

**MINI PROJECT REPORT
On**

**SECURE PUBLIC GRIEVANCE
PORTAL AND COUNSELLING
CENTER**

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DECLARATION

We hereby declare that the work which is being presented in the B. Tech Mini Project **“SECURE PUBLIC GRIEVANCE PORTAL AND COUNSELLING CENTER”** in partial fulfillment of the requirements for the award of the Bachelor of Technology in Computer science and Engineering and submitted to the Department of Computer Engineering and Applications of GLA University, Mathura, is an authentic record of our own work carried under the supervision of “Mrs. Ruchi Gupta, Training and Placement Department”.

The content of this project report, completely or partially, have not been submitted to any other Institute or University for the award of any degree.

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ACKNOWLEDGEMENT

We, Shilpy Raghav, Avani Singh and Shoyab Alam Idrisi express our sincere thanks to Mr. Anand Gupta Sir, Training and Placement Department, GLA University, Mathura.

We pay our deep gratitude towards Mrs. Ruchi Gupta Ma'am, GLA University, Mathura who encouraged us to the highest peak and provided us the opportunity to prepare this project. We are immensely obliged to our friends who helped us for their cooperative inspiration and kind supervision in the completion of the project.

We feel highly acknowledged to all those who helped and encouraged us in completion of the given task. We take this opportunity to record our sincere thanks for our parents who unceasingly encouraged and supported us. At last we would like to thank God Almighty without whose blessing this project would have never been possible. We thank to all those who lent their helping hands either directly or indirectly in this venture.



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ABSTRACT

A social issue is anything that influences many individuals within the society. A social issue has many categories in depth as well as light. It is a common problem which we see happening in our society. The major social issues in our country like communalism, casteism, regionalism, poverty, population, environmental imbalance, gender discrimination, harassment, drug abuse, sexual abuse and many more which cannot be counted over our fingers. There are many people striving to solve these problems and many more who step back to these problems due to nature of the government and fear of the society. Our project aims to benefit those people who have any social issue and they are unable to raise their voice due to the power. In this project we have designed a portal where a person can lodge a complaint to any of these issues without revealing its identity. The idea is to connect some renowned personalities who will act as counsellors. We have some NGOs which will be providing guidance and help in case of any environmental issue. At last we have the feedback form to suggest some ideas to improve our website or portal if there is any discrepancy. With all these if there is any kind of discrepancy while working with the portal there is a separate page designed to show a error message. The user can login any time and get the status of its complaint. Similarly, the other users like the experts, the counselors and the admin can login to get to know the complaints and other details which they seem to be required of.

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CHAPTER 1

INTRODUCTION

Secure Public Grievance Portal and Counselling System is a full-stack technology based project. It aims to develop a working portal where people can lodge social-complains and get counselling and justifiable guidance from authorized experts. There are many people striving to solve these problems and many more who step back to these problems due to nature of the government. In Due to the increasing problem in the society and the corruption, people face problem to come forward and eliminate the issue. It aims to develop a working portal where people can lodge social-complains and get counseling and justifiable guidance from authorized experts. We have some renowned personalities and some NGOs who come to play their role wherever needed.

1.1 GENERAL INTRODUCTION TO THE TOPIC

A social issue is anything that influences many individuals within the society. A social issue has many categories in depth as well as light. Social issues transcend almost every part of the society whether it is religion, caste, color or gender. There are several cases being reported daily but more than that remains unnoticed and buried under. These issues come into existence as our society comes in role. The reason behind the invisibility of these issues are mainly the powers who are supposed to eradicate them. Due to this majority prefers not to get involved in these as it is a kind of headache for them. There are a variety of methods which people use to combat these social issues. We aim to develop a working portal where people can lodge social-complains and get counseling and justifiable guidance from authorized experts.

1.2 AREA OF COMPUTER SCIENCE

As the increasing trend of digitalization and enormous growth of technology it has become necessary to update ourselves with the era of the technology and give proper answer to the problems using these. We have made use of PHP and other web development tools to develop this portal so that a candidate in need should get help as

early as possible. We have used the concept of forms in order to design registration form. We also used different css tools to design and make the portal look attractive. We have made use of ‘Brackets’, a tool for writing web development codes. We also used MySql, Apache5, Linux and other tools to make this a successful one. Besides all these, we have given different options to categorize the problem so as to make it easy for the user. We have also provided with the different option which can be provided as a help during a particular time. For all these we made use of checkboxes, radio buttons, text areas and other different tags and attributes from html.

1.3 OBJECTIVE

Social issues are the major problem of our society nowadays and due to the corrupted system and other reasons most of the things remains unnoticed. Secure Public Grievance Portal and Counseling Center is a platform where anyone can register complaints regarding any social issues without revealing his identity. The complaint lodger will be provided with a satisfactory help. It aims to develop a working portal where people can lodge social-complains and get counseling and justifiable guidance from authorized experts.

CHAPTER 2

SOFTWARE REQUIREMENT AND ANALYSIS

2.1 PROBLEM STATEMENT

A social issue is anything that influences many individuals within the society. A social issue has many categories in depth as well as light. It is a common problem which we see happening in our society. The major social issues in our country like communalism, casteism, regionalism, poverty, population, environmental imbalance, gender discrimination, harassment, drug abuse, sexual abuse and many more which cannot be counted over our fingers. There are many people striving to solve these problems and many more who step back to these problems due to nature of the government. Here, **we collect a complaint from the user side without taking much of details from them so as to make them feel that their identity will be kept secret.** After taking the input we categorize the problem and ask that what type of help the user is seeking for. On behalf of that we send them the help needed. We have some renowned personalities and some NGOs who come to play their role wherever needed. Moreover, there is medical help provided too. We have tried best to provide a proper help needed.

2.2 TECHNICAL FEASIBILITY

Secure Public Grievance Portal is generally based on the idea of solving the social issues which remains unnoticed due to certain reasons. Initially, the user needs to create an account over this portal with simple verifications and less information and using that the user can lodge a complaint. After that we have different renowned personalities and NGOs who will see this issue and provide feedback accordingly. This portal doesn't have much more technical aspects excluding the languages used in designing and hence it is completely feasible.

2.3 SCOPE

The increase in the social issues and being traditional most of the people hesitate to come forward and lodge any kind of complain regarding the social grievances. This

website will provide them a platform to raise their voice and get proper help. We have user, admin and counselor section in our website. The user lodges the complaint and it is made visible to the counselors and on the basis of the problem they provide feedback which will be helpful for the lodger.

2.4 OVERVIEW OF THE SRS

This SRS aims at providing all the internal and external details of our grievance portal. We further describe all the modules of our website on the basis of their functionalities and features.

2.4.1 HARDWARE AND SOFTWARE REQUIREMENT

There is not any hard and fast requirement to use this portal. You can directly access it through your mobile phone. But still we prefer these Hardware requirements for the smooth functioning of the portal. As the technology is increasing rapidly and this portal is designed according to the current technology, hence, it is recommended that this portal should be used over the current.

Hardware required:

- RAM required- 8 GB or above
- Processor- core i3 or above

Software required:

- Linux
- MySql
- Apache5
- Brackets
- HTML
- CSS

These are all the hardware and the software which we have made use of.

2.5 WEB DEVELOPMENT

Web development is the work involved in developing a web site for the internet or an intranet. Web development can range from developing a simple single static page of plain text to complex web-based internet applications, electronic businesses and social network services. A more comprehensive list of tasks to which web development commonly refers, may include web engineering, web design, web content development, client liaison, client-side/server-side scripting, web server and network security configuration and e-commerce development. Web development is the coding or programming that enables website functionality, per the owner's requirements. It mainly deals with the non-design aspect of building websites, which includes coding and writing markup. An ever-growing set of tools and technologies have helped developers build more dynamic and interactive websites. Further, web developers now help to deliver applications as web services which were traditionally only available as applications on a desk-based computer. This has allowed for many opportunities to decentralize information and media distribution.

2.6 WEB-SITE

A **website** or **web site** is a collection of related network web sources, such as web pages, multimedia content, which are typically identified with a common domain name, and published on at least one web server. Websites can be accessed via a public Internet Protocol (IP) network, such as the Internet, or a private local area network (LAN), by a uniform resource locator (URL) that identifies the site. Websites can have many functions and can be used in various fashions; a website can be a personal website, a corporate website for a company, a government website, an organization website, etc. Websites are typically dedicated to a particular topic or purpose, ranging from entertainment and social networking Websites to providing news and education. All publicly accessible websites collectively constitute the world wide web, while private websites, such as a company's website for its employees, are typically part of an intranet.

Web pages, which are the building blocks of websites, are documents, typically composed in plain text interspersed with formatting instructions of Hypertext Markup Language (HTML, XHTML). They may incorporate elements from other websites with suitable markup anchors. Web pages are accessed and transported with

the Hypertext Transfer Protocol (HTTP), which may optionally employ encryption (HTTP server, HTTPS) to provide security and privacy for the user. The user's application, often a web browser, renders the page content according to its HTML markup instructions onto a display terminal.

Hyperlinking between web pages conveys to the reader the site structure and guides the navigation of the site, which often starts with a home page containing a directory of the site web content. Some websites require user registration or subscription to access content. Examples of subscription websites include many business sites, news websites, academic journal websites, gaming websites, file-sharing websites, message boards, web-based emails, social networking websites, websites providing real-time stock market data, as well as sites providing various other services. End users can access websites on a range of devices, including desktop and laptops, tablet computers, smartphones and smart TVs. A website consists of web pages which are interconnected to each other and contain various data and functionalities.

2.7 WEB PAGE

A **web page** or **webpage** is a document commonly written in HTML (Hypertext Markup Language) that is accessible through the Internet or other networks using an Internet browser. A web page is accessed by entering a URL address and may contain text, graphics, and hyperlinks to other web pages and files. Web pages can either be static or dynamic. Static

pages show the same content each time they are viewed. Dynamic pages have content that can change each time they are accessed. These pages are typically written in scripting languages such as PHP, Perl, ASP, or JSP. The scripts in the pages run functions on the server that return things like the date and time, and database information. All the information is returned as HTML code, so when the page gets to your browser, all the browser has to do is translate the HTML.

2.8 USER INTERFACE DEVELOPMENT AND BACK-END

Technologies that are mostly used to develop this user interface are:

- HMTL
- CSS
- JavaScript

2.8.1 HTML

HTML is a markup language which is used for creating attractive web pages with the help of styling, and which looks in a nice format on a web browser. An HTML document is made of many HTML tags and each HTML tag contains different content. Web browsers receive HTML documents from a web server or from local storage and render the documents into multimedia web pages. HTML describes the structure of a web page semantically and originally included cues for the appearance of the document.

HTML elements are the building blocks of HTML pages. With HTML constructs, images and other objects such as interactive forms may be embedded into the rendered page. HTML provides a means to create structured documents by denoting structural semantics for text such as headings, paragraphs, lists, links, quotes and other items. HTML elements are delineated by *tags*, written using angle brackets. Tags such as `` and `<input />` directly introduce content into the page. Other tags such as `<p>` surround and provide information about document text and may include other tags as sub-elements. Browsers do not display the HTML tags, but use them to interpret the content of the page.

HTML tags are like keywords which defines that how web browser will format and display the content. With the help of tags, a web browser can distinguish between an HTML content and a simple content. HTML tags contain three main parts: opening tag, content and closing tag. But some HTML tags are unclosed tags.

When a web browser reads an HTML document, browser reads it from top to bottom and left to right. HTML tags are used to create HTML documents and render their properties. Each HTML tags have different properties.

An HTML file must have some essential tags so that web browser can differentiate between a simple text and HTML text. We can use as many tags you want as per your code requirement.

2.8.2 CSS

Cascading Style Sheets (CSS) is a style sheet language used for describing the presentation of a document written in a markup language like HTML. CSS is a cornerstone technology of the World Wide Web, alongside HTML and JavaScript.

