MINOR PROJECT

Rubrics III

TITLE: SOCIAL NETWORKING SITE

MCA CC & DEVOPS

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Submitted to:

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<u>Acknowledgement:</u>

The success and final outcome of this project "Social Networking Site" required a lot of guidance and assistance from many people and we are very fortunate to have got this all along our completion the project.

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Abstract

Social networking sites (SNSs) are online communities where users can make public profiles of themselves, communicate with friends in real life, and connect with others who share their interests.

The largest worldwide information platform available on the Internet nowadays is social media. As more individuals spend time online socialising, they have grown to be an essential part of our daily life. As they have become more commonplace in our lives, they have seen an increase in their collective fortunes. These technologies have ingrained themselves deeply into popular culture. Making online social networks, nevertheless, poses privacy issues with potential abuse.

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1. INTRODUCTION TO PROJECT

1.1 Introduction

A social networking service includes each user (often a profile), and it focuses on websites that enable communication or relationships between real-life people with comparable interests, hobbies, backgrounds, and connections. a symbol of the interpersonal relationships and myriad other services More social networking platforms appear, offering consumers online communication tools like email and instant messaging.

Online connectivity and technology are required for online social networking. Smartphones, tablets, and PCs can all be used by users to browse interactive websites. The majority of social networking sites, which are found at the bottom of search results, organise, store, and retrieve data using sophisticated programming languages like Python.

The major goal of this service is to strengthen and enhance your relationships with your friends. By reaching out to people you have never met before, the social network can assist you in maintaining current relationships and establishing new ones.

1.2 Statement of Problem

The problem statement for making a social networking site is to create a platform that meets the needs of users and addresses the challenges that exist in existing social networking sites. This project seeks to provide an online social media platform experience for users in order to make new friends or connection all over the world. It is easy to connect with people with the help of internet. Physical barriers to communication have been reduced by recent technology advancements, such as smartphones, computers, and the Internet, which enable people to interact via a worldwide network. Social networking is the assembling of people into certain groups, such as neighbourhood subdivisions or small rural communities. Even if it is feasible to socialise in person, particularly at work, at colleges, and in high schools, it is more common online. The

rivalry from new and upcoming social media platforms is getting stronger for the established platforms. These new platforms are luring consumers with creative marketing strategies while providing greater features and functionality.

Solution:

The social media platform should put its attention on giving users a distinctive and diverse experience. Among the characteristics that could be present are:

- A significant emphasis on privacy and security
- A focus on community building and involvement
- A commitment to social responsibility
- A focus on user experience and design

Benefits:

By resolving this issue, the social media platform will be able to:
- Increase engagement and activity on the platform
- Enhance user experience and make platform more enjoyable to use.
- Establish a strong brand reputation and become a leader in the social media industry

1.3   Objectives

The Objective of this project is to establish a suitable technique for SNS (social networking sites) application development. As a result, it can be used as a manual in the future development work of SNS application developers and potential SNS application developers.

Developers are more likely to finish the applications for SNSs with less time, less money, and more interactive aspects if they use this methodology for implementation. This is possible because the technique appropriately addresses the elements of both the system development life cycle and social networking sites.

Here are some of the Objectives of Social Networking site project:

- To connect people: Any social networking website's main goal is to bring people together. By enabling users to make profiles, interact with friends, and exchange material, this can be accomplished.

- To build Community: Websites for social networking can also be used to foster community. Users can be encouraged to join in conversations and activities by setting up groups and forums.

- To share Information: Information sharing on social networking platforms is possible. Posting status updates, uploading images and videos, and linking to articles and other information are all effective ways to achieve this.

- To promote Business: Social media platforms can be used to advertise businesses. Create pages for businesses, run advertisements, and interact with users to do this.

- To raise awareness: Social media platforms can also be utilised to spread awareness of significant topics. Sharing news stories, videos, and other materials on the problem can do this.

1.4 Client Identification and Recognition of Need

The particular requirements of a social networking site will change depending on its target audience, goal, and features. However, by being aware of the client's requirements, the developers may design a website that lives up to their expectations and accomplishes their objectives.

Here are some examples of specific needs that a social networking site can address:

- Connecting with friends and family
- Finding and making new friends

- Sharing photos and videos
- Networking with professionals
- Learning new things
- Finding support groups
- Getting involved in social causes
- Promoting businesses or products

1.5   Scope and limitations

Scope:

A "social networking site" is a website that will be available online and that users will be able to access from their home computers. A "social networking site" is created to enable friends to contact with one another and obtain online assistance. Additionally, a "social networking site" offers chat, message, for friends, video songs and movies, audio songs, poetic images, e-books, etc., all of which are accessible from anywhere in the globe. Limited facilities are available to unregistered users, whereas registered users have access to all of the administrator's features.

In order for this project to be successful, stronger user service will come first. With time, the project will be improved to give consumers better amenities. Additionally, new work is occasionally completed. There are limits to this project. To make this initiative viable and media-competitive, more effort must be done on it in the future. The user can also start a group, search for groups, ask to join groups, and post information to the group's wall. The group's creator may edit or remove the group.

Limitations:

- Scalability
- Data Security or Privacy
- Performance
- Accessibility
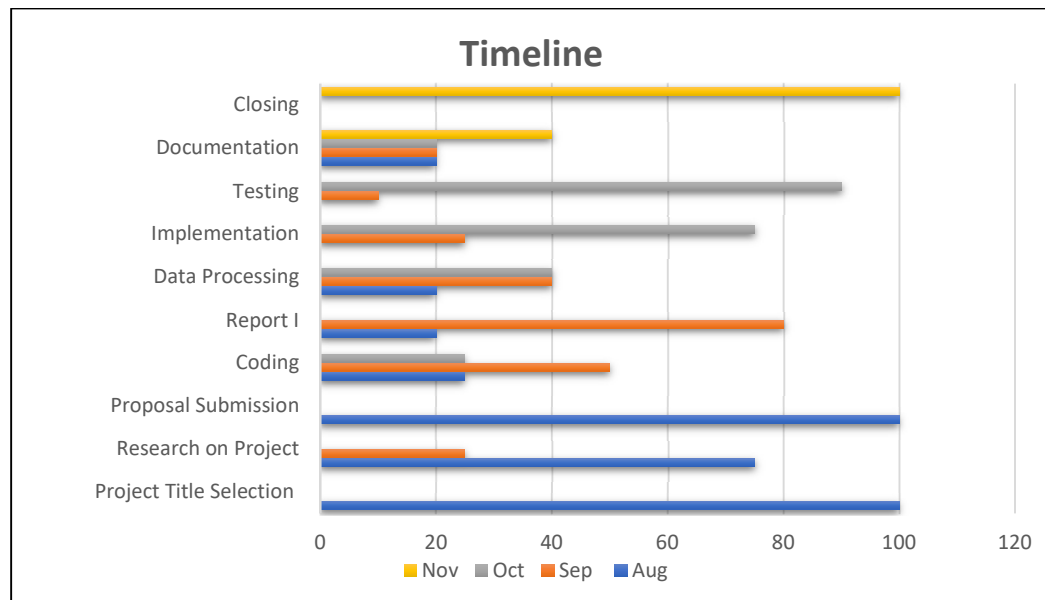- Localization

- Content Moderation

1.6   Timeline Chart

This is a timeline chart, and the specific milestones and dates will vary depending on the specific project. However, this chart provides a general overview of the steps involved in developing a social networking site.

