

Modul 3

# Back End Development

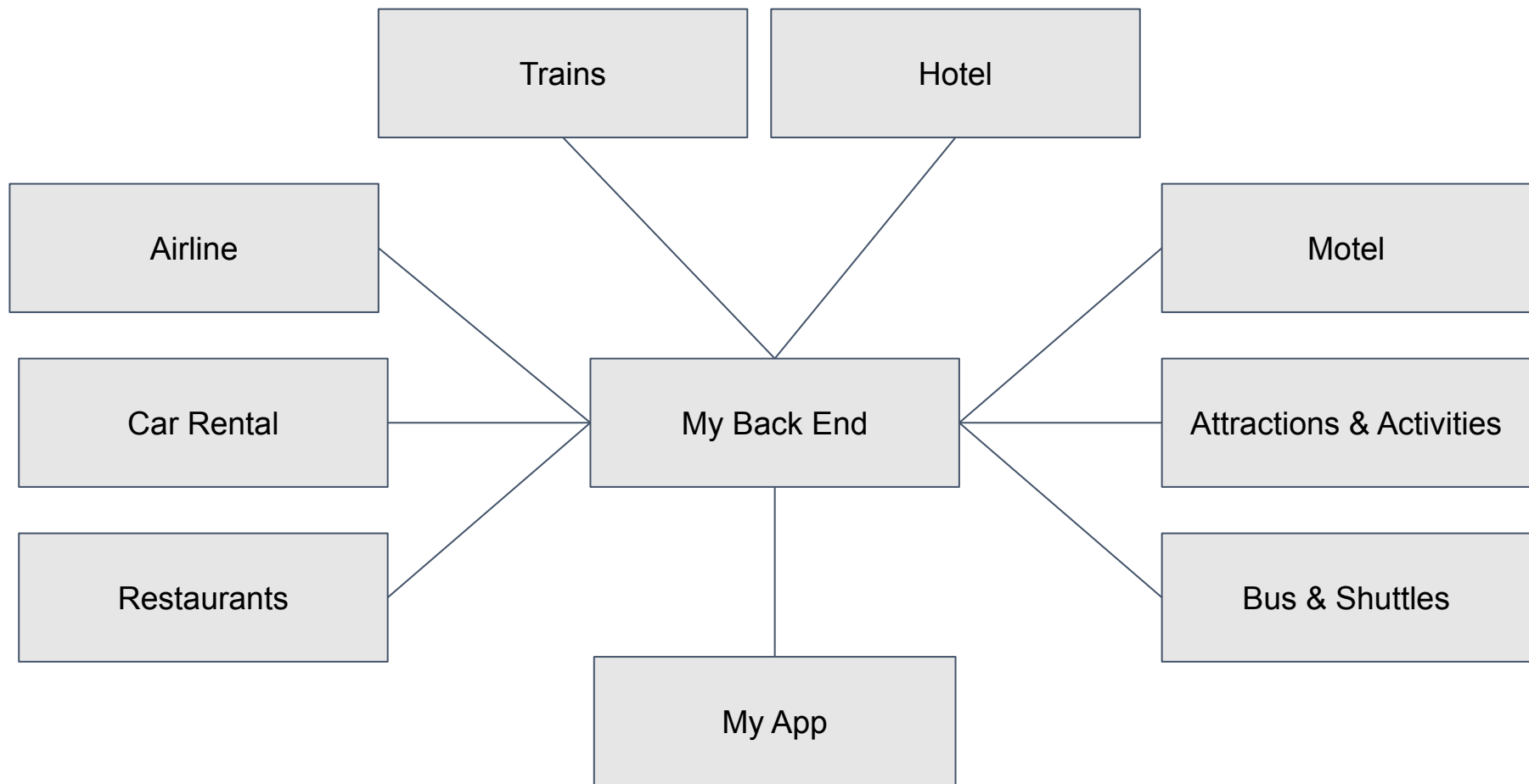
# Outline

- Back End Development Definition & Purpose
- Front End & Back End Relation
- Roles & Responsibilities
- Real Life Cases of a Back End Developer

# Definition

“Back End refers to the part of a computer system or application that is not directly accessed by the user, typically responsible for storing and manipulating data”.





