Online Chat Aplication Project Report

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Mahmudul islam (UG02-47-18-004)
Department of Computer Science and Engineering
State University of Bangladesh (SUB)
Dhaka, Bangladesh
Email: mahmudulislamridoy06@gmail.com

***Abstract*—Teleconferencing or Chatting, is a method of using technology to bring people and ideas together despite of the geographical barri- ers. The technology has been available for years but the acceptance it was quit recent. Our project is an example of a chat server.**

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***Index Terms*—The word mostly used in your report.**

I. Introduction

Communication is a mean for people to exchange messages. It has started since the beginning of human creation. Distant communication began as early as 1800 century with the introduction of television, telegraph and then telephony. Interestingly enough, telephone communication stands out as the fastest growing technology, from fixed line to mobile wireless, from voice call to data transfer. The emergence of computer network and telecommunication technologies bears the same objective that is to allow people to communicate. All this while, much efforts has been drawn towards consolidating the device into one and therefore indiscriminate the services. Chatting is a method of using technology to bring people and ideas together despite of the geograph- ical barriers. The technology has been available for years but the acceptance it was quit recent. Our project is an example of a chat server. It is made up of applications the client application which runs on the users mobile and server application which runs on any pc on the network. To start chatting our client should get connected to server where they can do Group and private chatting Chatting is now-a-days very useful to express our ideas as well as receive others ideas on any topic. Chats reflect the recent trends of the society. Sometimes, it is possible to meet eminent people in chatting and have their advice.

Chatting, is a method of using technology to bring people and ideas "together" despite of the geographical barriers. The technology has been available for years but the acceptance it was quit recent. My project is an example of a chat server. It is made up of 2 applications the client application, which runs on the user's Pc and server application, which runs on any Pc on the network. To start chatting client should get connected to server where they can practice two kinds of chatting, public one (message is broadcasted to all connected users) and private one (between any 2 users only) and during the last one security measures were taken voice communication system became down then text chatting can be done

II. Scope of the project

It may help collecting perfect management in details. In a very short time, the collection will be obvious, simple and sensible. It will help a person to know the management of passed year perfectly and vividly. It also helps in current all works relative to Online Chat Application. It will be also reduced the cost of collecting the management collection procedure will go on smoothly.

Our project aims at Business process automation, i.e we have tried to computerize various processes of Online Chat Application.

•In computer systeen the person has to fill the various forms number of copies of the forms can be easily generated at a time,

•In computer system, it is not necessary to create the manifest but we can directly print it, which saves our time. To assist the staff in capturing the effort epent on their respective working areas:

•To utilize resources in an efficient manner by increasing their productivity through automation.

•The system generates types of information that can be used for various purposes

•It satisfy the user requirement

•Be easy to understand by the user and operator

•Be casy to operate

•Have a good user interface Be expandable

•Delivered on schedule within the budget

III. Literature Review

A lot of Research has been carried out on chatting because it is important to know how much research has been done in chatting. Their description is as follows: Avinas Bamane et al. proposed Enhanced Chat Application, in this research paper they added a new feature in chatting which is paint tool box, with the help of paint tool box now user can create their 2D Diagram such as line, triangle, rectangle, square etc. and then can send to their online chatting partner. In previous research technique there is no such kind of function in which user can write their own diagram so writer introduce this research.[1] Maha Sabri Altemam proposed their research paper on Voice Chat Application using Socket Programming, in this research

paper used socket programming to record their voice and later sending it to their communication partner,

IV. Proposed Methodology

The methodology you work, explain here with code and other items.

A. Purpose

However , the purpose of this project is to develop a java chat application. The objective of this process is as follows;

1) To develop an instant messaging solution to enable users to seamlessly communicate with each other:

2) The project should be very easy to use enabling even a novice person to use it.:

B. User Feature

1. Login
2. Registration
3 .Profile Picture
4. Profile info
5. Cover Picture
6. Follow Friend
7. Newsfeed
8. Chat Online Status
9. Group Chat
10. PDF, Picture, Zip File Transfer
11. Emoji
12. Calling Option
13. Block User
14. Post Reaction Option
15. Poke option
16. Profile Verification Option

C. Admin Feature

1. Total user activity view
2. User status change (Silver,Platinum,Gold,Pro,Vip)
3. Total user online status
4. Remove user
5. User profile details
6. Boost option
7. Newsfeed performance
8. User login details change facility

V. Technology Used in the project Online Chat Application

We have developed this project using the below technology HTML: Page layout has been designed in HTML

CSS: CSS has been used for all the desigining part

JavaScript: All the validation task and animations has been developed by JavaScript

PHP: All the business and frontend logic has been implemented in PHP

MySQL MySQL database has been used as database for the project

Apache2: Project will be run over the Apache2 server

A. Supported Operating System

We can configure this project on following operating system.

