String	Unique User Id
3	Description	String	Complaint comment
4	Time Stamp	Time	Time of Comment

Table 8: My caption

S.No.	Fields	Type	Description
1	Complaint Id	String	Unique Id for Complaint
2	User Id	String	Unique User Id

Table 9: My caption

S.No.	Fields	Type	Description
1	Complaint Id	String	Unique Id for Complaint
2	From User Id	String	Unique User Id
3	To User Id	String	Unique User Id
4	Description	String	Content of notifcation
5	Seen	Boolean	Marked as seen or not

Table 10: My caption

S.No.	Fields	Type	Description
1	User Id	String	Entry Number for students or Employee Code for staff and faculty
2	Complaint Id	Int	Integer code for complaint area
3	Response	Int	Int corresponding to Satisfied or not

Table 11: My caption

S.No.	Fields	Type	Description
1	Complaint Id	String	Unique Id for Complaint
2	User Id	String	Unique User Id
3	Complaint Type	Int	Complaint category
4	Complaint Content	String	Content of complaint
5	Extra Info	Image	Upload a photo
6	Admin Id	String	Id of person assigned
7	Time Stamp	Time	Time of filing the complaint
8	Resolved	Boolean	Resolved or Not
9	Mark for resolution	Boolean	Option for complaint addressee to seek approval
10	Comment	String	Any comments
11	Previous Id	Int	Previous complaint id if any

Table 12: My caption

S.No.	Fields	Type	Description
1	Complaint Id	String	Unique Id for Complaint
2	User Id	String	Unique User Id or Anonymous
3	Complaint Type	Int	Complaint category
4	Complaint Content	String	Content of complaint
5	Extra Info	Image	Upload a photo
6	Admin Id	String	Id of person assigned
7	Time Stamp	Time	Time of filing the complaint
8	Resolved	Boolean	Resolved or Not
9	Mark for resolution	Boolean	Option for complaint addressee to seek approval
10	Comment	String	Any comments
11	Previous Id	Int	Previous complaint id if any
12	Hostel	Int	Hostel Id

Table 13: My caption

S.No.	Fields	Type	Description
1	Complaint Id	String	Unique Id for Complaint
2	User Id	String	Unique User Id or Anonymous
3	Complaint Type	Int	Complaint category
4	Complaint Content	String	Content of complaint
5	Extra Info	Image	Upload a photo
6	Admin Id	String	Id of person assigned
7	Time Stamp	Time	Time of filing the complaint
8	Resolved	Boolean	Resolved or Not
9	Mark for resolution	Boolean	Option for complaint addressee to seek approval
10	Comment	String	Any comments
11	Previous Id	Int	Previous complaint id if any

Table 14: My caption

S.No.	Fields	Type	Description
1	Complaint Id	String	Unique Id for Complaint
2	Number of Up-votes	Int	Number of Up-votes
3	Number of Down-votes	Int	Number of Down-votes
4	Number of Neutrals	Int	Number of Neutral people
5	Number of Satisfied	Int	Number of people satisfied
6	Number of Dissatisfied	Int	Number of people dissatisfied with solution

5.2 Network APIs

5.3 Android App Front End

5.4 Android App Back End

6 Interaction amongst Sub Components

6.1 Back-end and Android App

6.2 Back-end and Network

7 Testing Of Components

7.1 Server and APIs

7.2 Android App

7.3 Overall Testing

8 Extra Features

- The scope of the Application will be extended to Web Clients

- Hierarchy of Authorities would be maintained for every Complaint Type and Category

- In public level complaints option to register complaint as anonymous would be provided

- Users would be allowed to select the categories that affect them.Only public level complaints related to these categories will be displayed to the user

- Notification would be marked seen/unseen

- Users will get option to mark as satisfactory/unsatisfactory after the complaint is resolved

- Users will be able to post comments in the thread related to the concerned complaint

9   Future Endeavors

- Keep local cache of changes done, at mobile level and sync them with the global server as soon as Internet connectivity is supplied.

- To extend the scope of Application to Windows as well as iOS client.Same Networking API's will be used.

10   Source Code

The source code of the project is maintained in the following repository:
https://github.com/aditi741997/COP290_Assignment_2.git

11   References

TODO