By creating a timeline chart, you can help to ensure that your social networking site project is completed on time and within budget.

Here are some other things to consider when creating a timeline chart:
- The complexity of the project.
- The availability of resources.
- The number of people involved in the project.
- The risks involved in the project.

1.7   GANTT Chart

This is just a sample Gantt chart, and the specific tasks and dates will vary depending on the specific project. However, this chart provides a general overview of the steps involved in developing a social networking site.

Here are some of the benefits of using a Gantt chart:

- It helps to visualize the project schedule.
- It helps to identify potential bottlenecks and delays.
- It helps to track the progress of the project.
- It helps to communicate the project schedule to stakeholders.
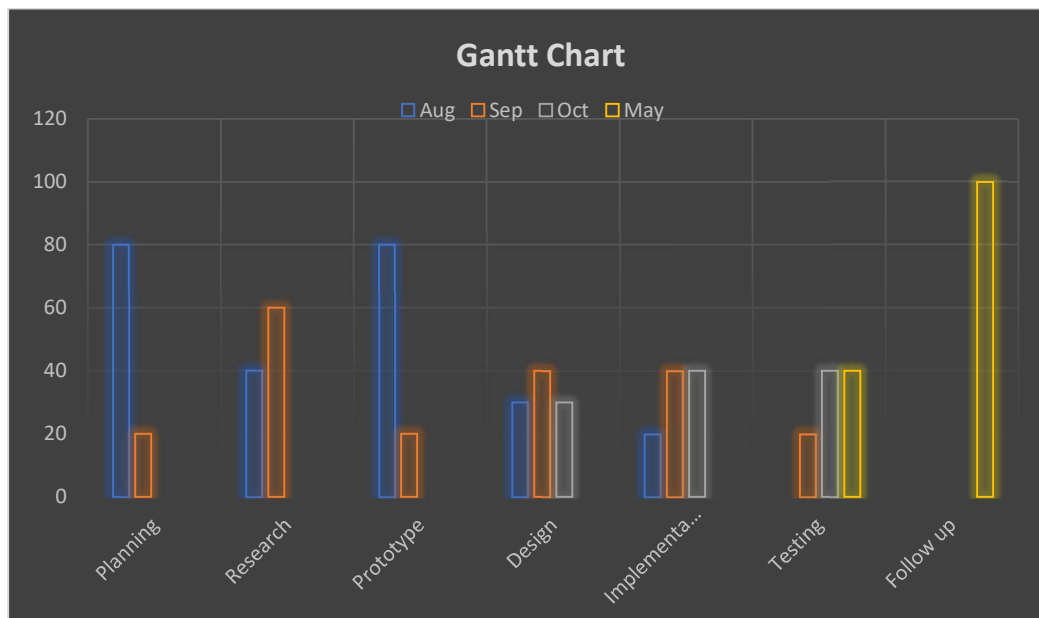
2. RESEARCH METHODOLOGY

2.1 Literature Review

In the early 2000s, when people found and embraced social networking services, the Internet significantly increased in intimacy. Web-based services that allow people to create public or semi-public profiles within a constrained framework are referred to as social networking sites. List of users they have connections with, and the ability to browse and traverse both their own list of connections inside the network as well as those formed by other users. From one site to another, these relationships' nature and conditions could be different. Instead of allowing people to meet strangers, social networking websites are special because they give users the ability to express and display their social networks.

Individuals can first register for a xyz.com account. Following the submission of some personal data, like name, birthdate, gender, email address, etc. After creating a password, the new user is granted account access. On a social networking website, members can watch short-form video, talk live, post comments, share photos, and link to news or other interesting online material. The two most crucial pages of the account are home and profile. User profiles serve as their own personal brand. A modest profile photo complements the page's enormous cover image. Users are alerted of status updates and other activities, such as joining groups or becoming fans of, on the home page, commonly known as the "news feed."

Businesses can strengthen their relationships with current and potential consumers and increase word-of-mouth by using social media platforms. Particularly, social media has an impact on an organization's operations, marketing, sales, and services departments. The main commercial goals of using social media platforms are marketing, branding, and involving stakeholders. Social capital, impression management, knowledge sharing, knowledge management, and social media were the main concepts that emerged from this grouping. Business communication, which is closely tied to social presence, company performance, and the hiring process, is improved by social media activities. The cautious deployment of social media by organisations is advised by academics. Mismanagement of social media interaction may cause people to have a bad impression of you.

Organisations may solicit the assistance of their devoted clients during times of distress.

2.2   Feasibility Study

A feasibility study is conducted to determine whether the project will, upon completion, fulfil the objectives of the organisation in relation to the work, effort, and time invested in it. A feasibility study enables the developer to predict the project's usefulness and potential future.

A system proposal's workability, which includes the influence on the organisation, capacity to satisfy user needs, and efficient use of resources, is the basis for a feasibility study. As a result, before a new application is accepted for development, it often undergoes a feasibility assessment.

Social networking sites, which have hundreds of millions of monthly members, have become the largest application platforms in the world as a result of extending their API (Application Programme Interface) to outside developers. In August 2009, there were 122 million visitors to Facebook, 56 million to MySpace, and 24 million to Twitter, according to a site comparison of the three largest SNSs (Compete 2009).

Such a large user base presents an infinite number of business obstacles and opportunities. In a dramatic shift, those application developers on the war of social networking site platforms become business owners. Therefore, the first duty for the prospective "entrepreneur" is to locate, investigate, and then choose an alluring business opportunity. Returning to the developers' perspective, an opportunity could signify a good idea for creating a specific application that could meet a need from users and merits spending money or effort to develop.

