**Related Theory**

**3.1 Monolith Architecture**

Monolith architecture refers to a software design where an entire application is built as a single, unified unit, with all components like the user interface, business logic, and data access tightly integrated.

Monoliths can be convenient early on in a project's life for ease of code management, cognitive overhead, and deployment. This allows everything in the monolith to be released at once.

A diagram of a single server

Description automatically generated

**3.2 HTTP**

HTTP (Hypertext Transfer Protocol) is a stateless, text-based protocol used for data transfer between servers and browsers, forming the foundation of the web. It follows a request-response model, where the client requests data, and the server responds with data and status codes. HTTP is simple, extensible, and easy to understand. However, it lacks built-in encryption, relying on higher-level protocols or HTTPS for secure communication.

**3.3 MVVM Architecture**

MVVM stands for Model-View-ViewModel. It is a software design pattern that separates the user interface (UI) from the underlying data. This makes it easier to develop and maintain complex applications.

In MVVM, the Model represents the data of the application. The View represents the UI of the application. The ViewModel is a layer between the Model and the View. It is responsible for transforming the data from the Model into a format that the View can understand.

A diagram of a process

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**3.4 REST API**

REST is an architectural approach for developing web services. A RESTful API (Applica-

tion Programming Interface) is built using REST (Representational State Transfer)concepts.

RESTful API transfers a representational state of the resource to the endpoint or requester.

The information can be of any format like JSON, HTML, PHP, XML etc.

REST APIs are used for the data exchange between client and server. They communicate

with the server via HTTP (Hypertext Transfer Protocol) techniques. GET, POST, PUT,

PATCH, and DELETE are the most often used HTTP methods in RESTful APIs.

A diagram of a computer network

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**3.4.1 GET**

the GET method is used when data is needed to retrieve from the server. It reads the data

from the server. It is used to retrieve data like user profiles, product information, or other

resources

**3.4.2 POST**

THE POST method is used to send the data to the server. It is useful for creating new

resources to be retrieved later in the server.

**3.4.3 PUT**

The PUT method is used to update an existing resource on the server. It replaces the exist-

ing resource with the new one that is sent in the request.

**3.4.4 PATCH**

The PATCH method is similar to the PUT method, but it only updates the specified fields

of an existing resource. It is used when only a portion of a resource needs to be updated,

rather than replacing the entire resource.

**3.4.5 DELETE**

The DELETE method is used to delete a resource from the server. It removes the resource from the server and makes it unavailable for further use.