CSS is designed to enable the separation of presentation and content, including layout, colors, and fonts. This separation can improve content accessibility, provide more flexibility and control in the specification of presentation characteristics, enable multiple web pages to share formatting by specifying the relevant CSS in a separate .css file, and reduce complexity and repetition in the structural content.

Separation of formatting and content also makes it feasible to present the same markup page in different styles for different rendering methods, such as on-screen, in print, by voice (via speech-based browser or), and on Braille-based tactile devices. CSS also has rules for alternate formatting if the content is accessed on a mobile device.

There are three ways to incorporate CSS:

- Externally, where a stylesheet file (most likely with a .css extension) is linked near the beginning of the HTML document. Linking a .css file keeps the style sheet separate from an HTML document but still pulls in and applies the appropriate formatting to each HTML element. Without linking them, an HTML document can't read the style sheet and styles won't render.
- Internally, in which a <style> tag is nested in the <head> tag.
- Inline, by adding the <style> or <id> attribute inside an individual HTML element. Inline styles allow you to stylize a specific element in an HTML document, so they do look a little different from internal styles (but not by

much). Instead of nesting a tag within a tag, you directly apply inline styles to an open tag using the style attribute.

2.8.3 JavaScript

JavaScript is a scripting language that enables you to create dynamically updating content, control multimedia, animate images, and pretty much everything else. (Okay, not everything, but it is amazing what you can achieve with a few lines of JavaScript code.)

The JavaScript is executed by the browser's JavaScript engine, after the HTML and CSS have been assembled and put together into a web page. This ensures that the structure and style of the page are already in place by the time the JavaScript starts to run. This is a good thing, as a very common use of JavaScript is to dynamically modify HTML and CSS to update a user interface, via the Document Object Model API (as mentioned above). If the JavaScript loaded and tried to run before the HTML and CSS were there to affect, then errors would occur.

There are several reasons for why you may want to use JavaScript on your web page even though the page is usable without the JavaScript. Most of the reasons relate to providing a friendlier experience for those of your visitors who do have JavaScript enabled.

2.9 SPECIFICATIONS

1. In this portal we have categorized the social problems into different categories like child labour, sexual harassment, Environmental problems, domestic violence and adult illiteracy.
2. After the user get registered, he steps forward to lodge a complaint.
3. The complaints are stored in a complain box and the counselor can fetch the list and provides the valuable feedback.
4. The feedback is shown to the user page and on behalf of that he provides some suggestions if any needed.
5. After the completion of a complaint the counselor can change the status of the complaint. The status is changed to close.

CHAPTER 3

SOFTWARE DESIGN

Software design is a process to transform user requirements into some suitable form, which helps the programmer in software coding and implementation. Software design is the first step in SDLC (Software Design Life Cycle), which moves the concentration from problem domain to solution domain. It tries to specify how to fulfill the requirements mentioned in SRS. The project is

3.1 UML DIAGRAM

A diagram is the graphical presentation of a set of elements, most often rendered as a connect graph of vertices and arcs. You draw to visualize a system from different perspective, so a diagram is a projection into a system. For all but most trivial systems, a diagram represents an elided view of the element that make up a system. The same element may appear in all diagrams, only a few diagrams or in no diagrams at all. In theory, a diagram may contain any combination of things and relationships. In practice, however, a small number of common combinations arise, which are consistent with the five most useful views that comprise the architecture of a software-intensive system.

1. Use case Diagram
2. Data flow Diagram
3. Sequence Diagram

3.2.1 Use-case diagram

A use case diagram is the Unified Modelling Language (UML) is a type of behavioural diagram defined by and created from a use-case analysis. Its purpose is to present a graphical overview of the functionality provide by a system in terms of actors, their goals (represented as use cases), and any dependencies between those use cases.

3.2.2 DATA FLOW DIAGRAM

A **data-flow diagram** (DFD) is a way of representing a **flow** of a **data** of a process or a system (usually an information system). The DFD also provides information about the outputs and inputs of each entity and the process itself.