The OETHL feasibility study stands for feasibility studies in five different fields with regard to operational, economic, technical, human factors and legal respectively. We now describe each of the five categories in turn.

The degree to which the proposed application fits with the social context, such as the multicultural culture and buddy network, is the main emphasis of the operational feasibility study. The goal of the economic feasibility

evaluation is to evaluate the organization's ability to reap positive economic advantages from the proposed application by identifying all anticipated costs and benefits. Understanding the developers' current technological resources and how well they fit the anticipated requirements of the proposed application is the main goal of the technical feasibility study. The end users, who are the most crucial elements of a successful programme installation, are the focus of the human factors feasibility assessment.

The OETHL feasibility study of the Social Networking website

Operational	• Is their sufficient support for the user? • Give users a modern reflection, flicking and glassy experience.
Economical	• Use the social networks photo resources, save own server space costs, even for free. • The cost of hardware and software
Technical	• Does the existing technologies sufficient for the suggested one. • Can the system expand if developed?
Human Factor	• Will the proposed system cause harm? • The developer is capable of web 2.0 techniques.
Legal	• No patent or copyright violations. • No privacy policy violations.

2.3   Project Planning

This project uses the SDLC, or software development life cycle, as its project methodology. A methodology for describing the complete development process is defined by the life cycle. This system is being built using an agile paradigm. It also goes by the names incremental and iterative model. The project will be broken down into phases with an emphasis on ongoing collaboration and improvement using the agile methodology. Teams go through a cycle of planning, carrying out, and assessing. The following stages are a part of this methodology:

- Planning: This phase involves defining the scope of the project, identifying the requirements, and creating a project plan.
- Development: This phase involves breaking down the project into smaller tasks, developing the software, and testing it.
- Testing: This phase involves testing the software to ensure that it meets the requirements.
- Deployment: This phase involves deploying the software to production.
- Maintenance: This phase involves ongoing support and maintenance of the software.
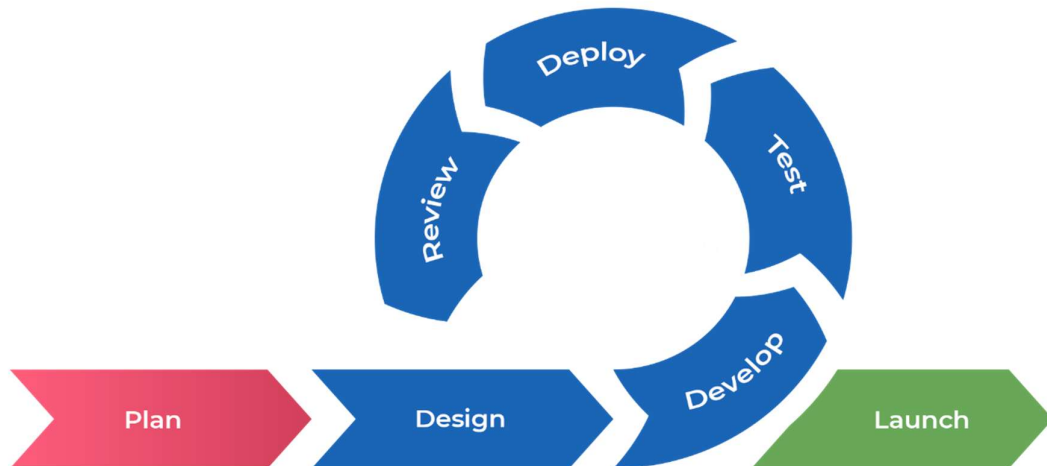
2.4   Project Identification

An online or social networking community created to make social life more-lively and exciting is the social networking website. By connecting with people you've never met before and sharing films and dispatches, the social network can help you keep your relationships strong. The most important global information platform currently available on the Internet is social media. They have evolved into a need in our day-to-day activities as people spend more time online interacting. They have seen how their

cooperative fortunes have improved as they have become more commonplace in our lives.

These technologies have ingrained themselves deeply into popular culture. However, building online social networks raises concerns about protecting businesses from potential exploitation. Product seeks to provide a reputable web-based social networking platform.

A well-established web-based social networking system is what the product aims to give. This outlines the scope, functions, needs, and viability of a networking system. This project intends to create a website that facilitates network communication and functions very similarly to social networking sites like Facebook, Orkut, etc.

2.5   Task Identification

System Design of Social Networking Site:

This stage involves creating a logical system that satisfies the specifications. In the design phase of software development, the client's needs are transformed into a logically sound solution. In most cases, design is carried out in the following two steps:

1. **Primary Design Phase:**

   The system is designed at the block level at this phase. The blocks are made using the analysis carried out during the problem identification stage. Different blocks are made for various purposes, with a focus on reducing information flow between blocks. As a result, those activities that demand more interaction are grouped together in a block.

2. **Secondary Design Phase:**

   In the secondary phase the detailed design of every block is performed. The general tasks involved in the design process are the following:

- Design various blocks for overall system processes.
- Design smaller, compact and workable modules in each block.
- Design various database structures.
- Specify details of programs to achieve desired functionality.
- Design the form of inputs, and outputs of the system.
- Perform documentation of the design.
- System reviews.

Organisation of the report:

System analysis: This includes the Project planning, feasibility study, identification of need, software and hardware requirements and the data models which consists of technical diagrams like Data flow diagram and Entity relationship diagram.

System design: System design consists of data integrity and constraints, database design and user interface design.

Coding: The coding section includes the whole project code including the comments, parameters calling/passing and validation checks. The screenshots of the system are also included here.

Testing: This section has screenshots of all the implementation i.e. user interface and their description.

Documentation: This section consists of cost estimation of the project, pre-requisite for project installation and limitations of the project.

Conclusion: This includes the conclusion, future scope and further enhancements of the food ordering management system

3. REQUIREMENT ANALYSIS

3.1   Software Requirement Specification

- **Operating System:** No particular OS required because Python is platform independent

- **Front-end:** HTML, CSS, JAVASCRIPT, BOOTSTRAP

- **Back-end:** Python Django, PostgreSQL

- **Integrated Development Environment (IDE):** Visual Studio Code

3.2   Technology or Tools Used

Front- End Development:

Hyper-Text Transfer Protocol (HTML): The preferred markup language for making web pages is HTML. Using tags, HTML describes the layout of a web page. Tags are directives that inform a web browser how to present a page's content.

Cascading Style Sheet (CSS): CSS, or cascading style sheets is a language for style sheets that is used to describe how a document presented in a markup language, such HTML or XML. In other words, CSS specifies how HTML elements should appear on paper, in print, or in other media.