• Windows: This project can easily be configured on windows operating system. For running this project on Windows system, you will have to install WAMP or XAMP on your system.

• Linux: We can run this project also on all versions of Linux operating system

• Mac: We can also easily configured this project on Mac operating system:

VI. PROJECT SUMMARY

A. Project Background

The previous work of this already exists. The similar application can be found on the project either Android market. This project will focus on pro- viding high quality usability experiences to users mainly following Googles user interface guideline. Experiments The application will be tested on a test group to improve the usability quality based on the user's feedback.

B. Functional Requirements

1) User Registration: User must be able to register for the application through a valid phone number. On installing the application, user must be prompted to reg- ister their phone number. If user skips this step, application should close. The users phone number will be the unique identifier of his/her account on Chat Application

2) Send Message: User should be able to send instant message to any contact on his/her Chat Application contact list. User should be notified when message is successfully delivered to the recipient by displaying a tick sign next to the message sent.

3) Message Status: User must be able to get information on whether the message sent has been read by the intended recipient. If recipient reads the message, 2 ticks must appear next to the message read

C. Non Functional Requirements

1) Privacy: Messages shared between users should be encrypted to maintain pri- vacy. 2. Robustness In case users device crashes, a backup of their chat history must be stored on remote database servers to enable recoverability.

2) Performance: System must be lightweight and must send messages instantly,

3) Robustness: In case users device crashes, a backup of their chat history must be stored on remote database servers to enable recoverability.

D. Modules of Online Chat Application

• Chat Profile Management Module: Used for managing the Chat Profile details.
• Smilies Chat Module: Used for managing the details of Smilies Chat
• Multi Chat Module: Used for managing the details of Multi Chat
• Chat User Management Module: Used for managing the information and details of the Chat User.
• Chat History Module: Used for managing the Chat History details
• Group Chat Module: Used for managing the Group Chat information
• Login Module: Used for managing the login details
• Users Module: Used for managing the users of the system

E. Input Data and Validation of Project on Online Chat Application

• All the fields such as Chat Profile, Chat History, Smilies Chat are validated and does not take invalid values
• Each form for Chat Profile, Chat User, Multi Chat can not accept blank value fields
• Avoiding errors in data
• Controlling amount of input
• Integration of all the modules/forms in the system.
• Preparation of the test cases.
• Preparation of the possible test data with all the validation checks.
• Actual testing done manually.
• Recording of all the reproduced errors.
• Modifications done for the errors found during testing.
• Prepared the test result scripts after rectification of the errors.
• Functionality of the entire module/forms.
• Validations for user input.
• Checking of the Coding standards to be maintained during coding.

F. The proposed system has the following requirements:

• System needs store information about new entry of Chat Profile.
• System needs to help the internal staff to keep information of Chat User and find them as per various queries.
• System need to maintain quantity record.
• System need to keep the record of Chat History.
• System need to update and delete the record.
• System also needs a search area.
• It also needs a security system to prevent data.

VII. Tools/Platform, Hardware and Software Requirement specifications

A. Software Requirements

Name of component	Specification
Operating System	Windows 98, Windows XP, Windows7, Linux
Language	Java 2 Runtime Environment
Database	MySQL Server
Browser	Any of Mozilla, Opera, Chrome etc
Web Server	Tomcat 7
Software Development Kit	Java JDK 1.7 or Above
Scripting Language Enable	JSP (Java Server Pages)
Database JDBC Driver	MySQL Jconnector

B. Hardware Requirements

Hardware Requirements:

Name of component	Specification
Processor	Pentium III 630MHz
RAM	128 MB
Hard disk	20 GB
Monitor	15" color monitor
Keyboard	122 keys

VIII. Project Profile

There has been continuous effort to develop tools, which can ease the process of software development. But, with the evolving trend of different programming paradigms today's software developers are really challenged to deal with the changing technology. Among other issues, software re-engineering is being regarded as an important process in the software development industry. One of the major tasks here is to understand software systems that are already developed and to transform them to a different software environment. Generally, this requires a lot of manual effort in going through a program that might have been developed by another programmer. This project makes a novel attempt to address the issued of program analysis and generation of diagrams, which can depict the structure of a program in a better way. Today, UML is being considered as an industrial standard for software engineering design process. It essential provides several diagramming tools that can express different aspects/ characteristics of program such as
Use cases: Elicit requirement from users in meaningful chunks.

Construction planning is built around delivering some use cases n each interaction basis for system testing.

Class diagrams: shows static structure of concepts, types and class. Concepts how users think about the world; type shows interfaces of software components; classes shows implementation of software components.

Interaction diagrams: shows how several objects collaborate in single use case.

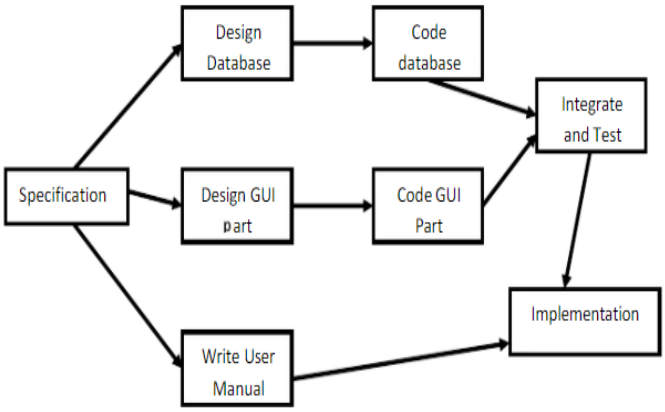
Package diagram: show group of classes and dependencies among them.

State diagram: show how single object behaves across many use cases.

Activity diagram: shows behavior with control structure. Can show many objects over many uses, many object parallel behavior, etc. single use case, or implementations methods encourage

A. PERT CHART (Program Evaluation Review Technique)

PERT chart is organized for events, activities or tasks. It is a scheduling device that shows graphically the order of the tasks to be performed. It enables the calculation of the critical path. The time and cost associated along a path is calculated and the path requires the greatest amount of elapsed time in critical path.



PERT Chart representation

B. Dataflow Diagram

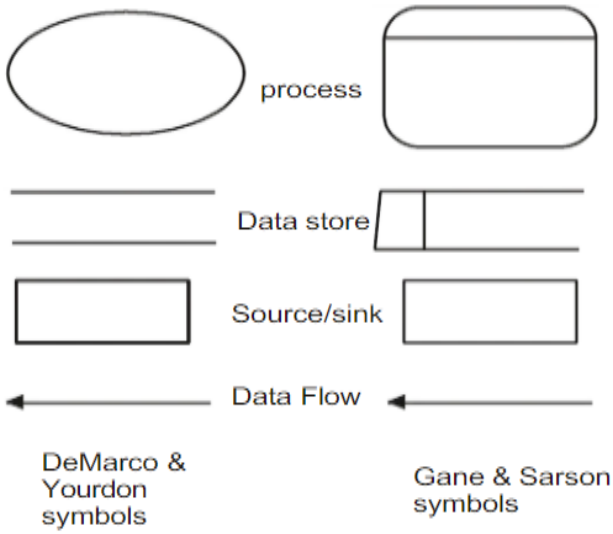
Data flow diagram is the starting point of the design phase that functionally decomposes the requirements specification. A DFD consists of a series of bubbles joined by lines. The bubbles represent data transformation and the lines represent data flows in the system. A DFD describes what data flow rather than how they are processed, so it does not hardware, software and data structure.

A data-flow diagram (DFD) is a graphical representation of the ”flow” of data through an information system. DFDS can also be used for the visualization of data processing (structured design). A data flow diagram (DFD) is a significant modeling technique for analyzing and constructing information processes. DFD literally means an illustration that explains the course or movement of information in a process. DFD illustrates this flow of information in a process based on the inputs and outputs. A DFD can be referred to as a Process Model.