Secure Public Grievance Portal and Counselling Center

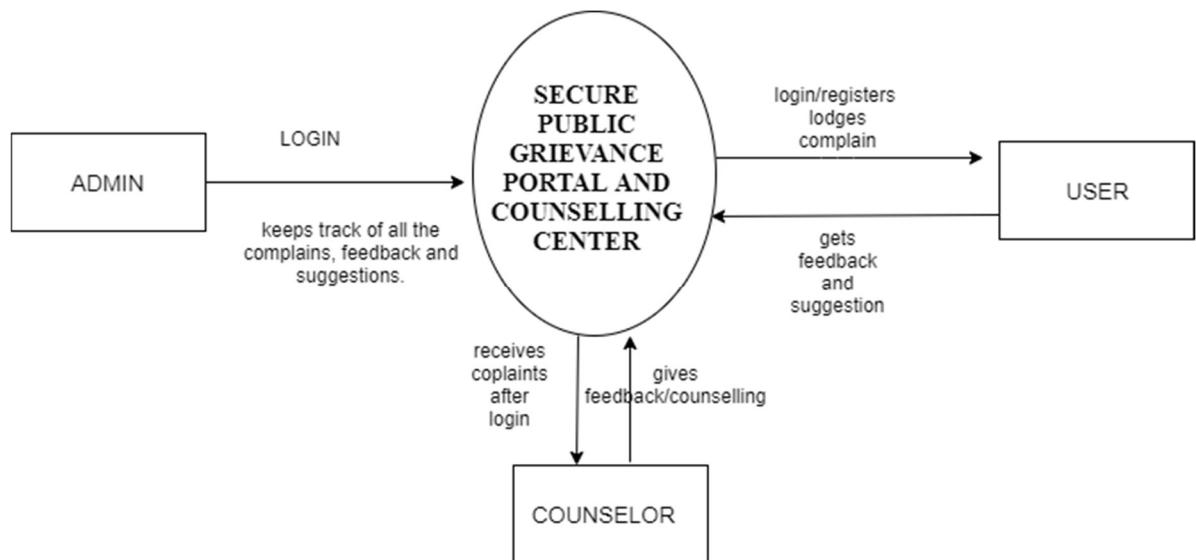


Fig 3.1 Level 0 DFD

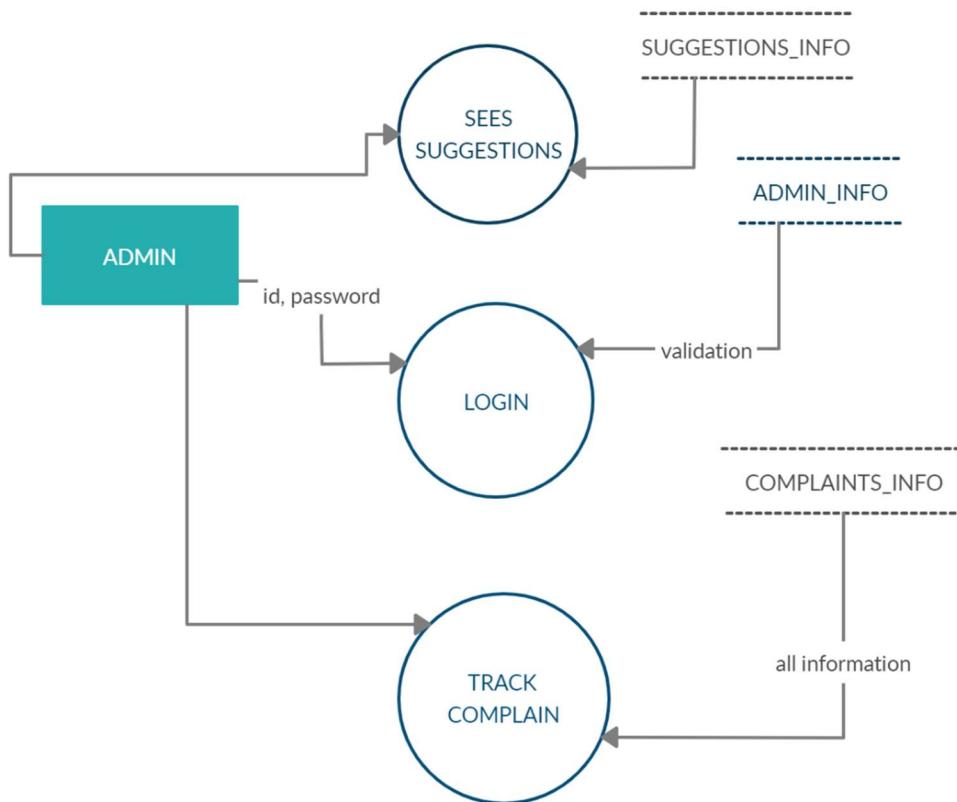


Fig 3.2 Admin-side DFD

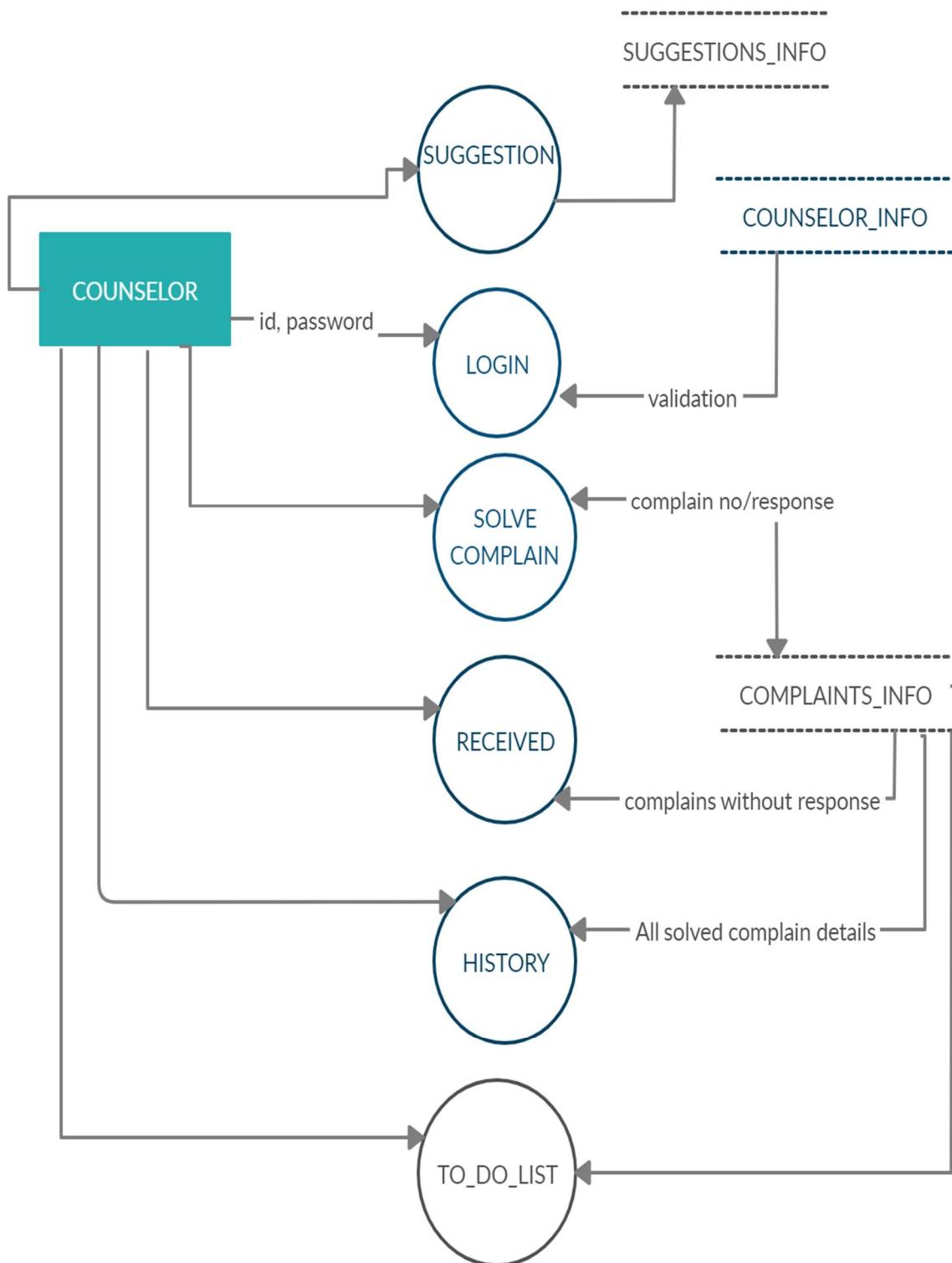


Fig 3.3 Counsellor- side DFD

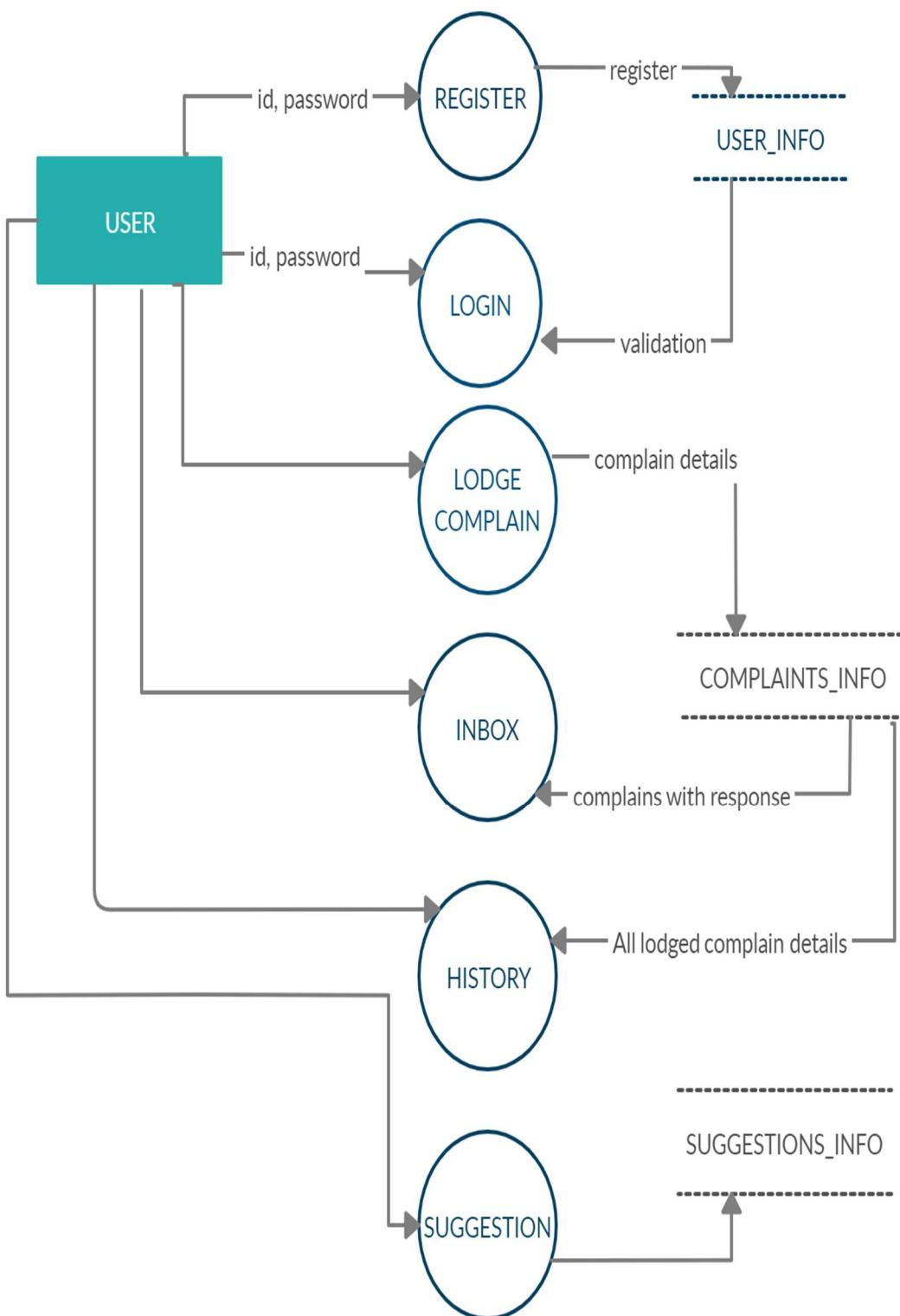


Fig 3.4 User-side DFD

3.2 FLOW CHART: The below **flowchart** represents the workflow and process of the whole project. A **flowchart** can also be defined as a diagrammatic representation of an algorithm, a step-by-step approach to solving a task. The **flowchart** shows the steps as boxes of various kinds, and their order by connecting the boxes with arrows.

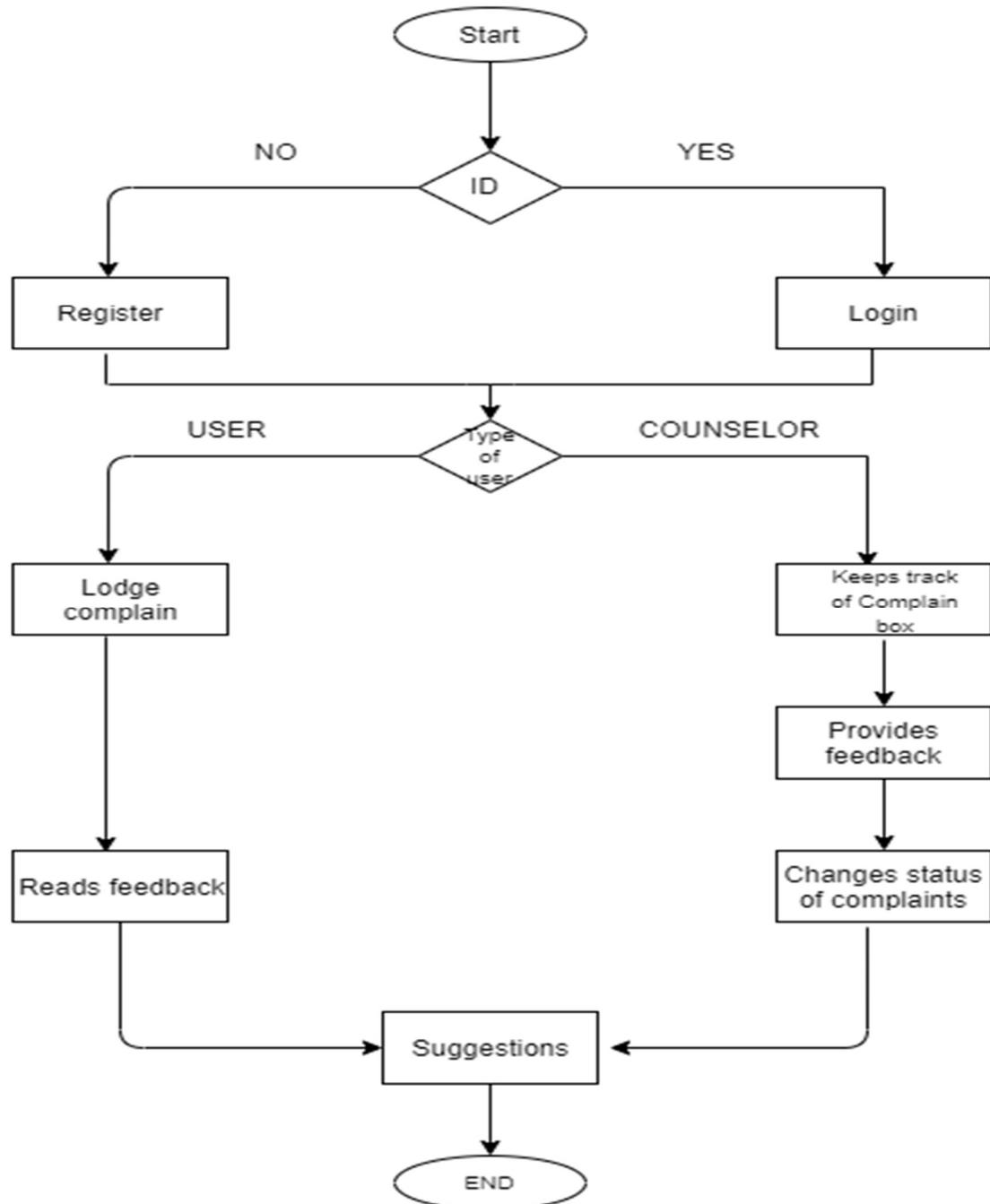


Fig 3.5 Flow Chart

3.3 Overview of the website

Below given is a **class diagram** in the Unified Modeling Language (UML), a type of static structure **diagram** that describes the structure of our system by showing the system's **classes**, their attributes, operations (or methods), and the relationships among objects.

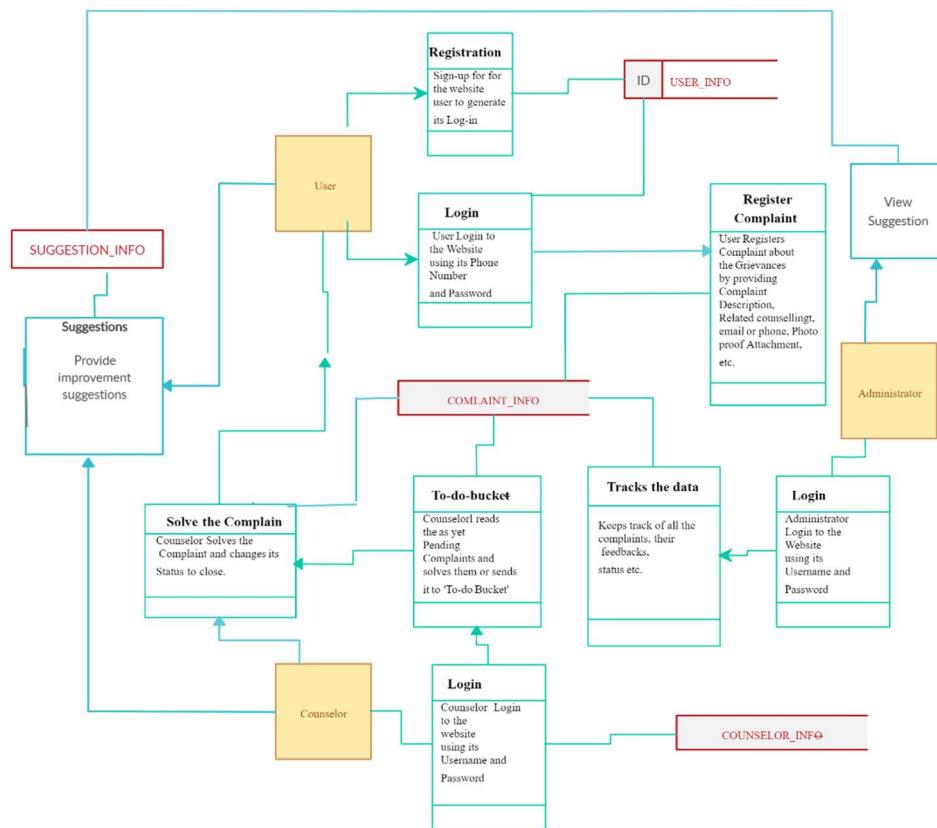


Fig 3.6 Working of the website

CHAPTER 4

IMPLEMENTATION

4.1 REQUIREMENT FOR THE PROJECT

The requirement of Secure Public Grievance and Counselling Portal is to allow user to complain against social issues without providing much of their details provided that the details will be kept private. The lodger may seek help from the counsellor and different other sources like NGOs according to the kind of help needed. Besides all these the user can seek help for environmental issues.