JavaScript (JS): JavaScript (JS) is a multi-paradigm, dynamic, lightweight, interpreted, or just-in-time compiled programming language. Along with HTML and CSS, it is one of the three fundamental web technologies. JavaScript is used to create dynamic, interactive web sites.

Bootstrap: A front-end framework for building websites and web apps, Bootstrap is open-source and free. JavaScript, CSS, and HTML are its foundations. To build responsive and mobile-friendly websites, Bootstrap offers a selection of pre-designed elements and tools.

Back-End Development:

Python Django: A Python-based web framework. Django enables you to easily build effective online apps. Because Django has built-in features for everything, including the Django Admin Interface and the default database, SQLlite3. A comparable set of elements are usually required when establishing a website: a method for handling user authentication (signing up, signing in, and signing out), a management panel for your website, forms, a method for uploading files, etc. Django provides you with pre-made components that may be used for quick development.

PostgreSQL: PostgreSQL is a mature and well-maintained database that is used by many organizations around the world. It is a good choice for a variety of applications and is backed by a large and active community.
Here are some of the benefits of using PostgreSQL:
- It is open source
- It is scalable
- It is reliable
- It is secure

Integrated Development Environment

Visual Studio Code: Visual Studio Code (VS Code) is a code editor developed by Microsoft for Windows, macOS, and Linux. It is a lightweight and extensible editor that supports a variety of programming languages, including JavaScript, Python, C++, and Java. VS Code is a popular choice for web developers because it is lightweight and has a large number of extensions that can be used to add features and functionality. It is also a good choice for students and beginners because it is easy to learn and use.

3.3   Cost Estimation

Software cost comprises a small percentage of overall computer-based system cost. There are a number of factors, which are considered, that can affect the ultimate cost of the software such as - human, technical, Hardware and Software availability etc.

The size of the Social Networking Site system is focus point in estimating the cost of the project. In spite of complete software sizing, function point and approximate lines of code were also used to "size" each element of the Software and their costing. The cost estimation for the project also depend upon the baseline metrics collected from existing projects and these were used in conjunction with estimation variables to develop cost and effort projections.

On these two bases, the cost estimation of the project is calculated:

1) Hardware Required Estimation:
This includes the cost of the PCs and the hardware cost required for development of
this project. The hardware used to operate the system is a laptop or PC, RAM 512 MB
or above, Hard disk 20 GB or above and Processor 1.6 GHz.

2) Effort Estimation:
This refers to the total man-hours required for the development of the project. The
time required for completing documentation and user manual is also included in effort
estimation.

3.4   SWOT and PESTEL Analysis

In order to build up a proper Social Networking website for a business, there must have to be some implementations of these analyses as follows:

SWOT: SWOT analysis is a strategic planning tool that helps organizations identify their strengths, weaknesses, opportunities, and threats.

1. **Strength**(S)- Internal attributes that are helpful to the organization to achieving its objectives. Strength includes:
    - Large and engaged user base
    - Active community
    - Diverse content
    - Effective moderation

2. **Weaknesses**(W)- Internal attributes that are harmful for the organization achieving its goals. Weakness includes:
    - Fake news and misinformation
    - Cyberbullying and harassment
    - Data privacy concerns
    - Algorithmic bias

3. **Opportunities**(O)- External factors that help the organization to achieve its aims & objectives. Opportunities includes:
    - Expansion into new markets
    - Development of new features
    - Increased monetization
    - Partnerships with other brands and organizations

4. **Threats**(T)- External factors that help the organization to achieve its aims & objectives. Threats includes:
    - Declining user engagement
    - Emergence of new social media platforms
    - Regulatory changes
    - Security breaches

PESTEL: PESTEL analysis is a strategic planning tool that helps organizations understand the external factors that can impact their business.

1. Political- The potential change of government, as well as the changes in the policies & priorities and the introduction of a new government initiative could be major political factors. It includes:
- Government regulations on data privacy and content moderation
- Trade restrictions on the transfer of data across borders

2. Economic- Economic factors may also be limited to the home country but as global trade continues to grow, economic difficulties in one nation would tend to have a broad impact overall. It includes:
- Economic growth and disposable income
- Inflation and currency fluctuations

3. Socio-cultural- Socio-cultural factors are those that arise from customers or probable customers. It includes:
- Changing demographics and cultural trends
- Increasing demand for mobile-friendly platforms

4. Technological- This area is all about those that are related to the uprising developments on the uses of technology.
- The rise of artificial intelligence and machine learning
- The development of new social media platforms and features

5. Legal- It is very important to take into accounts the factors arising from changes to the law. It includes:
- Data protection laws
- Copyright laws

6. Environmental- The factors arising from the concerns about the natural environment, in other words the 'green' issues. It includes:
- The increasing demand for sustainable social media platforms
- The impact of social media on climate change

4. DESIGN FLOW/PROCESS

4.1   Prototype Model

Prototype models are an important part of the product development process. They can help to identify potential problems with the design and to gather feedback from users. This information can then be used to improve the design of the product or system before it is released to market.
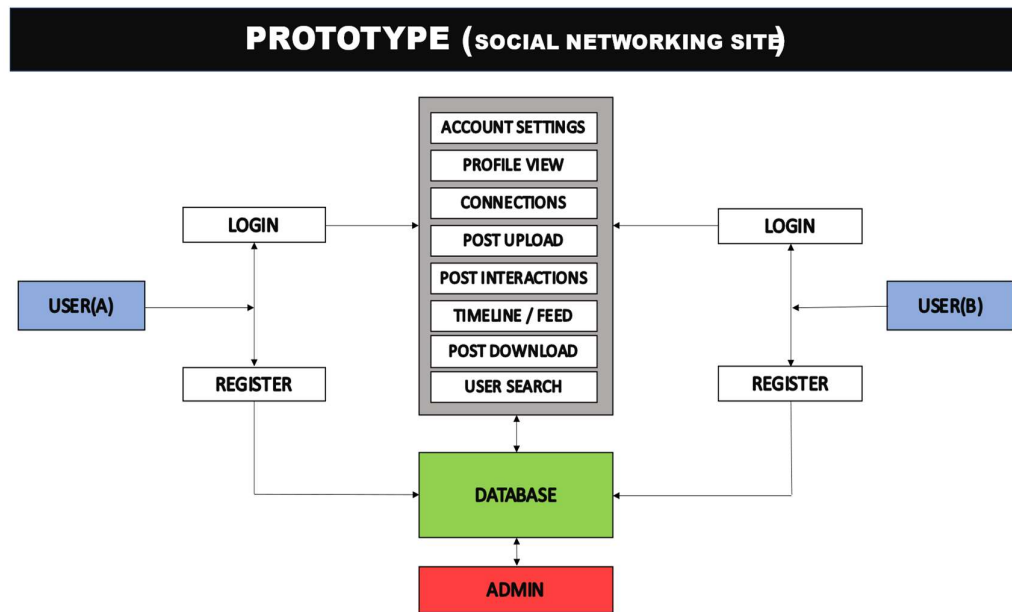

Fig 4.1 Social Networking Site Prototype

4.2   Entity Relationship Diagram

An Entity-Relationship Diagram (ERD) is a graphical representation of the structure of a database. It shows the different entities (or objects) in the database, and the relationships between them. ERDs are often used to design new databases, or to document the structure of existing databases.