The data flow diagram is a graphical description of a system’s data and how to

Process transform the data is known as Data Flow Diagram (DFD).

Unlike details flow chart, DFDs don’t supply detail descriptions of modules that graphically describe a system’s data and how the data interact with the system. Data flow diagram number of symbols and the following symbols are of by DeMarco.



There are seven rules for construct a data flow diagram

i) Arrows should not cross each other.

ii) Squares, circles and files must wears names.

iii) Decomposed data flows must be balanced.

iv) No two data flows, squares or circles can be the same names.

v) Draw all data flows around the outside of the diagram.

vi) Choose meaningful names for data flows, processes data stores.

vii) Control information such as record units, password and validation

requirements are not penitent to a data flow diagram.

Additionally, a DFD can be utilized to visualize data processing or a structured design.

Additionally, a DFD can be utilized to visualize data processing or a structured design.

This basic DFD can be then disintegrated to a lower level diagram demonstrating smaller steps exhibiting details of the system that is being modeled.

On a DFD, data items flow from an external data source or an internal data store to an internal data store or an external data sink, via an internal process. It is common practice to draw a context-level data flow diagram first, which shows the interaction between the system and external agents, which act as data sources and data sinks. On the context diagram (also known as the Level 0 DFD'), the system's interactions with the outside world are modeled purely in terms of data flows across the system boundary. The context diagram shows the entire system as a single process, and gives no clues as to its internal organization.

This context-level DFD is next "exploded", to produce a Level 1 DFD that shows some of the detail of the system being modeled. The Level 1 DFD shows how the system is divided into sub-systems (processes), each of which deals with one or more of the data flows to or from an external agent, and which together provide all of the functionality of the system as a whole. The level 1 DFD is further spreaded and split into more descriptive and detailed description about the project as level 2 DFD.The level 2 DFD can be a number of data flows which will finally show the entire description of the software project.

C. DATABASE DESIGN

In this phase the actual database is designed, which is used for,

1.Structuring the data

2.Identifying the entities

3.Showing the relationship among entities

Structuring the data is nothing but normalising the data. Normalisation is the process of simplifying the relationship among the data elements in a record.

Various aspects involve that whether the database is distributed or not, which database should be used by considering the organization Presently the organization is using the Oracle Server. So the database of the system to be developed is Oracle.

D. Entity Relationship Diagram

E-R Model is a popular high level conceptual data model. This model and its variations are frequently used for the conceptual design of database application and many database design tools employ its concept.

A database that confirms to an E-R diagram can be represented by a collecton of tables in the relational system. The mapping of E-R diagram to the entities are:

*Attributes

*Relations

o Many-to-many

o Many-to-one

o One-to-many

One-to-one

*Weak entities

*Sub-type and super-type

The entities and their relationshops between them are shown using the following conventions.

1. Model is an abstraction process that hides super details while highlighting details relation to application at end.

2. A data model is a mechanism that provides this abstraction for database application.

3. Data modeling is used for representing entities and their relationship in the database.

4. Entities are the basic units used in modeling database entities can have concrete existence or constitute ideas or concepts.

5. Entity type or entity set is a group of similar objects concern to an organization for which it maintain data,

6. Properties are characteristics of an entity also called as attributes.

7. A key is a single attribute or combination of 2 or more attributes of an entity set is used to identify one or more instances of the set.

1) Use Case Diagram:

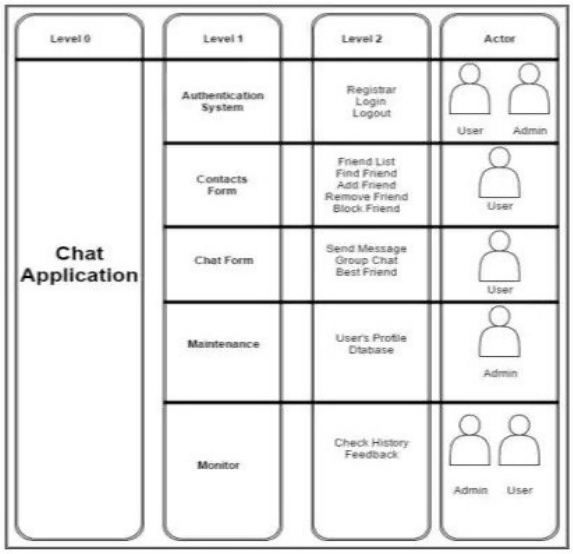


Figure 1: Use Case Table of Chat Application

2) Authentication-System:

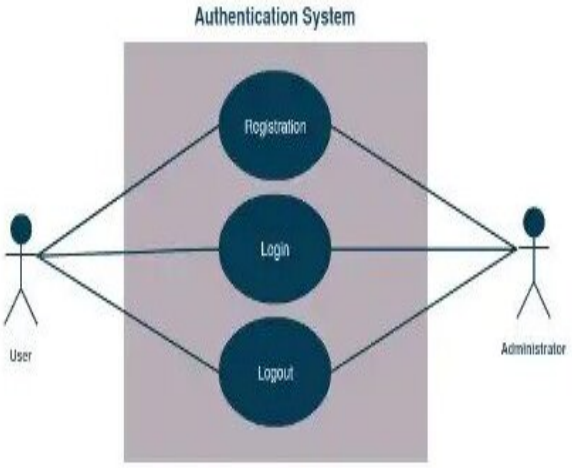


Figure 2: Use Case Diagram of Authentication System

IX. CHAT HISTORY MODULE

The main purpose for developing this module is to manage the chat history. This Chat History module is an important module in this project Online Chat Application which has been developed on PHP and MySQL. Here students can get php projects with database free download. So all chat history will be managed by admin and chat user will be able to see the chat history.

A. Features of Chat History Module

1.Chat User can see chat history
2. Admin can manage the chat history.
3. Admin can edit/delete the chat history . Admin can see the list of all chat history

B. Smiles Chat Module

The main purpose for developing this module is to manage the smiles chat. So all smiles chat will be managed by admin and employee will be able to see the smiles chat.

C. Features of Smiles Chat Module

1. Admin can manage the smiles chat
2. Admin can edit/delete the smiles chat
3. Admin can see the list of all smiles chat
4. patient can see smiles chat

X. FUNCTIONALITY PERFORMED BY PROJECT ONLINE CHAT APPLICATION

These are the functionality performed by Project.
Login For Admin

- Forgot password for Admin

. Edit Profile For Admin
. Change Password For Admin

- Logout Functionality

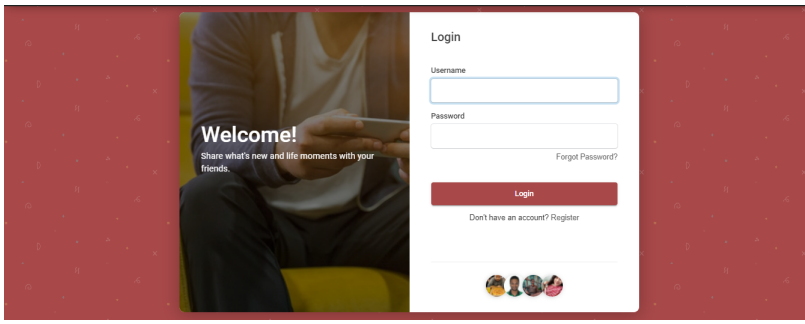
. Dashboard for Admin user
Manage Chat User
. Adding New Chat User
Edit the Exiting Chat User
. View details of the Chat User
Listing of all Chat User

- Manage Chat Profile
- Adding New Chat Profile
- Edit the Exiting Chat Profile
- View details of the Chat Profile

Listing of all Chat Profile

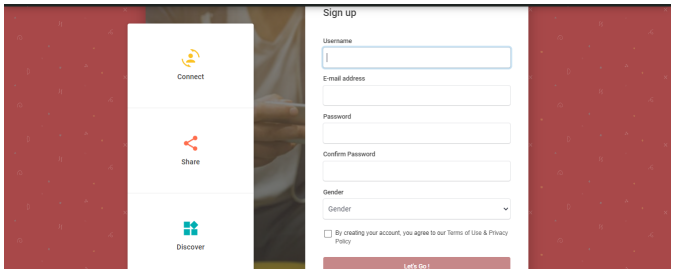
XI. SCREENSHOT OF THE PROJECT ONLINE CHAT APPLICATION

A.