4.2 SCRIPTING

A scripting or script language is a programming language for a special run-time environment that automates the execution of tasks; the tasks could alternatively be executed one-by-one by a human operator. Scripting languages are often interpreted (rather than compiled). There are two types of scripting methodologies. They are as follows:

1. Server-side scripting: This scripting is done at the server end.
2. Client-side scripting: This scripting is done at the client end or the browser.

4.2.1 SERVER-SIDE SCRIPTING

Server-side scripting is a technique used in web development which involves employing scripts on a web server which produce a response customized for each user's (client's) request to the website. The alternative is for the web server itself to deliver a static web page. The alternative is for the web server itself to deliver a static web page. Scripts can be written in any of a number of server-side scripting languages that are available (see below). Server-side scripting is distinguished from client-side scripting where embedded scripts, such as JavaScript, are run client-side in a web browser, but both techniques are often used together.

Server-side scripting is often used to provide a customized interface for the user. These scripts may assemble client characteristics for use in customizing the response based on those characteristics, the user's requirements, access rights, etc. Server-side scripting also enables the website owner to hide the source code that generates the interface, whereas with client-side scripting, the user has access to all the code received by the client. A down-side to the use of

server-side scripting is that the client needs to make further requests over the network to the server in order to show new information to the user via the web browser. These requests can slow down the experience for the user, place more load on the server, and prevent use of the application when the user is disconnected from the server.

4.2.2 SERVER-SIDE SCRIPTING LANGUAGES

There are several languages that can be used for server-side scripting:

- PHP
- ASP.NET
- C++
- Java and JSP
- Python
- Ruby and so on.

4.2.1 CLIENT-SIDE SCRIPTING

Client-side scripting is changing interface behaviours within a specific web page in response to mouse or keyboard actions, or at specified timing events. In this case, the dynamic behaviour occurs within the presentation. The client-side content is generated on the user's local computer system. The client-side content is generated on the client's computer. The web browser retrieves a page from the server, then processes the code embedded in the page (typically written in JavaScript) and displays the retrieved page's content to the user. The client-side content is generated on the client's computer. The web browser retrieves a page from the server, then processes the code embedded in the page and displays the retrieved page's content to the user. It also allows the user to access remote scripting, a technique by which the DHTML page requests additional information from a server, using a hidden frame.

4.3 SYSTEM MODULE

In this the module that act as an interface between Client and Server is described in detail.

4.3.1 PHP

PHP is a server-side scripting language designed primarily for web development but also used as a general-purpose programming language. PHP originally stood for Personal Home Page, but it now stands for the recursive acronym PHP (Hypertext Pre-processor). PHP code may be embedded into HTML or HTML5 markup, or it can be used in combination with various web template systems, web content management systems and web frameworks. PHP code is usually processed by a PHP interpreter implemented as a module in the web server or as a Common Gateway Interface (CGI) executable. The web server software combines the results of the interpreted and executed PHP code, which may be any type of data, including images, with the generated web page. PHP code may also be executed with a command-line interface (CLI) and can be used to implement stand-alone graphical applications. The standard PHP interpreter, powered by the Zend Engine, is free software released under the PHP License. PHP has been widely ported and can be deployed on most web servers on almost every operating system and platform, free of charge.²⁴ The PHP language evolved without a written formal specification or standard until 2014, leaving the canonical PHP interpreter as a de facto standard. Since 2014 work has gone on to create a formal PHP specification.

4.3.2 XAMPP

Xampp is a free and open source cross platform web server solution stack package developed by Apache Friends, consisting mainly of the Apache HTTP Server, MariaDB database, and interpreters for scripts written in the PHP and Perl programming languages. XAMPP stands for Cross-Platform (X), Apache (A), MariaDB (M), PHP (P) and Perl (P). It is a simple, lightweight Apache distribution that makes it extremely easy for developers to create a local web server for testing and deployment purposes. Everything needed to set up a web server – server application (Apache), database (MariaDB), and scripting language (PHP) – is included in an extractable file. XAMPP is also cross-platform, which means it works equally well on Linux, Mac and Windows. Since most actual web server deployments use the same components as XAMPP, it makes transitioning from a local test server to a live server extremely easy as well.

4.4 DATABASE

A database is an organized collection of data, generally stored and accessed electronically from a computer system. Where databases are more complex they are often developed using formal design and modelling techniques.

The database management system (DBMS) is the software that interacts with end users, applications, and the database itself to capture and analyse the data. The DBMS software additionally encompasses the core facilities provided to administer the database. The sum total of the database, the DBMS and the associated applications can be referred to as a "database system". Often the term "database" is also used to loosely refer to any of the DBMS, the database system or an application associated with the database.

Computer scientists may classify database-management systems according to the database models that they support. Relational databases became dominant in the 1980s. These model data as rows and columns in a series of tables, and the vast majority use SQL for writing and querying data. In the 2000s, non-relational databases became popular, referred to as NoSQL because they use different query languages.

4.4.1 SQL

Structured Query Language is a domain-specific language used in programming and designed for managing data held in a relational database management system (RDBMS), or for stream processing in a relational data stream management system (RDSMS). It is particularly useful in handling structured data, i.e. data incorporating relations among entities and variables.

SQL was one of the first commercial languages to utilize Edgar F. Codd's relational model. The model was described in his influential 1970 paper, "A Relational Model of Data for Large Shared Data Banks". Despite not entirely adhering to the relational model as described by Codd, it became the most widely used database language.

SQL became a standard of the American National Standards Institute (ANSI) in 1986, and of the International Organization for Standardization (ISO) in 1987. Since then, the standard has been revised to include a larger set of features. Despite the existence of such standards, most SQL code is not completely portable among different database systems without adjustments.

4.4.2 QUERIES

The most common operation in SQL, the query, makes use of the declarative SELECT statement. SELECT retrieves data from one or more tables, or expressions. Standard SELECT statements have no persistent effects on the database. Some non-standard implementations of SELECT can have persistent effects, such as the SELECT INTO syntax provided in some databases. Queries allow the user to describe desired data, leaving the database management system (DBMS) to carry out planning, optimizing, and performing the physical operations necessary to produce that result as it chooses. A query includes a list of columns to include in the final result, normally immediately following the SELECT keyword. An asterisk ("*") can be used to specify that the query should return all columns of the queried tables. SELECT is the most complex statement in SQL, with optional keywords and clauses.

4.5 USER INTERFACES AND BACK-END

4.5.1 FRONT END

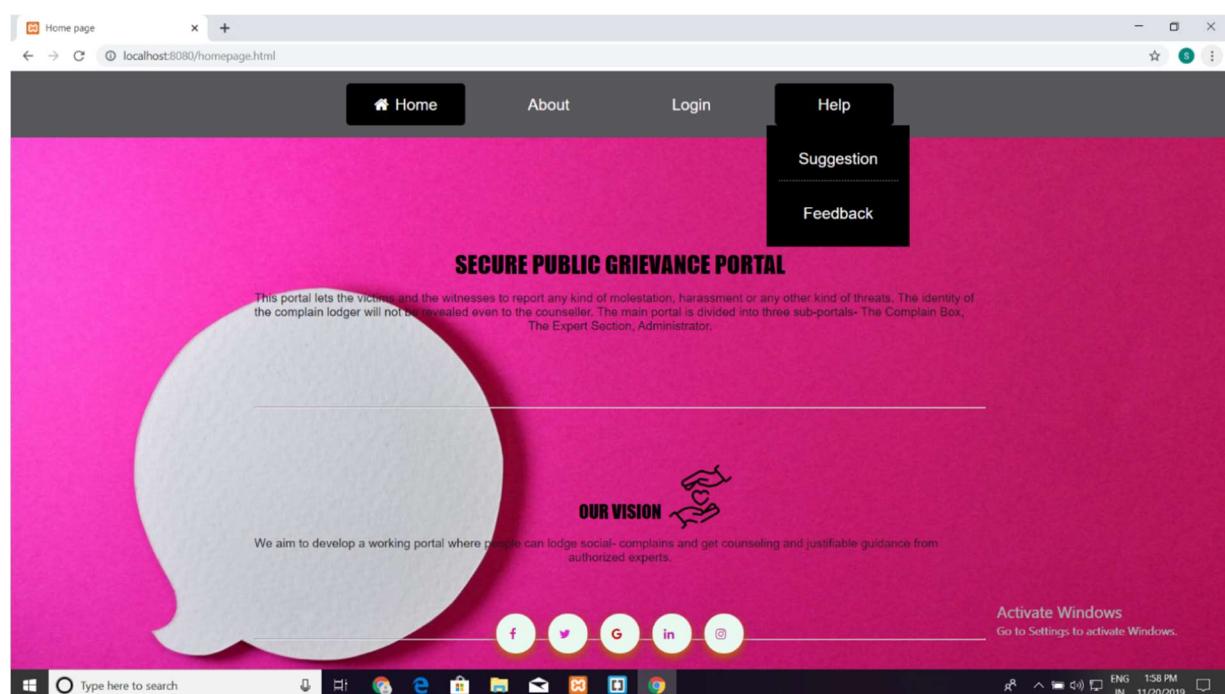


Fig 4.1 Website homepage

Secure Public Grievance Portal and Counselling Center

This is the first page which appears on the screen as soon as the portal is accessed. The navigation bar in this page takes us to login as: admin, user and counsellor, help, suggestion box and about us page.

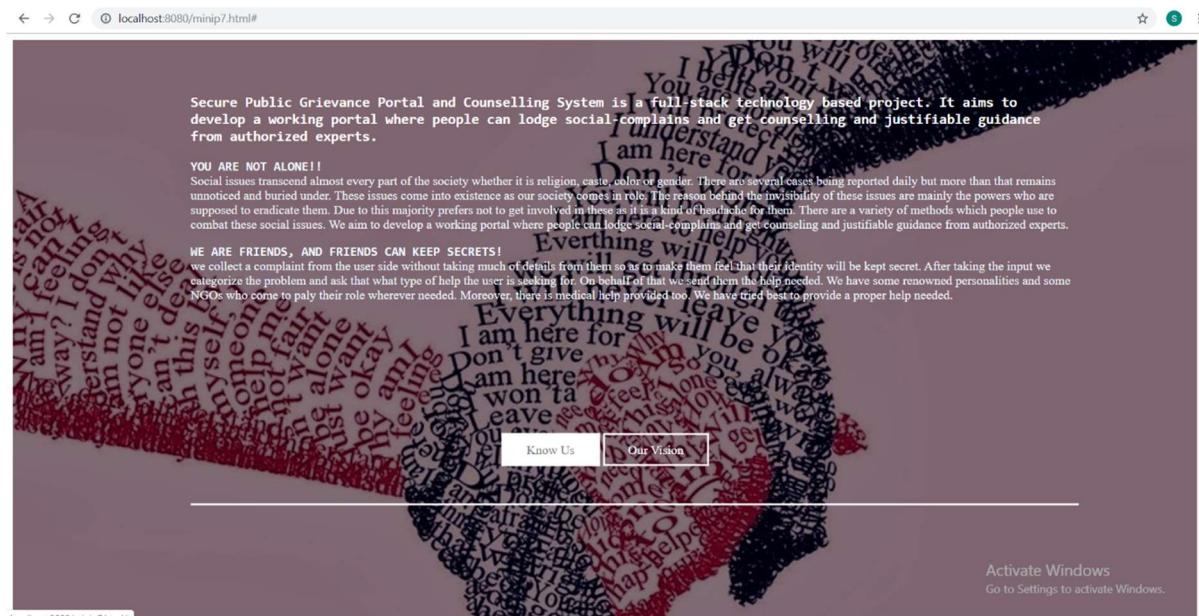


Fig 4.2 About and Vision

Fig 4.2 shows the information about the portal and vision behind the development of this website.