ERDs are made up of three main components:

Entities: Entities are the main objects in the database, such as customers, products, orders, etc. Entities are represented by rectangles in an ERD.

Attributes: Attributes are the properties of entities. Attributes are represented by ovals in an ERD.

Relationships: Relationships show how entities are related to each other. Relationships are represented by lines in an ERD.
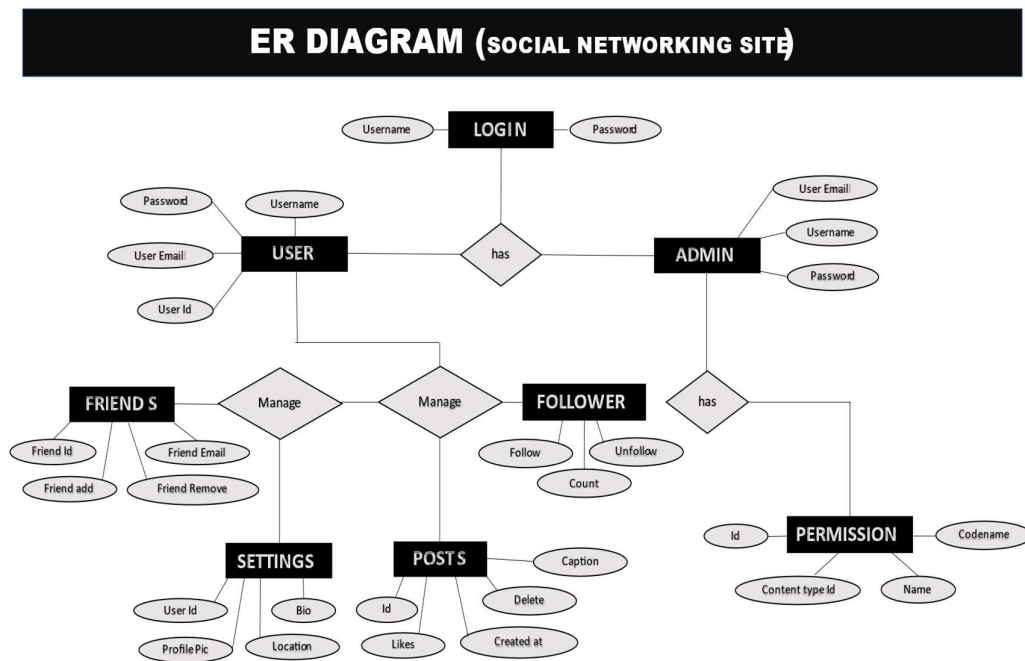

Fig 4.2 ER Diagram - Social Networking Site

4.3 Data Flow Diagram

A DFD consists of a series of columns representing data transformation joined by lines which represent data flow. Data flow diagrams are used to describe the flow of data in the system rather than how the data elements work. The data flow in system is based on inputs and outputs.
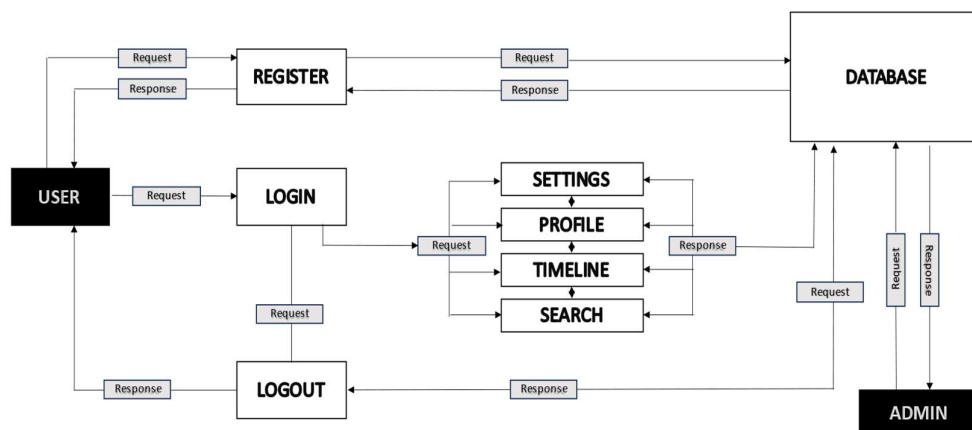
Fig 4.3.1 DFD level 0 - Social Networking Site

Fig 4.3.2 DFD level 1 - Social Networking Site

5. CODING AND IMPLEMENTATION

5.1 Coding Prototype

Django is based on MVT (Model-View-Template) architecture which has the following three parts –

Model: The model is going to act as the interface of your data. It is responsible for maintaining data. It is the logical data structure behind the entire application and is represented by a database (generally relational databases such as MySql, Postgres).

View: The View is the user interface that you see in your browser when you render a website. It is represented by HTML/CSS/Javascript and Jinja files.