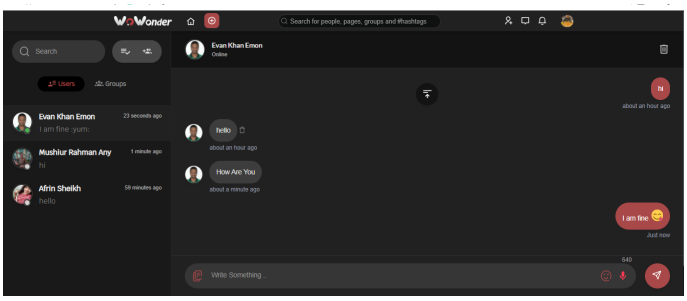
Login Page

B.



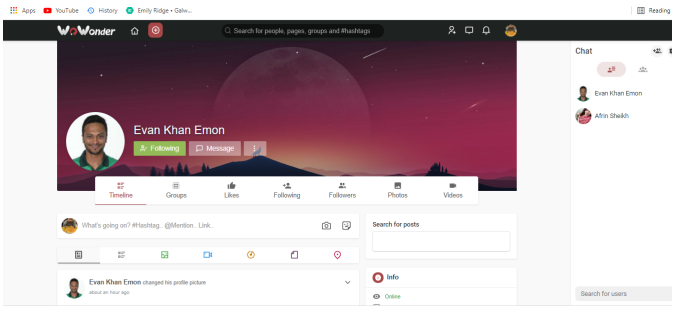
Registration Page

C.



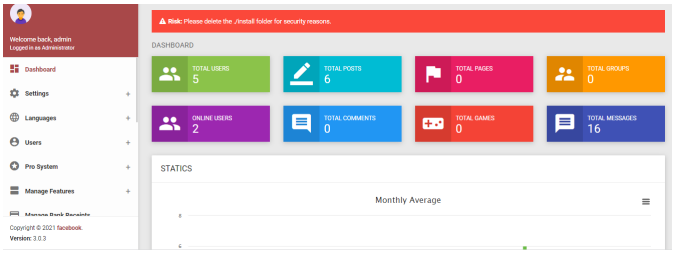
Chat Page

D.



Profile Page

E.



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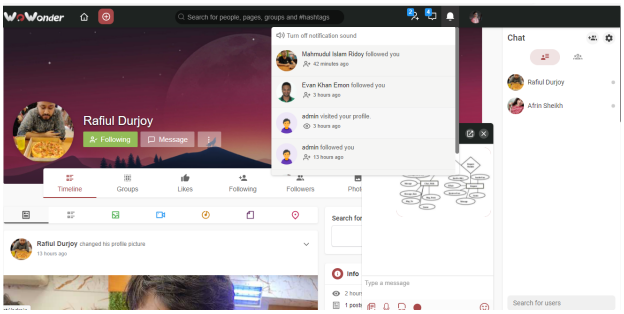