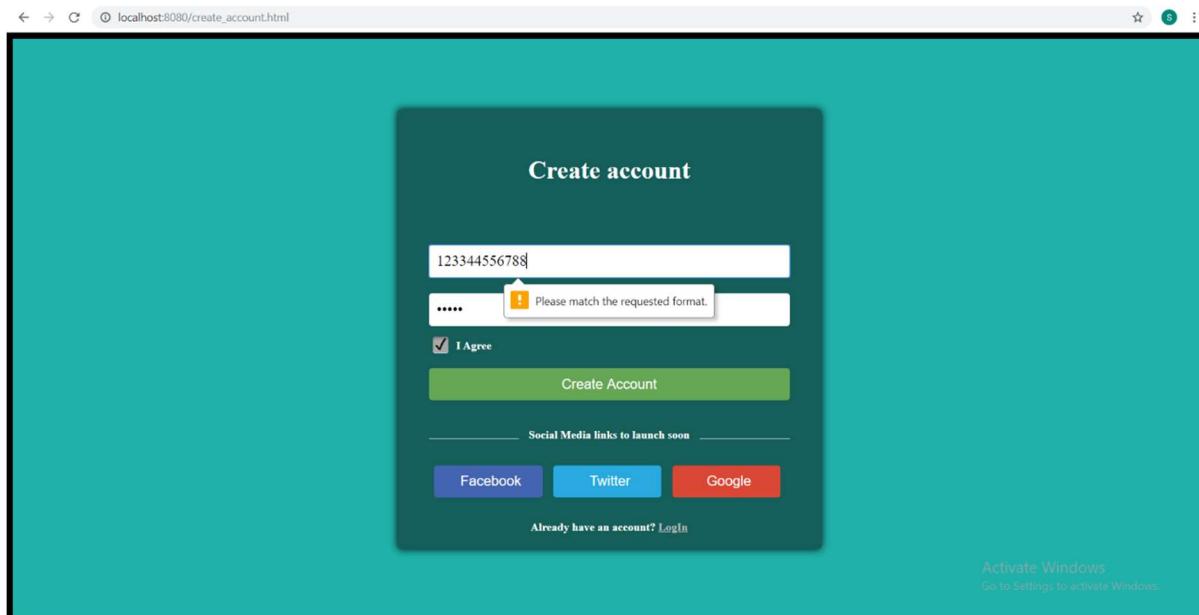


Fig 4.3 Create Account

Fig 4.3 helps us to create an account by filling the credentials if someone is not an authorized user yet. This facility is only for users as the admin and counsellor will be added by the developer itself.

The user needs to enter a valid phone number otherwise the field shows an error.

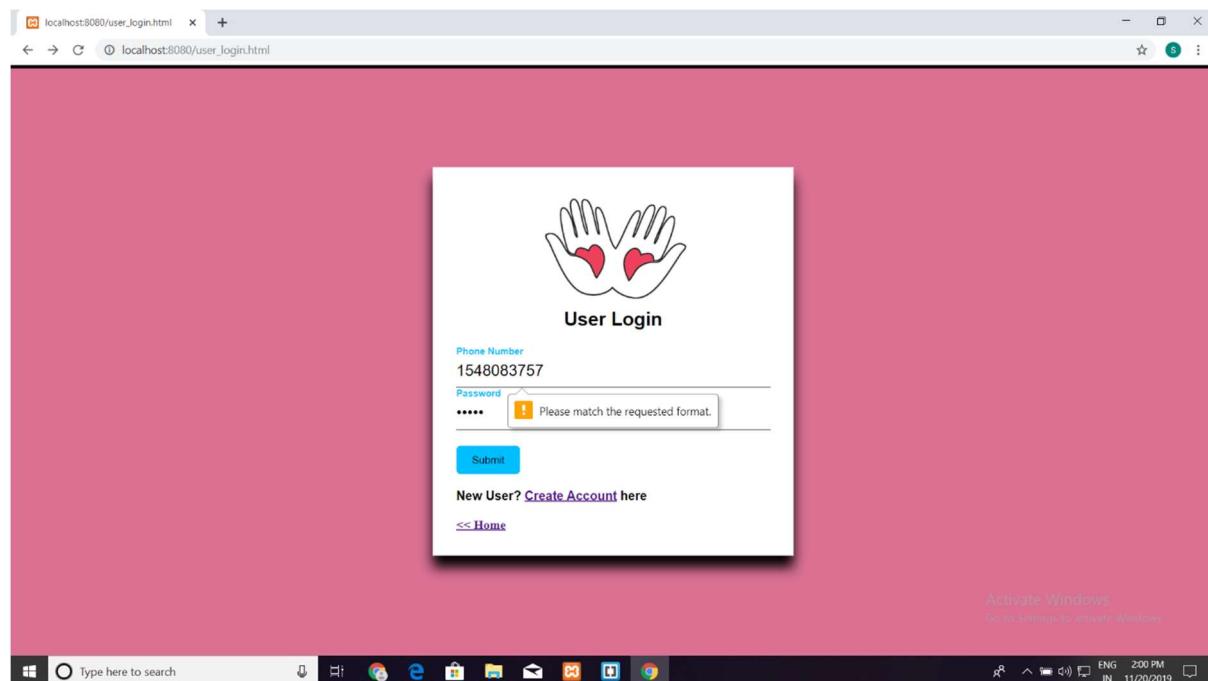


Fig 4.4 User login Page

Fig 4.4 helps the user to login to the portal after filling its credentials. A query runs in back-end which validates the entered user details with the details already in the database.

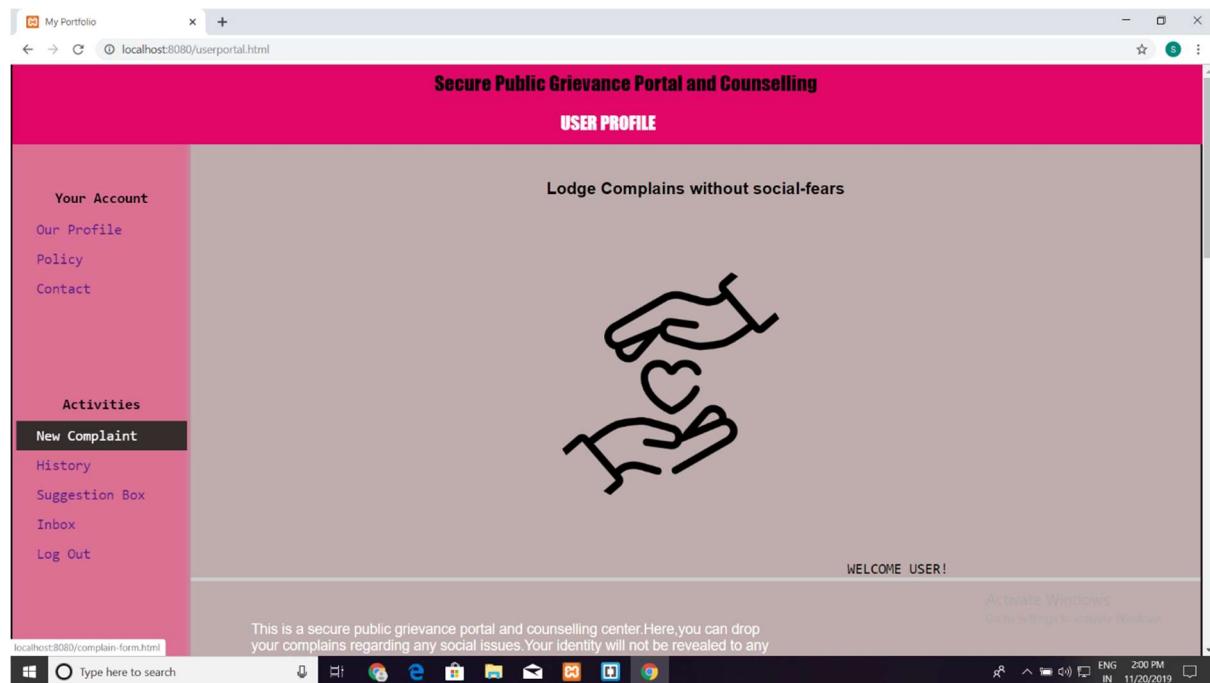


Fig 4.5 User Portal

Fig 4.5 shows the user portal. After the validation of user id and password it appears on the screen. The navigation bar takes you to inbox, history, lodge-complaint form, suggestion box and shows portal and user details. User can logout after lodging the complaint.

Secure Public Grievance Portal and Counselling Center

The screenshot shows a web browser window titled "User Account" with the URL "localhost:8080/complain-form.html". The page has a pink header with the text "Tell us your problems and let us find a solution for you!". Below the header, there are several input fields and dropdown menus:

- A text input field labeled "Phone Number" containing "9411268545".
- A dropdown menu labeled "Complain Type" showing "Sexual Assault".
- A dropdown menu labeled "Required Help Type" with the following options:
 - Counsellor expertise
 - Civil Officials (selected)
 - NGO
 - Environmental Activists
 - Medical Help
- A text area labeled "Your Problem in Detail(include dates, facts and possible outcomes)" with the placeholder "Enter Description here...".
- A file upload input field labeled "Attach a Proof (image or other)" with the placeholder "Choose File" and the message "No file chosen".
- A "Submit" button at the bottom.

At the bottom right of the page, there is an "Activate Windows" message: "Go to Settings to activate Windows." The Windows taskbar at the bottom shows various pinned icons and the date/time "11/20/2019 2:01 PM".

Fig 4.6 Complaint lodging form

Fig 4.6 shows the complaint lodging page. This page takes input from the user in the form of contact detail, type of problem being faced, required help type and a detailed description of the problem. The information is then stored into the database at back-end.

The screenshot shows a web browser window titled "localhost:8080/user-history-welcome" with the URL "localhost:8080/user-history-welcome.html". The page has a pink header with the text "Enter Username/Phone". Below the header, there is a text input field containing "7248083757" and a "GO" button. A large gray speech bubble graphic is positioned to the left of the input field. At the bottom right of the page, there is an "Activate Windows" message: "Go to Settings to activate Windows." The Windows taskbar at the bottom shows various pinned icons and the date/time "11/20/2019 2:02 PM".

Fig 4.7 User Verification

Fig 4.7 shows the user verification page. This page verifies the user and fetches information accordingly.

Complain No.	Type	Seen By	Complain	Feedback	Status
1	Child Abuse	NGO	help	meet me at @	close
3	Sexual Assault	Medical	descr	I am here with you	active
11	Environmental Issues	Civil	koool	hello	close
13	Sexual Assault	Medical	jjj	i am groot	close
21	Child Labour	Civil	mummi	we can fix a meeting on... This is my email	active
22	Child Labour	EVS	help me please		active
23	Child Labour	EVS	help me please		active
24	Child Labour	EVS	help me please		active
31	Child Abuse	Medical	kindly meet us		active
34	Child Abuse	Civil	i need help		active
35	Adult Illiteracy	NGO	illiteracy on alert		active
40	Domestic Violence	Medical	severe injuries		active
42	Domestic Violence	Civil	brutual beating		active
43	Environmental Issues	EVS	pollution	Activate Windows Go to Settings to activate Windows.	active
44	Sexual Assault	Counselling safety			active

Fig 4.8 User History fetched

Fig 4.8 shows the user history fetched. This contains the complaint number, its details, feedback if any, and the status of the complaint.

The screenshot shows a feedback form titled "FEEDBACK" on a dark-themed web page. At the top, it says "Please provide your valuable feedback." Below this is a mobile number input field containing "Mobile: 7248083757". There are three rating options: "Good: ", "Satisfactory: ", and "Bad: ". Below these are two yes/no questions: "Further Improvement Needed??" with "Yes: No: " and "Easy to use??" with "Yes: No: ". A text area labeled "Your comments:" contains the text "Secure". At the bottom is a "Submit" button. In the bottom right corner of the main window, there is an "Activate Windows" message: "Activate Windows Go to Settings to activate Windows." The browser address bar shows "localhost:8080/feed.html".