Template: A template consists of static parts of the desired HTML output as well as some special syntax describing how dynamic content will be inserted. To check more, visit – Django Templates
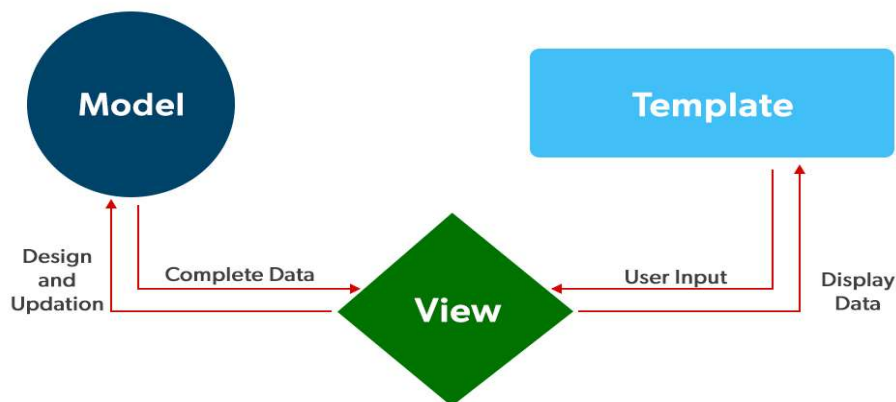

Fig 5.1 Django Architecture

Fig 5.2 Django Prototype - Social Networking Site

5.2 Front-End-Development

signin.html

```html
{% load static %}

<html lang="en">

<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Login Page</title>
    <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/5.12.1/css/all.min.css">
    <link rel="stylesheet" type="text/css" href="{% static 'assets/style.css' %}">
</head>

<body style="background-color: rgb(173, 173, 182);">
    <section class="main">
        <div class="navigation">
            <div class="brand">
                <h1>Social Media</h1>
            </div>
            <div class="toggle">
                <i class="fas fa-bars"></i>
            </div>
            <div class="nav-menu">
                <div class="close">
                    <i class="fas fa-window-close"></i>
                </div>
                <ul>
                    <li><a href="/signup">Register</a></li>
                    <li><a href="/signin">Login</a></li>
                    <li><a href="#">About</a></li>

                </ul>
            </div>
        </div>
        <div class="container">
            <div class="form-cont">
                <div class="inner-form">
```
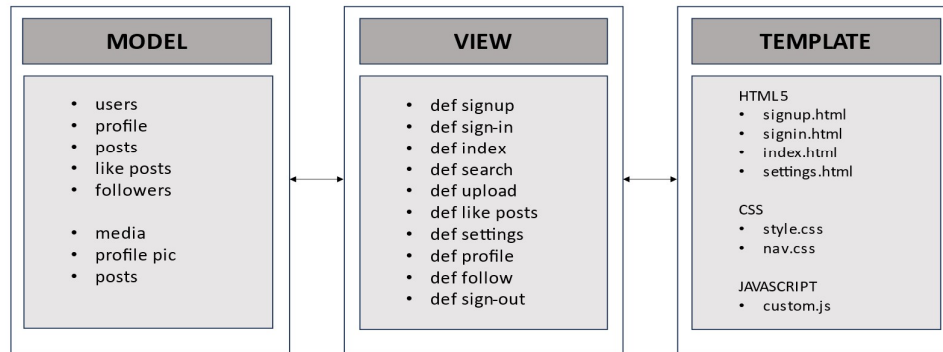
```html
                    <div class="social-login">
                        <span>Welcome !</span>

                    </div>
                    <div>
                        <style>
                            h5{
                                color: red;
                            }
                        </style>
                        {% for message in messages %}
                        <h5>{{message}}</h5>
                        {% endfor %}
                    </div>
                    <br>
                    <br>
                    <div class="input-area">
                        <form action="" method="POST">
                            {% csrf_token %}
                            <div>
                                <i class="fas fa-envelope"></i>
                                <input type="text" name="username" placeholder="Username">
                            </div>
                            <div>
                                <i class="fas fa-lock"></i>
                                <input type="password" name="password" placeholder="Password">
                            </div>
                            <br>
                            <br>
                            <button type="submit"  class="btn">Login</button>
                            <br>
                            <br>
                            <span>Don't have account? <br><a href="/signup">Register Here</a></span>
                        </form>
                    </div>
                </div>
            </div>
        </div>
    </section>
    <script>
        let toggler = document.querySelector('.toggle');
        let menu = document.querySelector('.nav-menu');
        let close = document.querySelector('.close');
        toggler.addEventListener('click', () => {
            menu.style.display = 'block';
            console.log('clicked')
        });
        close.addEventListener('click', () => {
            menu.style.display = '';
            cons
        });
    </script>
    <div class="footer">
        <ul>
            <li><a href="#">About</a></li>
            <li>Copyright 2023</li>
        </ul>

    </div>
</body>
</html>
```

custum.js

```javascript
(function($){
    "use strict";

    $(document).ready(function(){

        $('.sidebar_inner ul li a').on('click', function(e){
            if($(this).closest("li").children("ul").length) {
                if ( $(this).closest("li").is(".active-submenu") ) {
                    $('.sidebar_inner ul li').removeClass('active-submenu');
                } else {
                    $('.sidebar_inner ul li').removeClass('active-submenu');
                    $(this).parent('li').addClass('active-submenu');
                }
                e.preventDefault();
            }
        });
        tippy('[data-tippy-placement]', {
            delay: 100,
            arrow: true,
            arrowType: 'sharp',
            size: 'regular',
            duration: 200,
            animation: 'shift-away',
            animateFill: true,
            theme: 'dark',
            distance: 10,
        });

    });

})(this.jQuery);
```

style.css

```css
body {
  margin: 0;
  font-family: Arial, Helvetica, sans-serif;
}

.topnav {
  overflow: hidden;
  background-color: #010101;

}

.topnav a {
  float: right;
  display: inline;
  color: #f2f2f2;
  text-align: center;
  padding: 14px 16px;
  text-decoration: none;
  font-size: 17px;
}
.topnav .topnav-left {
  float: left;
}

.topnav a:hover {
  background-color: #4e62fa;
  color: rgb(255, 255, 255);
}

.topnav a.active {
  /* background-color: #04AA6D; */
  font-family: Georgia, 'Times New Roman', Times, serif;
  color: #ffffff;
}
```

```css
.topnav .icon {
  display: none;
}

.topnav .search-container button {
  float: right;
  padding: 0px 6px;

  margin-right: 16px;
  background: #ddd;
  font-size: 17px;
  border: none;
  cursor: pointer;
}
.topnav .search-container {
  float: right;
}

.topnav input[type=text] {
  padding: 0px;
  font-size: 17px;
  border: none;
}
.topnav .search-container button:hover {
  background: #ccc;
}

@media screen and (max-width: 800px) {
  .topnav a:not(:first-child) {display: none;}
  .topnav a.icon {
    float: right;
    display: block;
  }
}
```

```css
@media screen and (max-width: 800px) {
  .topnav.responsive {position: relative;}
  .topnav.responsive .icon {
    position: absolute;
    right: 0;
    top: 0;
  }
  .topnav.responsive a {
    float: none;
    display: block;
    text-align: left;
  }
  .topnav .search-container {
    float: none;
  }
  .topnav input[type=text], .topnav .search-container button {
    float: none;
    display: block;
    text-align: left;
    width: 100%;
    margin: 0;
    padding: 14px;
  }
  .topnav input[type=text] {
    border: 1px solid #ccc;
  }
}
```

