

# **COP 290 Assignment 3**

## **Ping Pong Game**



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# 1 Objectives

Design a desktop app which is:

## 2 Overall Design

1. The server side will be programmed in Web2py [?]
2. Volley will be used to send requests and receive responses
3. Doxygen will be used to create HTML documentation of the entire code base.
4. The entire code will be split up in multiple files to ensure modularity in code.

## 3 User Interface

### 3.1 Front End

## 4 Sub Components

### 4.1 Server Back End

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

#### 4.1.1 Databases

Table 1: User Database Table

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
8	User Id	String	Entry Number for students or Employee Code
9	Hostel Preferences	String	Bit string to represent interest in Hostel activities
10	Institute Preferences	String	Bit string to represent interest in Institute activities
11	Extra Preferences	String	Bit String to represent interest in Other activities

Table 2: Hostel Level Complaint

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
12	Hostel	Int	Hostel Id
13	Anonymous	Boolean	Anonymous or not
14	Number of Up-votes	Int	Number of Up-votes
15	Number of Down-votes	Int	Number of Down-votes
16	Number of Neutrals	Int	Number of Neutral people
17	Number of Satisfied	Int	Number of people satisfied
18	Number of Dissatisfied	Int	Number of people dissatisfied with solution

## 4.2 Network APIs

The following API's will be provided: [?]

## 4.3 Further server tasks

1. Crontab tasks will be used to schedule periodic events like database cleanup and sending complaints to higher authorities.
2. Crontab will also be used to generate push notifications for devices.

# 5 Interaction amongst Sub Components

# 6 Testing Of Components

## 6.1 Server and APIs

- Unit testing will be used to check if the server and end points are working correctly.
- For each endpoint, stress testing will be done via python or bash scripts to verify that the APIs perform as expected in various situations.

## **6.2 Overall Testing**

We will use the app on our phones once it is ready to identify and squash any remaining bugs in the app or the server.

## **7 Extra Features**

## **8 Future Endeavors**

## **9 Source Code**

The source code of the project is maintained in the following repository:

[https://github.com/aditi741997/COP290\\_PingPong.git](https://github.com/aditi741997/COP290_PingPong.git)

## **References**