Fig 4.9 Suggestion Box

Fig 4.9 shows the suggestion box. This form takes the input from the user in the form of mobile number and the feedback on the basis of the experience of the user. The user can tell about the experience regarding the portal and add some comments if needed.

The screenshot shows a table titled "Complaints with Feedbacks" with the following data:

Complain No.	Complain	Feedback	Status
1	help	meet me at @	close
3	descr	I am here with you	active
11	koool	hello	close
13	jjj	i am groot	close
21	mummi	we can fix a meeting on... This is my email	active

At the bottom of the screen, the taskbar shows various icons and the system status bar indicates "ENGLISH 2:04 PM IN 11/20/2019".

Fig 4.10 User Inbox

Fig 4.10 shows user inbox. This page shows the complaints whose feedbacks are provided. Along with these, the status of the complaint is also shown

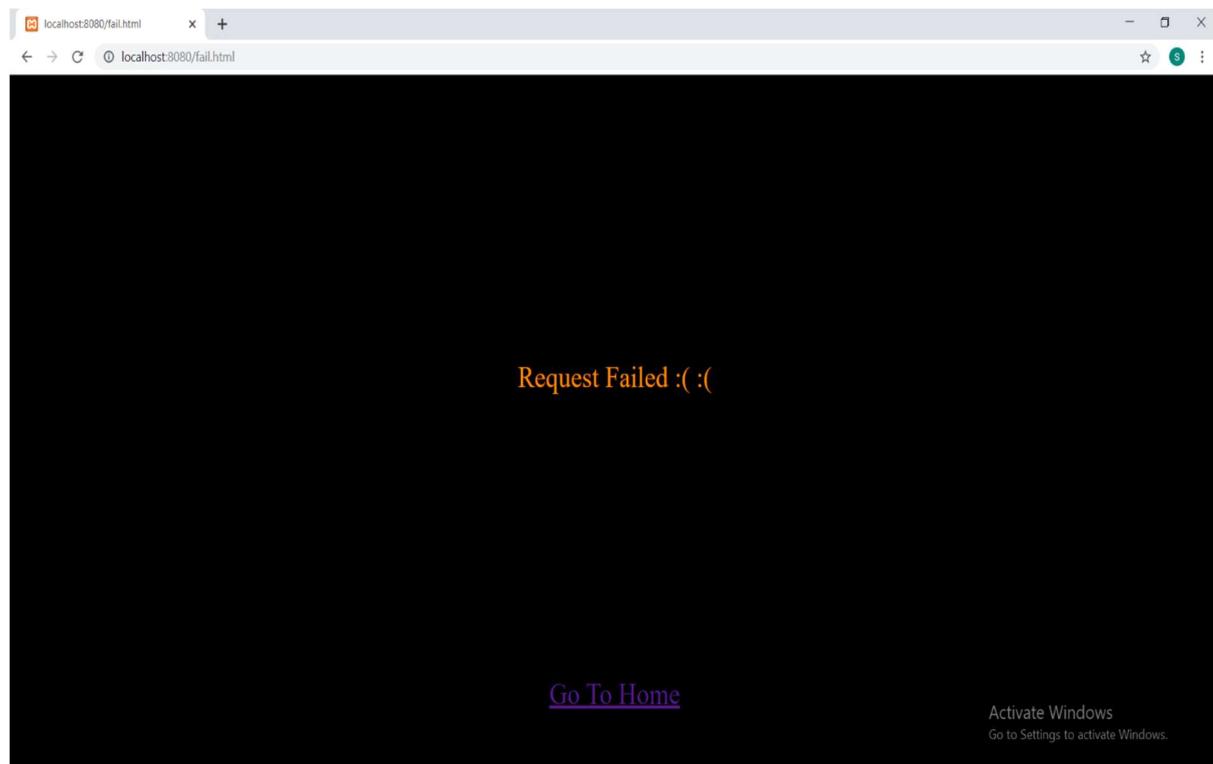


Fig 4.11 Error page in case of invalid access

Fig 4.11 shows an error page. This page appears in case any unauthorized user tries to login or in case of any failure and discrepancy this page is shown to the user.

Secure Public Grievance Portal and Counselling Center

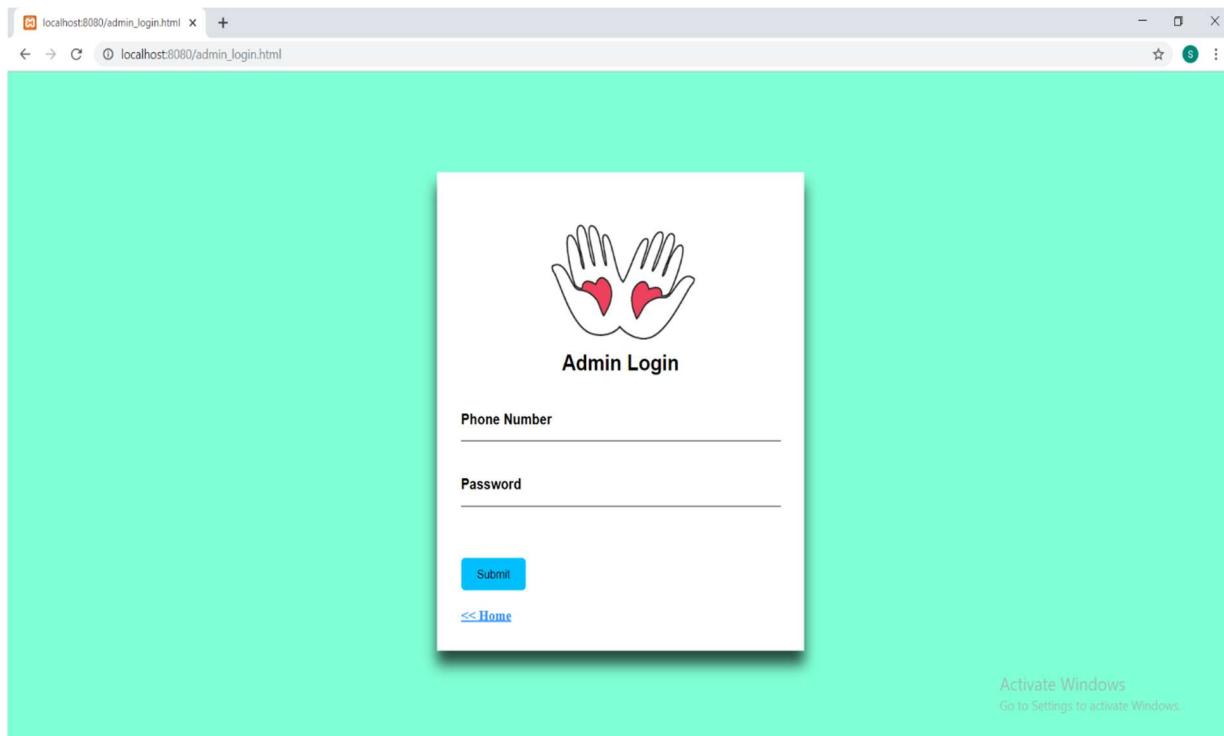


Fig 4.12 Admin login

Fig 4.12 shows the Admin login page. This page allows the admin to login to the portal. Here we have an option to return back to the home page. The admin has to provide its credentials to proceed further.

No.	Complain Type	Solution Type	Description	Sent From (UserID)	Status	Seen by (Counsellor)
1	Child Abuse	NGO	help	2147483647	close	meet me at @
2	Adult Illiteracy	Counselling	helpppp	1234567890	close	overwrite
3	Sexual Assault	Medical	descr	2147483647	active	I am here with you
10	Child Labour	EVS	hello	1234567890	close	kk
11	Environmental Issues	Civil	koool	2147483647	close	hello
13	Sexual Assault	Medical	jij	2147483647	close	i am groot
21	Child Labour	Civil	mummi	2147483647	active	we can fix a meeting on... This is my email
22	Child Labour	EVS	help me please	2147483647	active	
23	Child Labour	EVS	help me please	2147483647	active	
24	Child Labour	EVS	help me please	2147483647	active	
31	Child Abuse	Medical	kindly meet us	2147483647	active	
34	Child Abuse	Civil	i need help	2147483647	active	
	Adult		illiteracy on			

Fig 4.13 Admin Portal showing complaint details

Fig 4.13 shows the admin portal with complaint details. Here we have all the details of all complaints filed by different user with or without feedback stored according to their time-stamp of lodging. This page contains a logout button to exit the portal.

The screenshot shows a Windows desktop environment with a taskbar at the bottom. The taskbar includes icons for File Explorer, Edge browser, Task View, Taskbar settings, and system status (ENG, 2:06 PM, IN, 11/20/2019). Above the taskbar, there is a window titled "Table with database" showing a table of complaints. Below it are two more tables: "Counselling Request Bucket" and "Feedback Bucket".

Complain_No.	Complain Type	Description	Sent From(UserID)	Status	Solution	Seen by(Counsellor)
2	Adult Illiteracy	helpppp	1234567890	close	overwrite	7248083757
44	Sexual Assault	safety	2147483647	active		
47	Sexual Assault	harassment	2147483647	active		
54	Adult Illiteracy	11	7248083999	active		

User_Id	Rating	Improvement Needed	Easy-to-use	Remarks
7248083757	good	yes	yes	blob
7248083757	good	yes	yes	no
7248083757	good	yes	yes	no
7240083757	satisfactory	no	yes	Activate today's Go to Settings good date Windows
7248083757	good	no	yes	good
7248083757	good	yes	yes	average

Fig 4.14 Admin Portal showing suggestion box

Fig 4.14 shows the admin portal with suggestion-box details. Here we have all the details of all suggestions provided by different users and counsellors stored according to their time-stamp of lodging. This page contains a logout button to exit the portal.

Secure Public Grievance Portal and Counselling Center

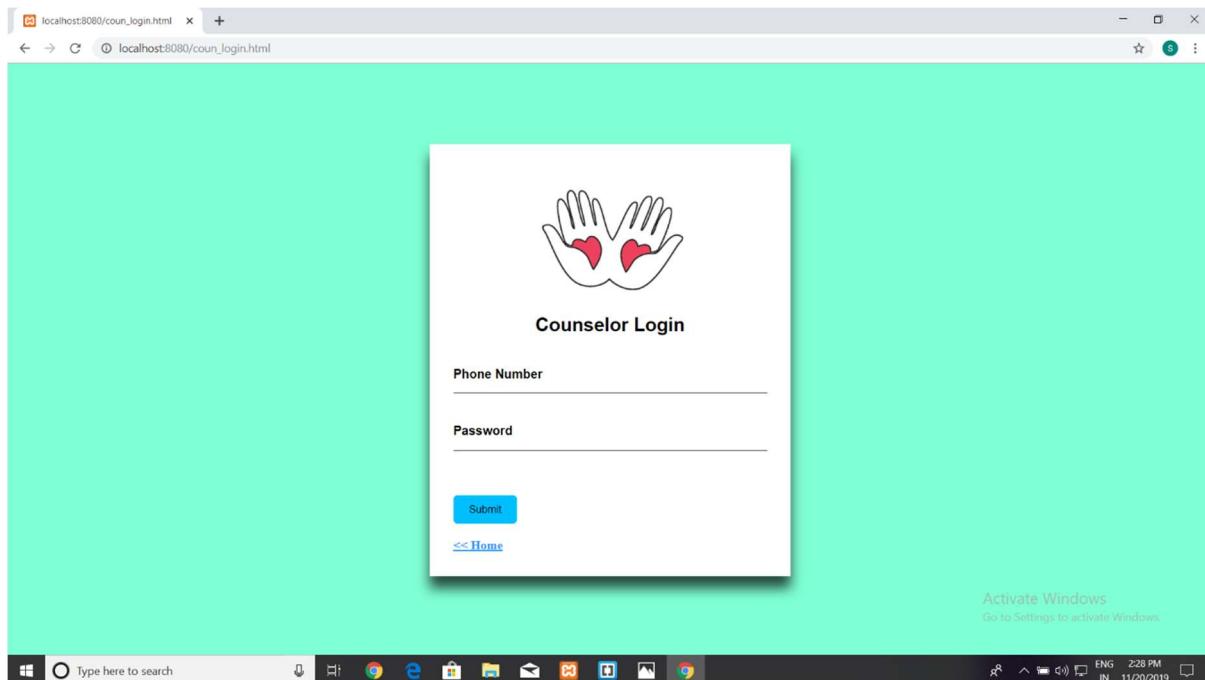


Fig 4.15 Counsellor login

Fig 4.15 shows the Counsellor login page. This page allows the counsellor to login to the portal. Here we have an option to return back to the home page. The counsellor has to provide its credentials to proceed further.