5.3 Back-End-Development

models.py

```python
from django.db import models
from django.contrib.auth import get_user_model
import uuid
from datetime import datetime

User = get_user_model()

# Create your models here.
class Profile(models.Model):
    user = models.ForeignKey(User, on_delete=models.CASCADE)
    id_user = models.IntegerField()
    bio = models.TextField(blank=True)
    profileimg = models.ImageField(upload_to='profile_images', default='blank-profile-picture.png')
    location = models.CharField(max_length=100, blank=True)

    def __str__(self):
        return self.user.username

class Post(models.Model):
    id = models.UUIDField(primary_key=True, default=uuid.uuid4)
    user = models.CharField(max_length=100)
    image = models.ImageField(upload_to='post_images')
    caption = models.TextField()
    created_at = models.DateTimeField(default=datetime.now)
    no_of_likes = models.IntegerField(default=0)

    def __str__(self):
        return self.user

class LikePost(models.Model):
    post_id = models.CharField(max_length=500)
    username = models.CharField(max_length=100)

    def __str__(self):
        return self.username


class FollowersCount(models.Model):
    follower = models.CharField(max_length=100)
    user = models.CharField(max_length=100)

    def __str__(self):
        return self.user
```

Settings.py

```python
# Static files (CSS, JavaScript, Images)

STATIC_URL = 'static/'
STATIC_ROOT = os.path.join(BASE_DIR,'staticfiles')
STATICFILES_DIRS = (os.path.join(BASE_DIR, 'static'),)

# Default primary key field type

DEFAULT_AUTO_FIELD = 'django.db.models.BigAutoField'

MEDIA_URL = '/media/'
MEDIA_ROOT = os.path.join(BASE_DIR, 'media')
```

views.py

```python
from django.urls import path
from . import views

urlpatterns = [
    path('', views.index, name='index'),
    path('signup', views.signup, name='signup'),
    path('settings', views.settings, name='settings'),
    path('upload', views.upload, name='upload'),
    path('profile/<str:pk>', views.profile, name='profile'),
    path('signin', views.signin, name='signin'),
    path('logout', views.logout, name='logout'),
    path('follow', views.follow, name='follow'),
    path('search', views.search, name='search'),
    path('like-post', views.like_post, name='like-post')

]
```

admin.py

```python
from django.contrib import admin
from .models import Profile, Post, LikePost, FollowersCount

# Register your models here.
admin.site.register(Profile)
admin.site.register(Post)
admin.site.register(LikePost)
admin.site.register(FollowersCount)
```

PostgreSQL View

6. TESTING

Software testing is the process of evaluating and verifying that a software product or application does what it is supposed to do. The benefits of testing include preventing bugs, reducing development costs and improving performance.

5.1 Functional Testing

Software testing techniques such as functional testing are used to ensure that a software application's functionality complies with the necessary specifications. Since it is carried out from a "black-box" perspective, the tester is not required to understand how the programme is internally developed. Instead, the tester concentrates on the application's input and output and makes sure that it functions as planned.

S.no	Test Case	Test Description	Test Step	Actual Result	Expected Result	Remark
1.	Testing for signup page	1. This test case verify sign up with valid credentials.	1. Enter correct or valid credential for signup.	1. Signup Successful	1. Signup Successful	PASS
		2. This test case verify sign up with Invalid credentials.	2. Enter Incorrect or Invalid credential for signup.	2. Signup Unsuccessful	2. Signup Unsuccessful	PASS
2.	Testing for login page	1. This test case verify login with valid credentials.	1. Enter correct or valid credential for login.	1. Login Successful	1. Login Successful	PASS
		2. This test case verify login with Invalid credentials.	2. Enter Incorrect or Invalid credential for login.	2. Login Unsuccessful	2. Login Unsuccessful	PASS
3.	Testing for Account Settings page (Profile Pic)	1. This test case verify default profile pic upload automatically by default.	1. No need to upload any profile pic leave it blank	1. Default profile pic uploaded	1. Default profile pic uploaded	PASS
		2. This test case verify uploaded profile pic by user.	2. Upload a profile pic in profile pic dialog box	2. Profile Pic uploaded successfully	2. Profile Pic uploaded successfully	PASS
		3. This test case verify new updated uploaded profile pic by user.	3. Upload new or update profile pic in profile pic dialog box	3. New or updated profile pic uploaded successfully	3. New or updated profile pic uploaded successfully	PASS

5.2 Non-Functional Testing

Software testing such as "non-functional testing" examines a software application's performance, usability, dependability, security, and scalability among other non-functional features. In order to guarantee that the software programme performs its intended functions and does so in a way that fulfils the needs of the users, non-functional testing is equally as vital as functional testing.

Sno	Test Case	Test Description	Test Steps	Actual Result	Expected Result	Remark
1.	Test for responsive site	1. This test case verify site responsivity on screen size @max-width.	1. Set screen size at @max-width.	1. Site is responsive	1. Site is responsive	PASS
		2. This test case verify site responsivity on screen size @max-width<720px.	2. Set screen size at @max-width<720px.	2. Site is responsive	2. Site is responsive	PASS
		3.This test case verify site responsivity on screen size @max-width<480px.	3.Set screen size at @max-width<480px.	3.Site is responsive	3.Site is responsive	PASS
2.	UI Testing	1. Check the field available on site url.	1. Open web browser and type url.	1. Different field are available on url	1. Page should contain different field	PASS
		2. Check the buttons available on site url.	2. View button on signup or login pages.	2. Buttons are available and in working state	2. Buttons are clickable and in working state	PASS
		3. Check for empty validations.	3. Click on sign in without entering any credentials.	3. Error Message "Invalid Credentials"	3. Error Message "Invalid Credentials"	PASS

5.3 Test Report

Test Objective:

- To verify that all of the website's core functionality works as expected, such as logging in, signup, upload posts and checking out.
- To identify and report any defects in the website's functionality.
- To ensure that the website meets all of the applicable performance and usability requirements.

Testing Scope:

- Signup for user
- Login for user
- Responsive website

Area Covered:

- Functional Requirements
- Non-Functional Requirements

Testing Approach:

- Manual Testing

Defect Report:

- Null, till now.
- Testing is ongoing process, if any error or bug occur it will be resolved soon.