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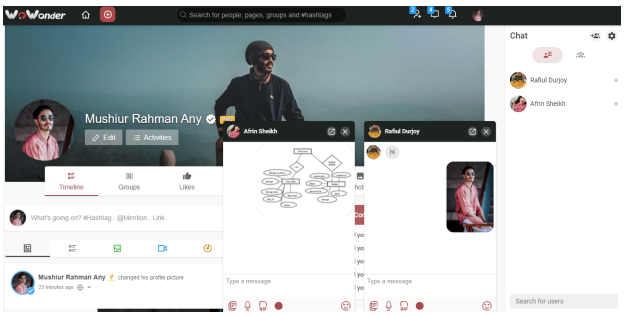
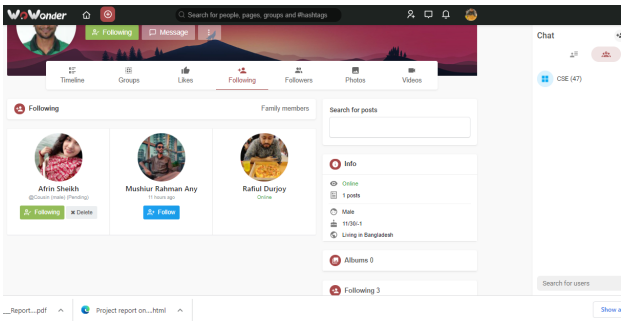
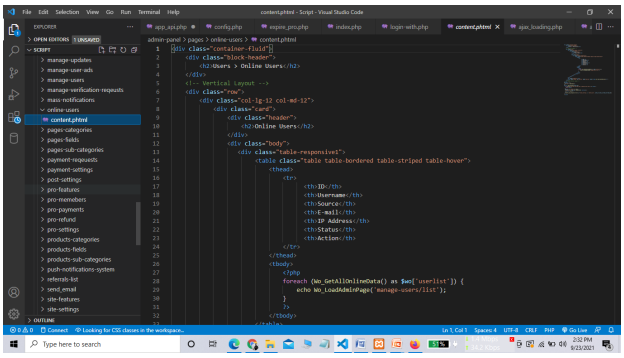
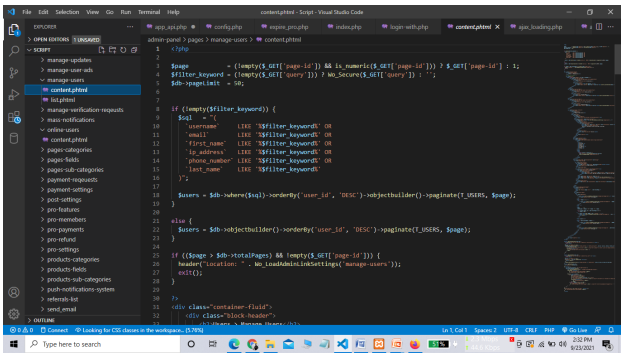


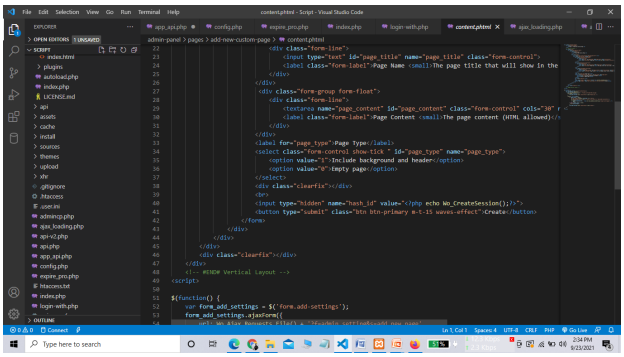
H.

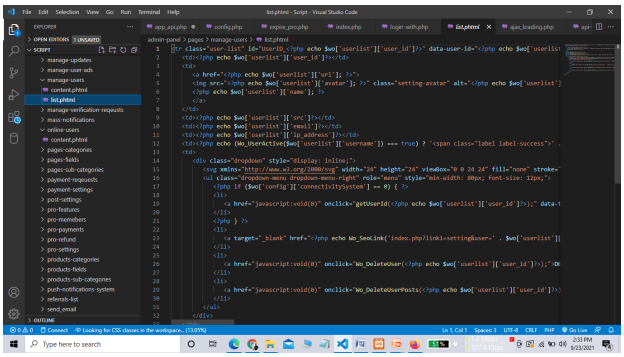


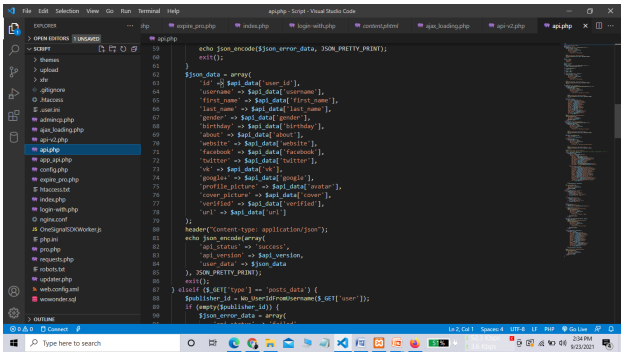
XII. Code Screenshot of the Project Online Chat Application

