DISCUSO

The Online Discussion Platform

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Introduction

- Online discussion forums have become increasingly popular in recent years as a means of facilitating communication and discussion among people with common interests or goals.
- These forums allow users to share ideas, information, and opinions on a variety of topics, including education, politics, entertainment, and technology.
- It provides a platform for people to connect, share experiences, and build relationships with others from around the world.

Objective

- Global connectivity: Online discussion forums provide a platform for individuals from different parts of the world to connect and engage in discussions.

- Knowledge sharing: Discussion forums enable users to share ideas, information, and expertise on specific topics. Users can ask questions, seek advice, and receive insights from others

- Community building: Online forums provide a space for like-minded individuals to come together and form communities centered around shared interests or goals.

Technology used:

Frontend Technology:

- HTML
- CSS
- JavaScript

Backend Technology:

- Django
- REST API

Front-End Technology

- Front-end web development also known as client-side development is the practice of producing HTML,CSS and JavaScript for a website so that a user can see and interact with them directly.

- The objective of designing a site is to ensure that when the users open up the side they see the information in a format that is easy to read and relevant.

HTML(Hypertext Markup Language)

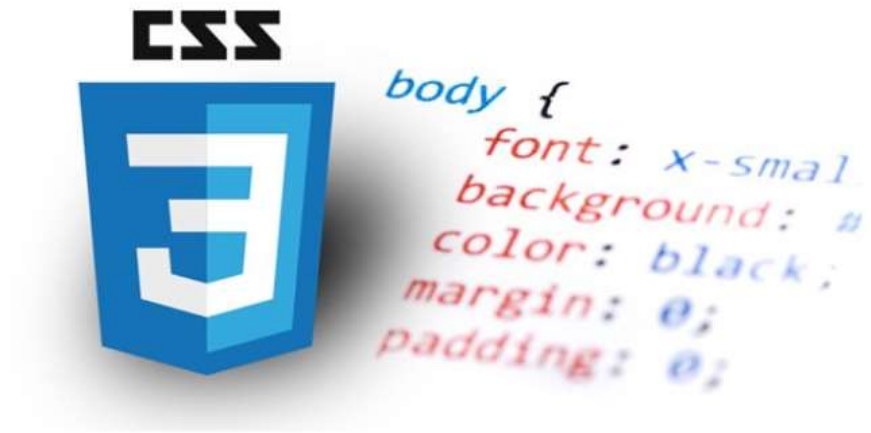
- HTML is the standard markup Language for creating web pages and web applications.
- Web browsers receive HTML documents from a web server or from local storage and render the documents into multimedia web pages.
- HTML describes the structure of a web pages.

```
<!DOCTYPE html>
<html>
  <head>
    <meta charset="UTF-8">
    <title>Title goes here</title>
  </head>
  <body>

  </body>
</html>
```

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 designed to enable the seperation of presentation and content, including layout, colors, and fonts.