Summary:
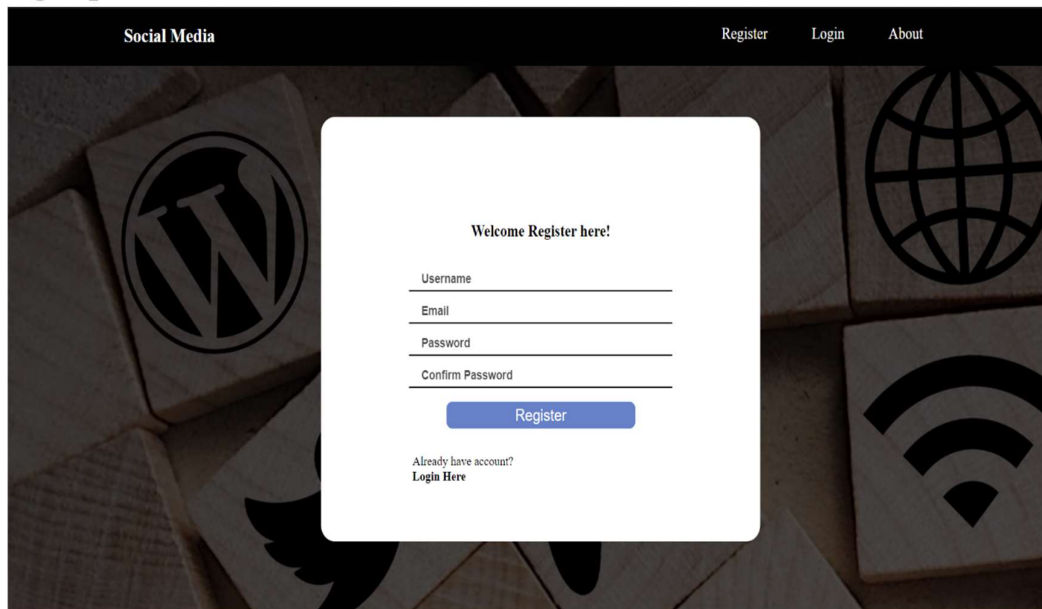
- Manual Testing is done till now for verification and validation for the Social Networking Site
- No error was found till now, if any error occur then it will be resolved soon.
- We will regularly monitoring and maintaining the site
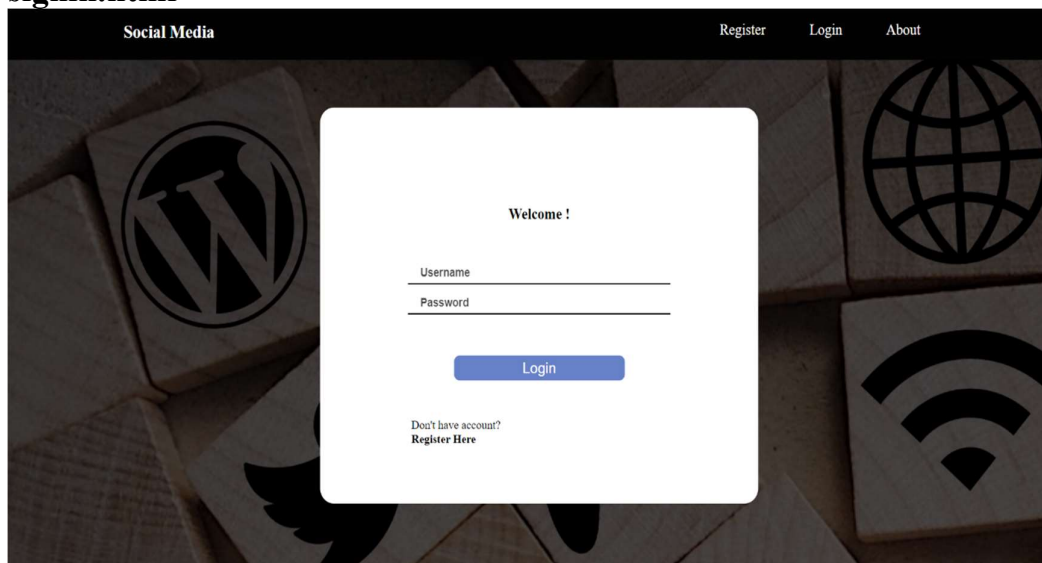
7. CONCLUSION

7.1 Project Output

User Interface:

signup.html

signin.html

Database:

Permission table

	id [PK] integer	app_label character varying (100)	model character varying (100)
1	1	admin	logentry
2	2	auth	permission
3	3	auth	group
4	4	auth	user
5	5	contenttypes	contenttype
6	6	sessions	session
7	7	media_core	followerscount
8	8	media_core	likepost
9	9	media_core	post
10	10	media_core	profile

Profile table

```
Query    Query History
1    SELECT * FROM public.media_core_profile
2    ORDER BY id ASC
```

Data Output   Messages   Notifications

	id [PK] bigint	id_user integer	bio text	profileimg character varying (100)	location character varying (100)	user_id integer
1	1	1		blank-profile-picture.png		
2	2	2		blank-profile-picture.png		

7.2 Future Scope

Social networking platforms have a very bright future. Social media is already a significant aspect of our lives, and in the years to come, its significance will only increase. The following are some trends in social networking that we can anticipate seeing in the future:

- More immersive and interactive experiences: Thanks to the development of technologies like augmented reality (AR) and virtual reality (VR), social networking sites will become more immersive and engaging.
- More individualised material: Social networking sites will get better at providing users with individualised content based on their choices and interests. Artificial intelligence (AI) and machine learning advancements will make this possible.
- The development of groups around common interests will receive increased attention on social networking platforms. Features like groups, forums, and events might be used for this.
- Integration of social networking sites with other technologies will increase.

7.3 Conclusion

Social networking websites are a ground-breaking concept with a very promising future and plenty of opportunity for development. Numerous organisations are embracing this medium to enhance their procedures due to the vast alternatives it offers. Organisations are no longer dependent on the media to spread their message or promote them. Using social networks, they can market or communicate more successfully. For instance, Starbucks has introduced a highly successful programme that allows anyone in the globe to log into a website, post comments, and engage in discussion about various topics.

Even with all the benefits, there is still the issue of information load and security. In contrast to traditional media, social networks don't follow a set protocol for when and how vital information should be shared. Information that is too significant could confuse drug users. Security could be yet another area of concern where information on a stoner could be obtained unlawfully. Although social networking appears to have a bright future, it must yet work through its issues.

8. BIBLIOGRAPHY

8.1 References

- https://www.freecodecamp.org/
- https://www.w3schools.com/django/
- https://github.com/
- https://www.google.co.in/
- https://scholar.google.com/