

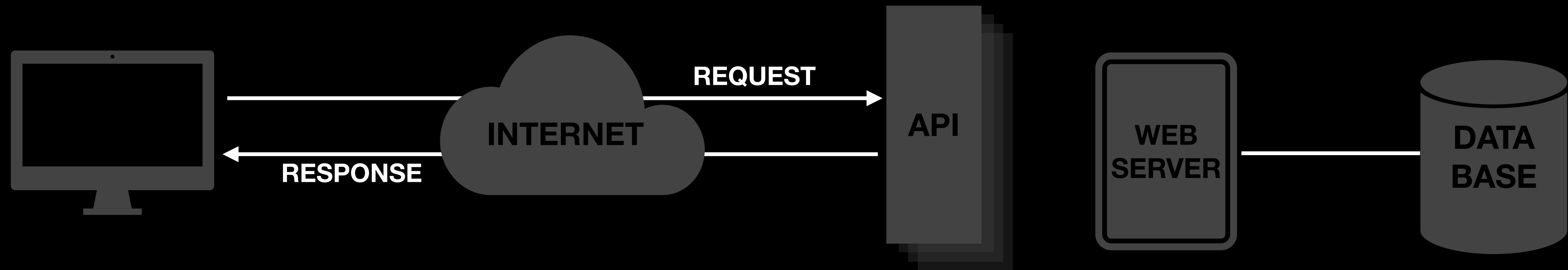
LEAP 4.0 Presentation Week 1

Application Programming Interface

A project by TRIBE- G

What is an API?

An API is a set of programming code that enables data transmission between one software product and another. It also contains the terms of this data exchange.



Types of Web APIs

- **There are four main types of APIs-**
- **Open APIs-** Also known as Public API, there are no restrictions to access these types of APIs because they are publicly available.
- **Partner APIs-** A developer needs specific rights or licenses in order to access this type of API because they are not available to the public.
- **Internal APIs-** Also known as Private APIs, only internal systems expose this type of API. These are usually designed for internal use within a company. The company uses this type of API among the different internal teams to be able to improve its products and services.
- **Composite APIs-** This type of API combines different data and service APIs. It is a sequence of tasks that run synchronously as a result of the execution, and not at the request of a task. Its main uses are to speed up the process of execution and improve the performance of the listeners in the web interfaces.

Web service APIs

- **SOAP (Simple Object Access Protocol)**- This is a protocol that uses XML as a format to transfer data. Its main function is to define the structure of the messages and methods of communication. It also uses WSDL, or Web Services Definition Language, in a machine-readable document to publish a definition of its interface.
- **REST (Representational State Transfer)**- REST is not a protocol like the other web services, instead, it is a set of architectural principles. The REST service needs to have certain characteristics, including simple interfaces, which are resources identified easily within the request and manipulation of resources using the interface.

Problem Statement

- Create an API which fetches details of an Github user profile specified by the client or user.
- This project focuses on giving client a user friendly environment and provides an aid for things like finding profiles and there directory.
- Due to pandemic there are a lot of coders sitting out there with an amazing repository and still unseen our, tribe would like to give them spotlight and recognition.

Git Extractor

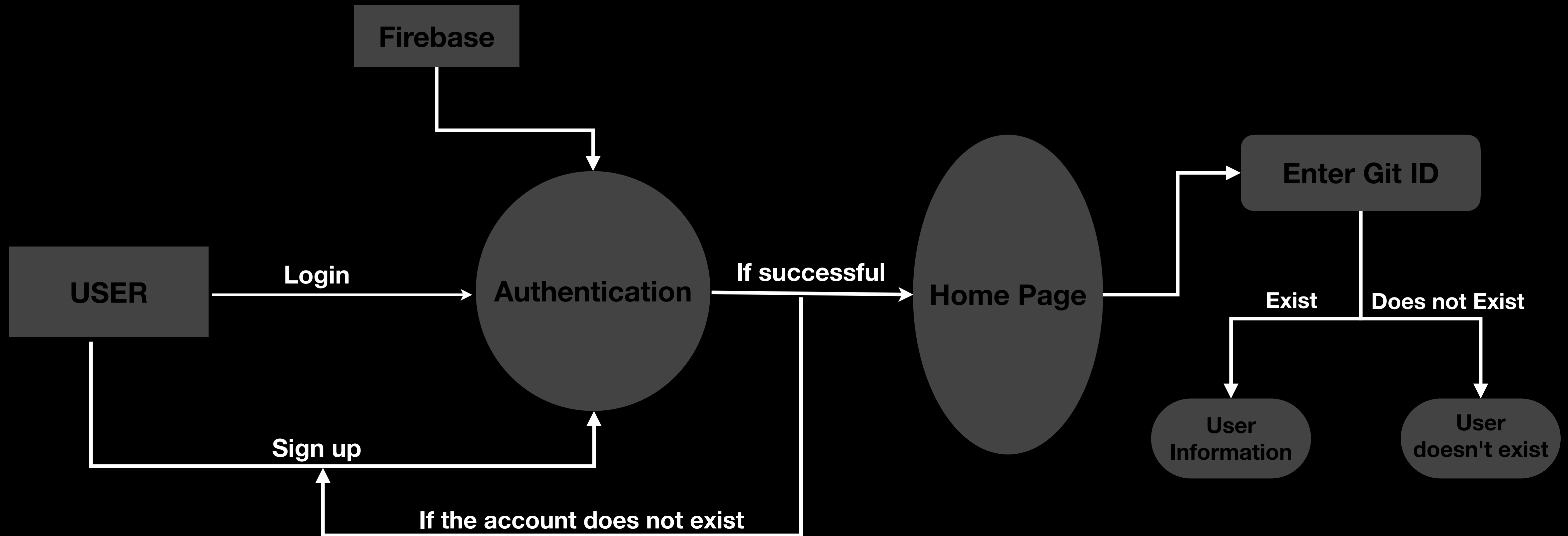
OUR APPROACH

- Our tribe is creating an API frame work using ReactJS and use Git API for fetching data from git servers.
- Then to Identify user request and list Repositories and user information which will be unique in each case can be achieved by using Axios library.
- Finally to show the result of the search using Axios library our tribe will be using Json (JavaScript Object Notation).
- For backend operations Firebase is the most suitable platform to go.
- For deployment purposes Netlify will be used as it provide optimized and fast cloud computing services.

T.D.E.S Approach

- This project aims for creating an API to fetch details of Github directory and we focus on four major areas-
- **Technology-** Use of the most advance and optimal sources of technology to be used for a secure, friendly and optimized interface.
- **Deployment-** Use of Netlify and github pages will give a broader spectrum of opportunities to use this API from anywhere by anyone.
- **Efficiency-** Making an interface which is organized and developed conscientiously as per clients requirement with touches of optimizations for optimal experience.
- **Speed-** Providing the interface with minimum wait time and maximum efficiency making the system smooth,fast and reliable .

Data Flow Diagrams



○ **Technical Requirements-**

1. Languages to be used- JavaScript, CSS, HTML
2. Framework- ReactJS
3. Database- Firebase
4. Deployment- Netlify

○ **Non-Technical Requirements-**

1. Documentation which will include BRD (business requirement document) and solution document
2. Design layout and working
3. Testing and presenting live demo of API after development to the stakeholder

Scope of the project

- There are a lot of students and amateurs who want to find codes for their assignments, mini projects, so on and so forth but GitHub is too complex to use and finding directories is a pain.
- Github extractor can be used to find profiles which are suited for the client's projects and hence can recruit or contact them in a much easier fashion.

CONCLUSION

THANK YOU