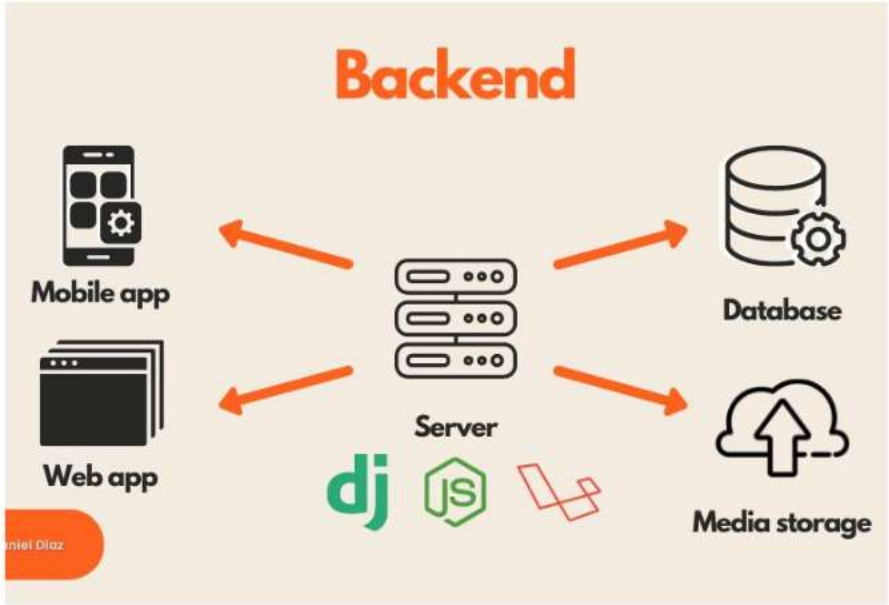


JavaScript

- A high-level, interpreted programming. It is a dynamic language.
- JavaScript enables interactive web pages and is an essential part of web applications.
- The vast majority of websites use it, and major web browsers have a dedicated JavaScript engine to execute it.

Back-End Technology

- Back-end Development refers to the server side of an application and everything that communicates between the database and the browser.
- Typically, backend technologies refer to the libraries of server-side languages that are used to create the server configuration of a website.
- The backend technologies form the basis of software development.

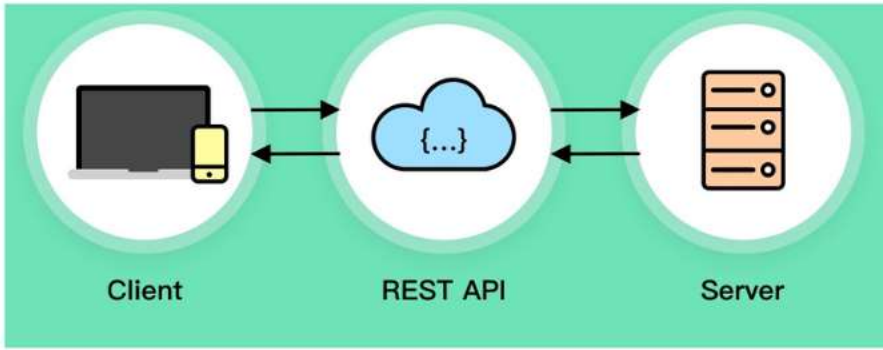


Django

- Django is a web application framework written in Python programming language.
- It is based on MVC(Model View Controller) design pattern.
- Django is very demanding due to its rapid development feature.
- It take less time to build application after collecting client requirement

REST API

- REST stands for Representational State Transfer.
- Representational state transfer (REST) is a set of architectural principles.
- This means that when a client requests a resource using a REST API, the server transfers back the current state of the resource in a standardized representation a subheading



ARCHITECTURE

MVC (Model-View-Controller) is a software architectural pattern that separates an application into three interconnected components: the Model, the View, and the Controller.

Model:

- The Model represents the application's data and business logic.
- It encapsulates the data and provides methods to access and manipulate it.