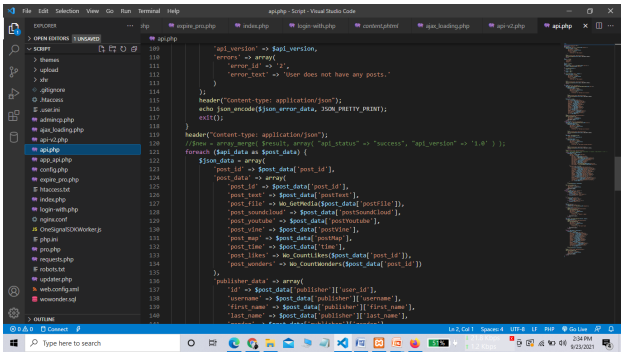


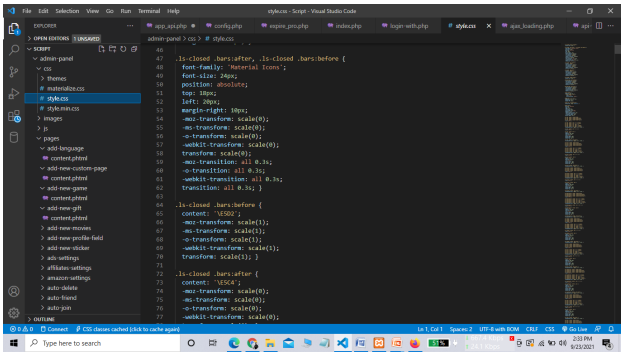


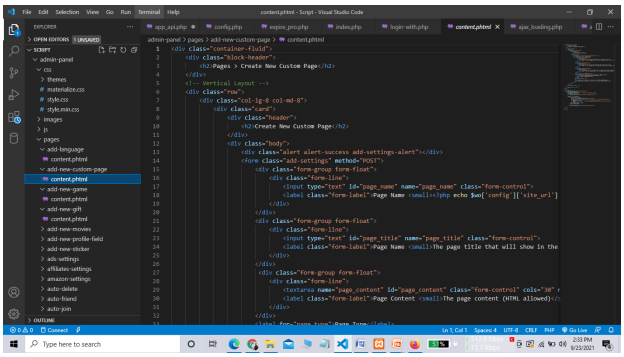












XIII. Feasibility Study:

After doing the project Online Chat Application, study and analyzing all the existing or required functionalities of the system, the next task is to do the feasibility study for the project. All projects are feasible - given unlimited resources and infinite time.

Feasibility study includes consideration of all the possible ways to provide a solution to the given problem. The proposed solution should satisfy all the user requirements and should be flexible enough so that future changes can be easily done based on the future upcoming requirements.

A. Economical Feasibility

This is a very important aspect to be considered while developing a project. We decided the technology based on minimum possible cost factor. All hardware and software cost has to be borne by the organization.

Overall we have estimated that the benefits the organization is going to receive from the proposed system will surely overcome the initial costs and the later on running cost for system.

B. Technical Feasibility

This included the study of function, performance and constraints that may affect the ability to achieve an acceptable system. For this feasibility study, we studied complete functionality to be provided in the system, as described in the System Requirement Specification (SRS), and checked if everything was possible using different type of frontend and backend plaformst.

C. Operational Feasibility

No doubt the proposed system is fully GUI based that is very user friendly and all inputs to be taken all self-explanatory even to a layman. Besides, a proper training has been conducted to let know the essence of the system to the users so that they feel comfortable with new system. As far our study is concerned the clients are comfortable and happy as the system has cut down their loads and doing.

XIV. Conclusion and Future Work

There is always a room for improvements in any apps. Right now we are just dealing with text communication. There are several android apps which serve similar purpose as this project, but these apps were rather difficult to use and provide confusing interfaces. A positive first impression is essential in human relationship as well as in human computer interaction. This project hopes to develop a chat service Android app with high quality user interface.
In future we may be extended to include features such as:

1. Group audio call
2. Group video call
3. Newsfeed
4. Community group
5. Live classroom
6. Live quiz exam
7. Chat bot
8. Story Share

Acknowledgment

I would like to thank my honourable**Khan Md. Hasib Sir** for his time, generosity and critical insights into this project.

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