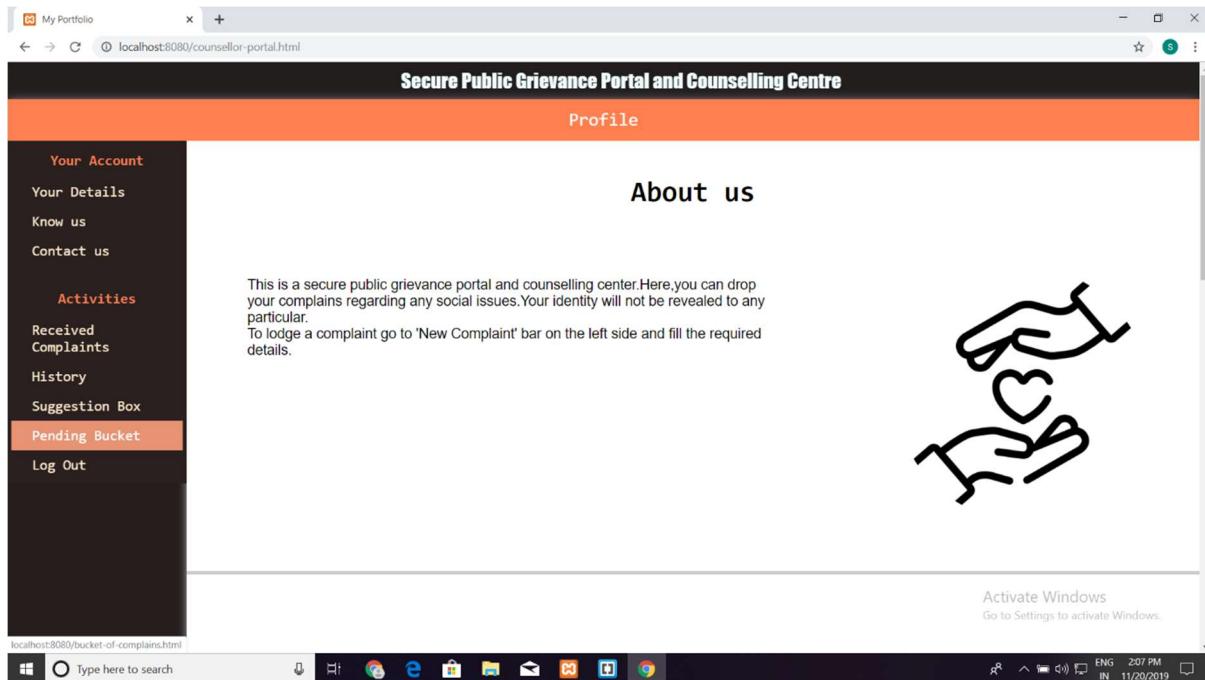


Fig 4.16 Counsellor's portal

Fig 4.16 shows the counsellor portal. After the validation of counsellor's credentials, it appears on the screen. The navigation bar takes you to pending bucket, history, received complaint, suggestion box and shows portal and counsellor's details. Counsellor can logout after providing the feedback of the complaint.

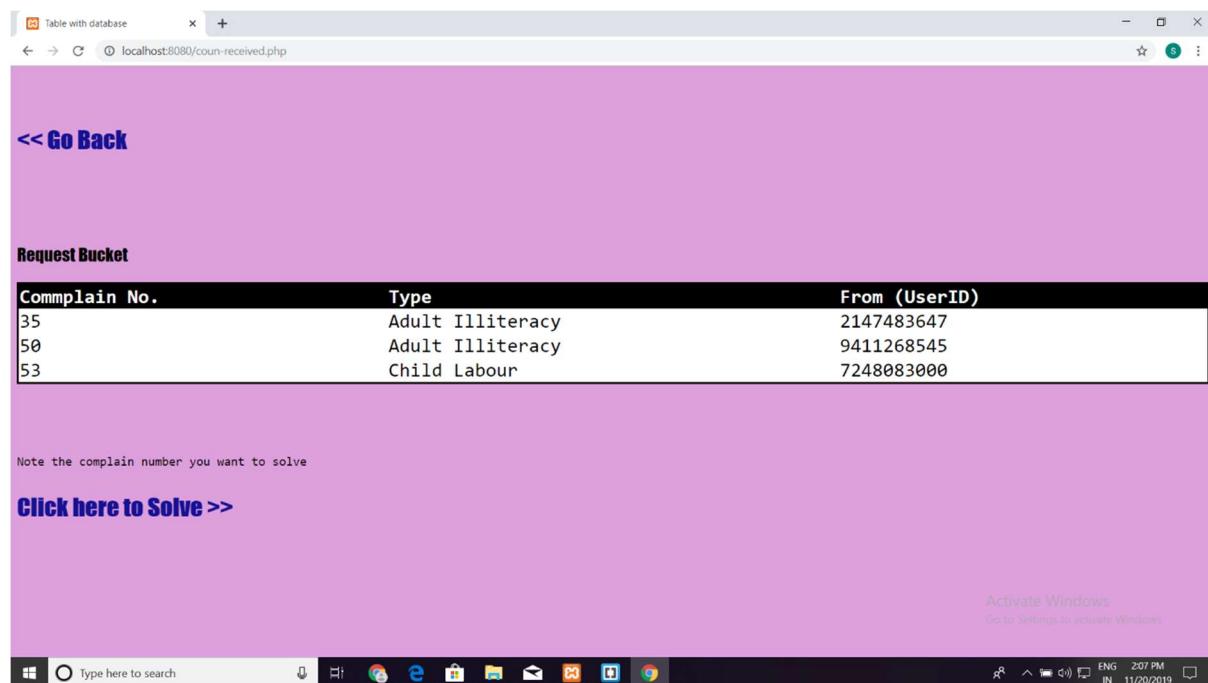


Fig 4.17 Received complaints list

Fig 4.17 shows the received complaints list. This page shows list of the complaints along with the type of complaint and complaint number. The counsellor can click over resolve button to proceed further and solve the problem and can return back after clicking the back button.

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The screenshot shows a web browser window titled "localhost:8080/solve.html". The page contains fields for entering a username (PHONE), complain number, and feedback. It also includes a section to set the complaint status (Close or Active) and a "Submit" button.

Enter your username(PHONE)

Enter the Complain Number

Give Feedback:

Set the complaint status (Choosing close will remove the complaint from your To-Do List)

Close
 Active

Submit

Activate Windows
Go to Settings to activate Windows.

Fig 4.18 Counsellor's form for complaint response

Fig 4.18 shows the counsellor's response form. Here the counsellor can provide the feedback to the complaint after giving the complaint number and username. The counsellor can set the status of the complaint to active or close after providing the details.

The screenshot shows a web browser window titled "localhost:8080/coun-history.php". The page displays a table titled "Your History of Complaints and Feedbacks" with columns for Complain No., Type, Complain, Feedback, Status, and Sent By(User_id). The table contains four rows of data. At the bottom left is a "Go Back" link, and at the bottom right is an "Activate Windows" message.

Complain No.	Type	Complain	Feedback	Status	Sent By(User_id)
2	Adult Illiteracy	helpppp	overwrite	close	1234567890
10	Child Labour	hello	kk	close	1234567890
11	Environmental Issues	koool	hello	close	2147483647
13	Sexual Assault	jjj	i am groot	close	2147483647

<< Go Back

Activate Windows
Go to Settings to activate Windows.

Fig 4.19 Counsellor's history

Fig 4.19 shows the details of counsellor's history. This page shows all the requests of the particular counsellor along with the

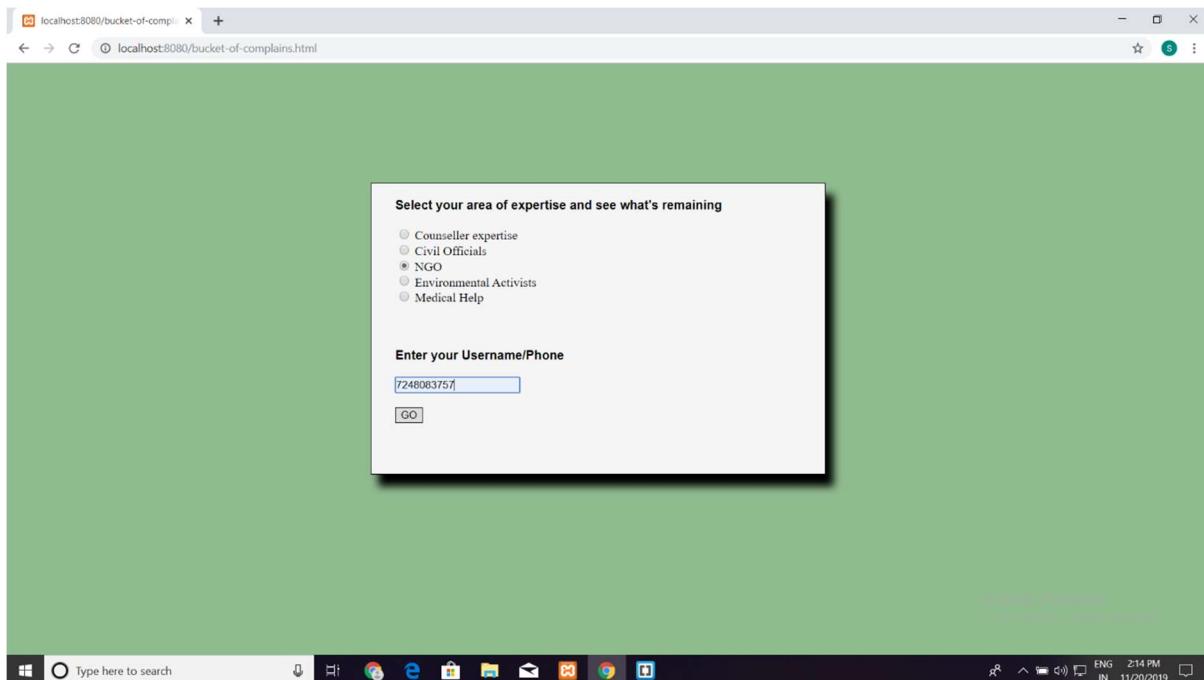


Fig 4.20 Counsellor's authentication

Fig 4.20 shows the counsellor' authentication page. The counsellor id and the type of complain which he wants to solve goes an input.

Secure Public Grievance Portal and Counselling Center

The screenshot shows a web application window titled "Table with database" with the URL "localhost:8080/to-do_bucket.php". The page has a pink header with "Request Bucket" and a sub-header "Type: 'Civil'". Below is a table:

Complain No.	Type	From (UserID)
21	Child Labour	2147483647
34	Child Abuse	2147483647
42	Domestic Violence	2147483647
45	Domestic Violence	2147483647

Note the complain number you want to solve

Pick and Solve >>

Activate Windows
Go to Settings to activate Windows.

Fig 4.21 To-do bucket with respect to complaint type

Fig 4.21 shows the to-do bucket. The counsellor can see how many complaints are still left of a particular type which he can pick up according to the complaint number and solve.