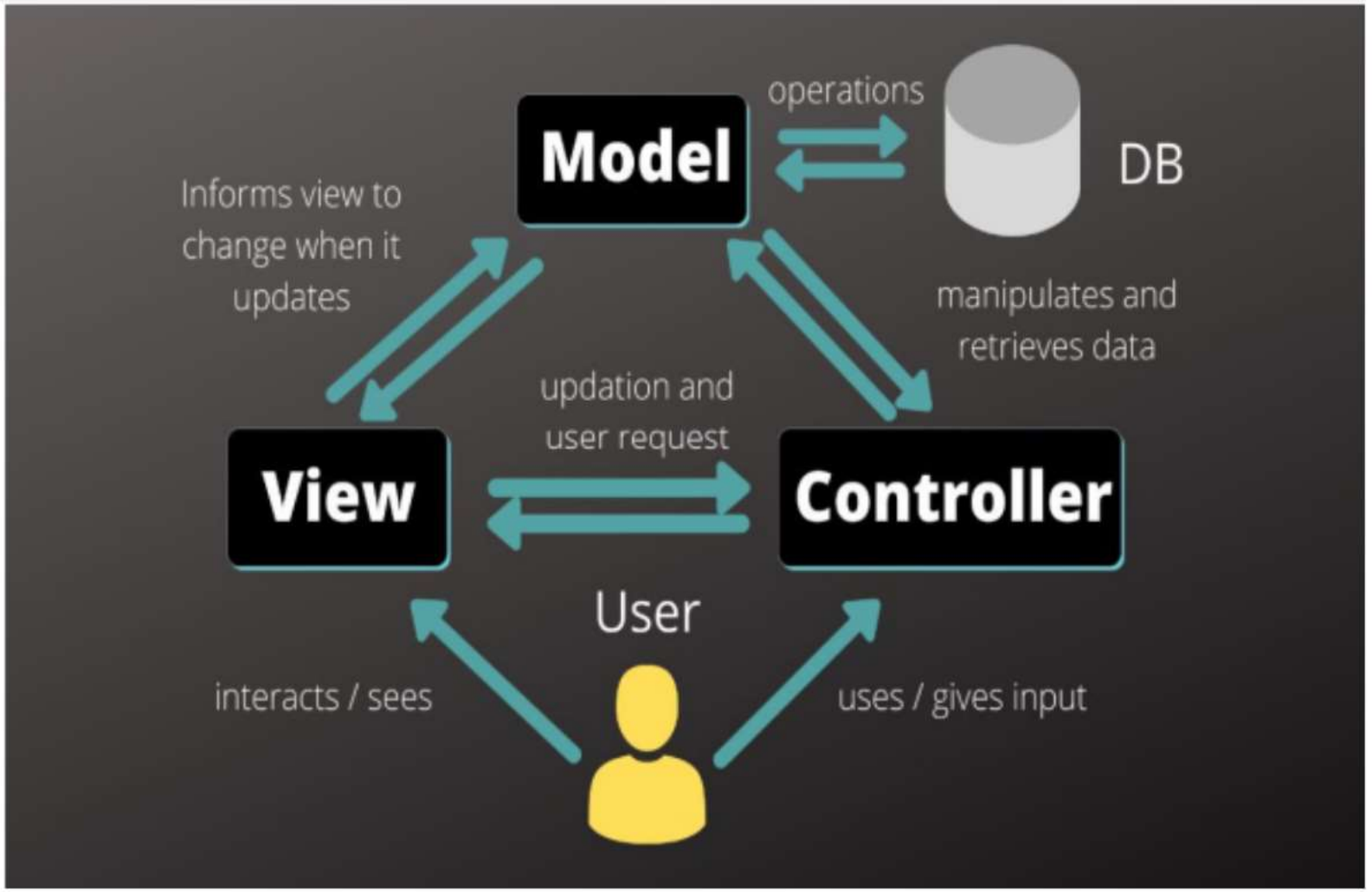
View:

- The View is responsible for the presentation layer of the application.
- It defines how the data is displayed to the user.
- It receives input from the user and sends it to the Controller for further processing.

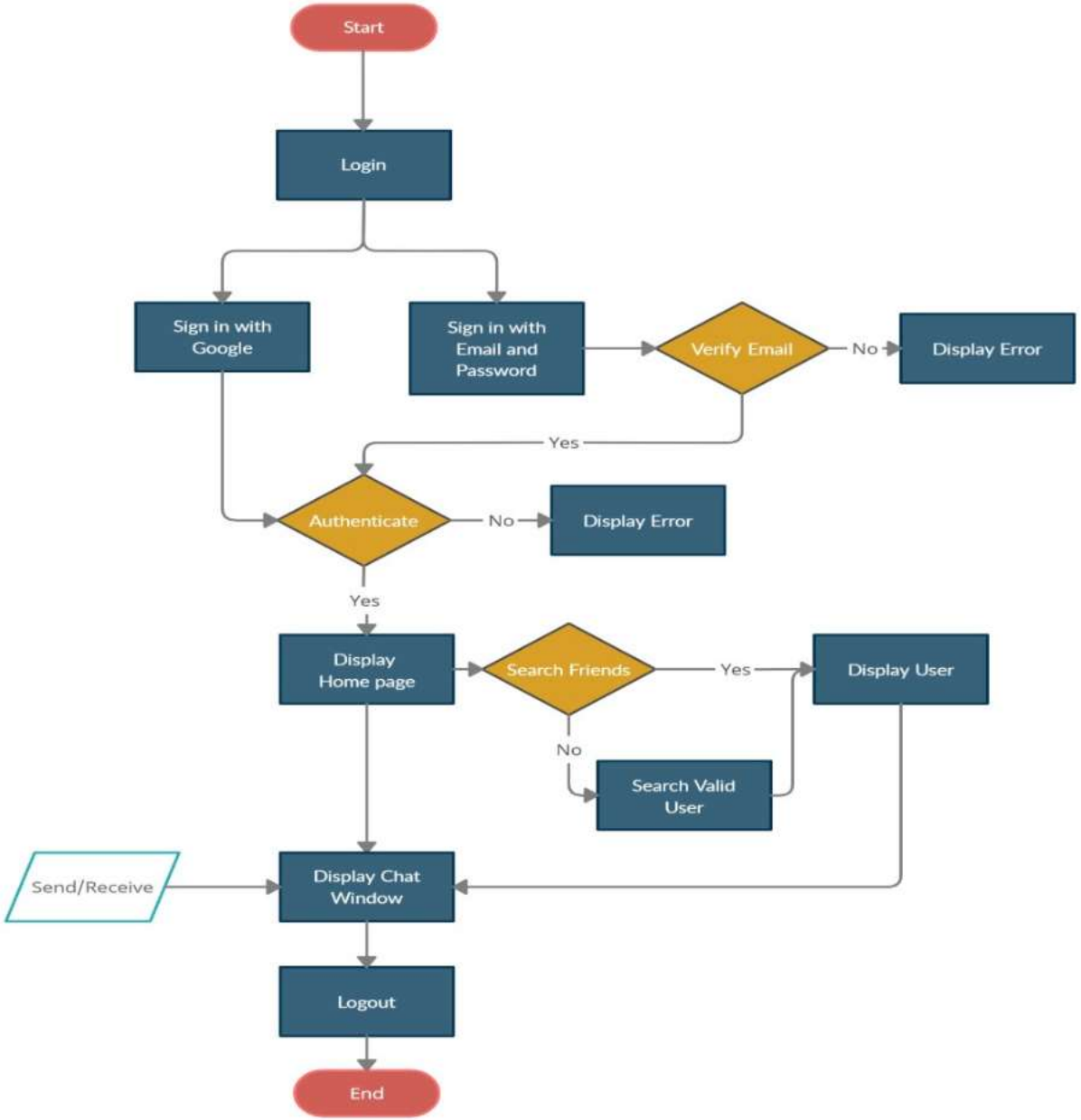
Controller:

- The Controller acts as an intermediary between the Model and the View.
- It receives user input from the View and decides how to handle it.

MVC Flow Diagram



Flowchart


Start
Login
Sign in with Google
Sign in with Email and Password
Verify Email
No
Display Error
Yes
Authenticate
No
Display Error
Yes
Display Home page
Search Friends
Yes
Display User
No
Search Valid User
Send/Receive
Display Chat Window
Logout
End

Features

- Optimized database queries with advanced indexing techniques and query optimization strategies for lightning-fast data retrieval.
- Implemented caching mechanisms, such as in-memory caching and content delivery network integration, to minimize server load and achieve near-instantaneous page loading.
- Leveraged Django's ORM framework to establish and manage complex database relationships effortlessly.
- Developed a customizable admin panel using Django's built-in interface for efficient data management and comprehensive control over the application.
- Improved user experience through reduced response times, streamlined data operations, and enhanced code maintainability.

Thank
you