4.5.2 BACK-END

The screenshot shows the phpMyAdmin interface for the "miniproject" database, specifically the "user_login" table. The table structure is as follows:

	phone	password
<input type="checkbox"/>	1234567890	tanuj111
<input type="checkbox"/>	2147483647	shilpyy
<input type="checkbox"/>	6754321890	tanuj111
<input type="checkbox"/>	72490893700	dogg
<input type="checkbox"/>	7248083757	shilpy12
<input type="checkbox"/>	7248083777	shilpu
<input type="checkbox"/>	7248083790	me12
<input type="checkbox"/>	7318343446	shoyab@123
<input type="checkbox"/>	8382885877	shoyab12
<input type="checkbox"/>	9411268545	rytahin
<input type="checkbox"/>	9616173440	avani123

Activate Windows
Go to Settings to activate Windows.

Fig 4.2.1 User info table

Secure Public Grievance Portal and Counselling Center

The screenshot shows the phpMyAdmin interface with the following details:

- Database:** miniproject
- Table:** feedbacks
- Rows:** 6
- Columns:**
 - user_id
 - review
 - improvement_needed
 - easy_to_use
 - remarks
- Data Preview:**

7248083757	good	yes	yes	blob
7248083757	good	yes	yes	no
7248083757	good	yes	yes	no
7240083757	satisfactory	no	yes	no
7248083757	good	no	yes	good
7248083757	good	yes	yes	average

Fig 4.21 Suggestion info table

The screenshot shows the phpMyAdmin interface with the following details:

- Database:** miniproject
- Table:** complaints
- Rows:** 47
- Columns:**
 - type
 - help
 - descr
 - evidence
 - id
 - complain_no
 - status
 - feedback
 - couns_id
- Data Preview:**

type	help	descr	evidence	id	complain_no	status	feedback	couns_id
Child Abuse	NGO	help	NULL	2147483647	1	close	meet me at @	
Adult Illiteracy	Counselling	helppp	NULL	1234567890	2	close	overwritte	7248083757
Sexual Assault	Medical	descri	NULL	2147483647	3	active	I am here with you	
Child Labour	EVS	hello	NULL	1234567890	10	close	kk	7248083757
Environmental Issues	Civil	koool	NULL	2147483647	11	close	hello	7248083757
Sexual Assault	Medical	ii	NULL	2147483647	13	close	i am groot	7248083757
Child Labour	Civil	mummi	NULL	2147483647	21	active	we can fix a meeting on... This is my email	
Child Labour	EVS	help me please	NULL	2147483647	22	active	NULL	
Child Labour	EVS	help me please	NULL	2147483647	23	active	NULL	
Child Labour	EVS	help me please	NULL	2147483647	24	active	NULL	
Child Abuse	Medical	kindly meet us	NULL	2147483647	31	active	NULL	
Child Abuse	Civil	i need help	NULL	2147483647	34	active	NULL	
Adult Illiteracy	NGO	illiteracy on alien	NULL	2147483647	35	active	NULL	
Domestic Violence	Medical	severe injuries	NULL	2147483647	40	active	NULL	
Domestic Violence	Civil	brutal beating	NULL	2147483647	42	active	NULL	
Environmental Issues	EVS	pollution	NULL	2147483647	43	active	NULL	
Sexual Assault	Counselling	safety	NULL	2147483647	44	active	NULL	
Domestic Violence	Civil	dowry	NULL	2147483647	45	active	NULL	
Social assault	Counselling	harassment	NULL	2147483647	47	active	NULL	

Fig 4.21 Complaints info table

4.5.3 BACK-END DESCRIPTION

The database contains the following 5 tables-

1. user_login: This table consists of the authorized user's information.

When the User registers, his credentials are saved into this table. At the time of User-login, validation is done with the saved records.

When a user files a complaint, his id is saved with the complaint number.

When a user makes an entry in suggestion-box, user_id associates with suggestion info too.

2. coun_login: When a counsellor logs-in, his credentials are verified with this table.

With each feedback given, the id of counsellor gets attached to the complaint number which can be displayed on the admin screen.

When a counsellor gives suggestion, his id is displayed along with the suggestion-details on admin screen.

3. admin_login: When a counsellor logs-in, his credentials are verified with this table.

4. complaints: It contains all the complaint details. A unique complain_no is allotted to every complaint lodged. It contains the id's of the user who files the complaints and the counsellor who solves it, the complaint status shows whether the complaint is still active or closed.

When the status is closed, the complaint will no longer appear in the received section of counsellor.

5. feedbacks: This table keeps records of all the suggestions given by user/counsellor with reference to the id used to rate.

CHAPTER 5

TESTING

The implementation phase of software development is concerned with translating design specification into source code. The preliminary goal of implementation is to write source code and internal documentation so that conformance of the code to its specifications can be easily verified, and so that debugging, testing and modifications are eased. This goal can be achieved by making the source code as clear and straightforward as possible. Simplicity, clarity and elegance are the hallmark of good programs, obscurity, cleverness, and complexity are indications of inadequate design and misdirected thinking. Source code clarity is enhanced by structured coding techniques, by good coding style, by, appropriate supporting documents, by good internal comments, and by feature provided in modern programming languages. The implementation team should be provided with a well-defined set of software requirement, an architectural design specification, and a detailed design description. Each team member must understand the objectives of implementation.

5.1 Testing Objectives:

The main objective of testing is to uncover a host of errors, systematically and with minimum effort and time. Stating formally, we can say,

- Testing is a process of executing a program with the intent of finding an error.
- A successful test is one that uncovers an as yet undiscovered error.
- A good test case is one that has a high probability of finding error, if it exists.
- The tests are inadequate to detect possibly present errors.
- The software more or less confirms to the quality and reliable standards

5.2 TYPES OF TESTING

5.2.1 Functional Test

Functional test cases involve exercising the code with Nominal input values for which expected results are known; as well as boundary values (minimum values, maximum values and values on and just outside the functional boundaries) and special values.

5.2.2 Performance Test

Performance testing determines the amount of execution time spent in various parts of the unit, program throughput, response time, and device utilization by the program unit. A certain amount of avoid expending too much effort on fine-tuning of a program unit that contributes little to the over-all performance of the entire system. Performance testing is most productive at the subsystem and system levels.

5.2.3 Stress Test

Stress test are those designed to intentionally break the unit. A great deal can be learned about the strengths and limitations of a program by examining the manner in which a program unit breaks.

5.2.4 Structure Test

Structure tests are concerned with exercising the internal logic of a program and traversing particular execution paths. Some authors refer collectively to functional performance and stress testing as “black box” testing. While structure testing is referred to as “white box” or “glass box” testing. The major activities in structural testing are deciding which path to exercise.

CHAPTER 6

CONTRIBUTION SUMMARY

Secure public grievance portal was designed by the three mates Shilpy Raghav, Avani Singh and Shoyab Alam Idrisi. The portal is mainly based on the front-end languages like HTML, CSS, JavaScript, etc.

All of us have equal contribution in designing the project. We are working together with helping each other and dividing the task in such a way that none of us should feel like doing extra effort. We have discussed all the heads and tails of this project as far as our knowledge and experience helped us to do so. We have also divided the task in such a way that the person with better knowledge in a particular field was given a priority to perform the definite task and help the other to understand the things going on. Although we have not developed the back-end of the project. The sub-tasks performed by each of us are as follows:

Name	Task(s) performed	Advantage of the task
Shilpy Raghav (171500316)	<ul style="list-style-type: none"> • Homepage 	<ul style="list-style-type: none"> • This page appears as soon as the website is opened. It contains a brief introduction about the portal.
	<ul style="list-style-type: none"> • Counsellor's page 	<ul style="list-style-type: none"> • This page provides an interface for the counsellor to login its account to resolve the problems or issues came via complain.

	<ul style="list-style-type: none"> • Valid request bucket page 	<ul style="list-style-type: none"> • This page shows all the information about the current list of complaints.
	<ul style="list-style-type: none"> • Admin login page 	<ul style="list-style-type: none"> • This page helps the admin to fill the credentials and go through all the complains.
	<ul style="list-style-type: none"> • History of complains 	<ul style="list-style-type: none"> • This page show the list of complains which were lodged and now they are completed.
	<ul style="list-style-type: none"> • Suggestion form 	<ul style="list-style-type: none"> • This page is required to fill if there is any kind of suggestion regarding the complains and the functioning of website.
	<ul style="list-style-type: none"> • Taking data from the database and showing on the page. 	<ul style="list-style-type: none"> • After designing front end with the help of PHP the front-end and back-end are connected together and a database is maintained regarding the feedback and

		complaints. Here we show that data it is needed.
Avani Singh (171500068)	<ul style="list-style-type: none"> • Complaint with Feedback 	<ul style="list-style-type: none"> • Here we collect the feedback for a particular complaint from the counsellor and display it to the user.
	<ul style="list-style-type: none"> • Create account 	<ul style="list-style-type: none"> • Here if some user arrives for the first time can create an account.
	<ul style="list-style-type: none"> • Login page 	<ul style="list-style-type: none"> • This page helps the user to login after providing its credentials.
	<ul style="list-style-type: none"> • Feedback bucket 	<ul style="list-style-type: none"> • This page contains all the feedback and shows to the user.
	<ul style="list-style-type: none"> • History of feedbacks • Request bucket 	<p>This page shows all the feedbacks provided by the counsellor.</p> <ul style="list-style-type: none"> • This page shows all the requests to the counsellor.

	<ul style="list-style-type: none"> • Joining the front end and back end. 	<ul style="list-style-type: none"> • This is done using xampp and php.
Shoyab Alam Idrisi (171500327)	<ul style="list-style-type: none"> • Feedback form 	<ul style="list-style-type: none"> • This collects all the information required to be given by the counsellor.
	<ul style="list-style-type: none"> • Error page 	<ul style="list-style-type: none"> • This page is shown in case of any discrepancy.
	<ul style="list-style-type: none"> • Type of problem 	<ul style="list-style-type: none"> • This helps to categorize the type of complain.
	<ul style="list-style-type: none"> • Lodge a complain 	<ul style="list-style-type: none"> • This page helps the user to lodge a complaint.
	<ul style="list-style-type: none"> • Filling data to the databases. 	<ul style="list-style-type: none"> • After connecting the back-end and front-end using PHP when the user inserts some credential and logins all the requests are stored in a database.

CHAPTER 7

FUTURE SCOPE

- The portal can be extended to cover a wide range of intra-organizational as well as extra-organizational issues.
- We can add more number of prominent members who are capable of solving these kind of issues and later groups/communities can be created to completely resolve serious issues together.
- User accounts can be created through registrations and a n account-to-account chat facility can be provided.
- Through this, the idea of chat-bot can be implemented so that users can have a conversation with other users as well as the experts.
- We can facilitate the user to send audio, video and images as a proof for the complaint lodged. This will help in better investigation and resolving the problem in a proper way.
- We can also add some features through which the current location can be traced in case of an emergency.
- We can verify the user by sending an one-time password (OTP) or a verification mail to the user so as to avoid misuse of the portal.
- We can have a maintenance team which will keep the portal maintained and work on its further improvement.

There can be many more features which can be added to this portal for its enhancement and better functioning

CHAPTER 8

CONCLUSION

After the successful completion of this project we have developed a solution for the most common but a complicated problem. This solution will help the user to lodge complains regarding the social issue which he notices but hesitates to register that complain to any place. Through this portal the user can lodge a complain without revealing the identity. We provide different type of support according to the problem reported.

We have tried our best to make this project a successful one. Besides solving this problem we have focused to make this portal attractive one. The best part is that the complaints are categorized into different categories and on that basis the counselling is provided by the renowned users. The user or the counsellor may suggest us if there is any kind of problem regarding the use of the portal. In this way proper steps are taken to make this a successful one.

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