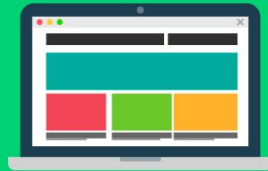
Front End Developers



Client Side  
Development

HTML, CSS,  
JavaScript

Focuses on User  
Interactivity

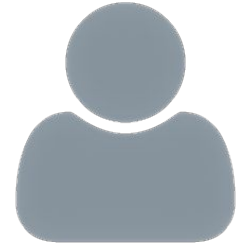


**FRONTEND**



**BACKEND**

Back End Developers



Server Side  
Development

Java, Python, .Net

Focuses on Data  
Manipulation

User

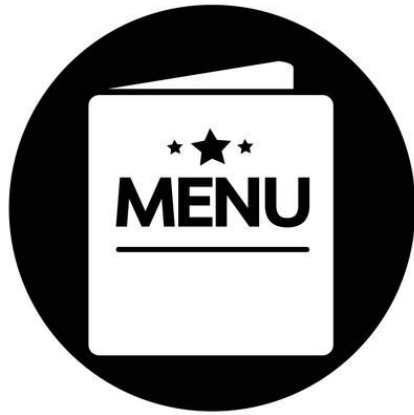


Front End



Back End





Back End

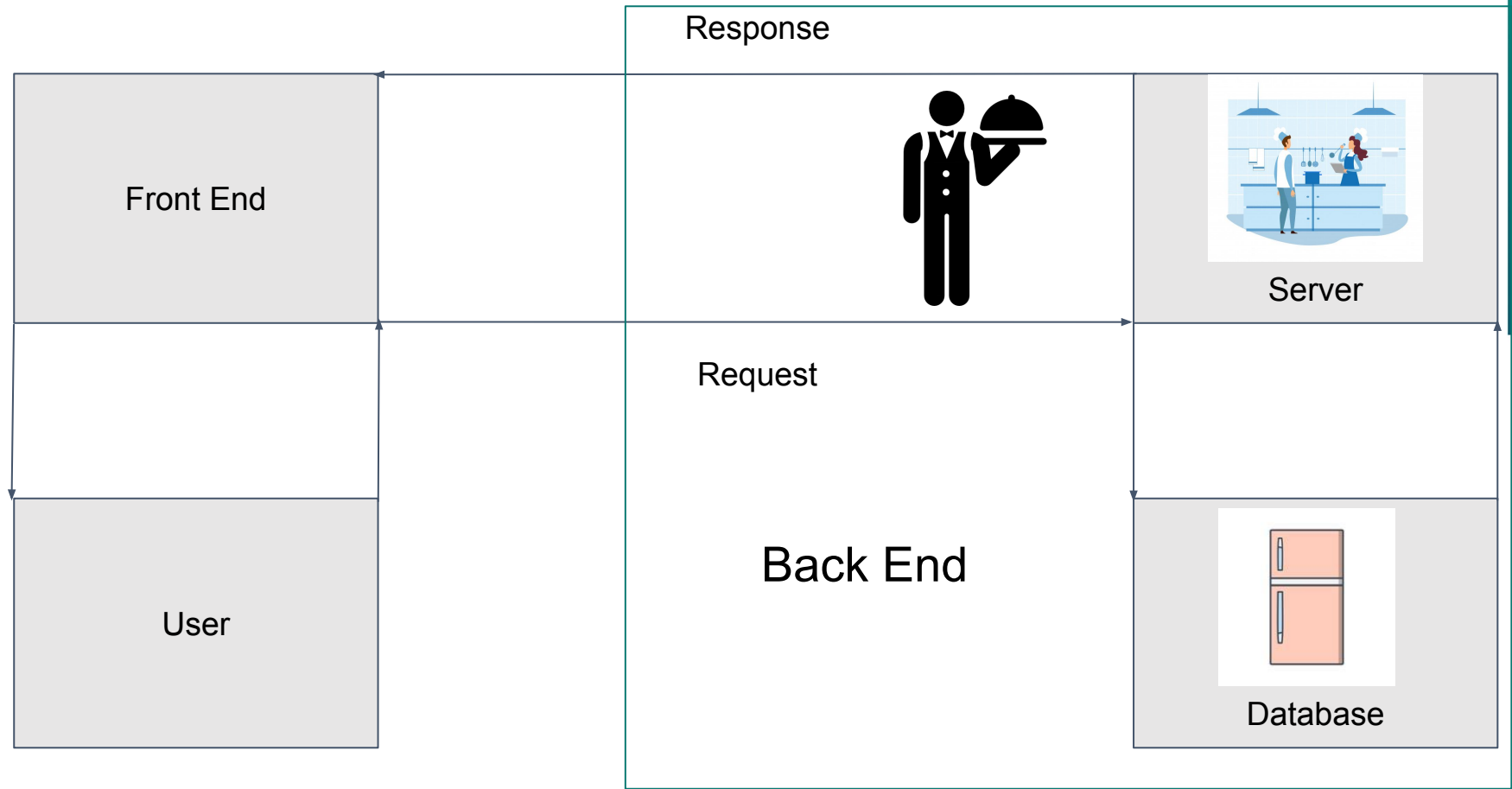




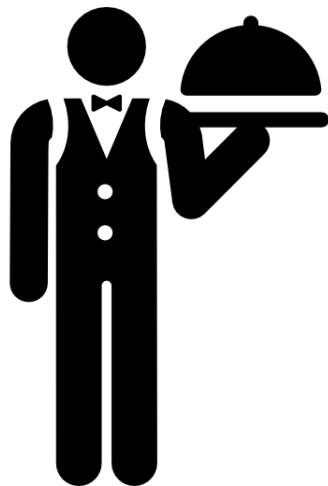


Back End





# API (Application Programming Interface)



“A set of definitions and protocols for building and integrating application software”

Or simply

“A software intermediary that allows two applications to talk to each other”

- Back End Interface
- Comprised of several endpoints to handle specific requests and give corresponding responses.
- Every endpoint gives access to the database or various web services
- API functionality is based on requests and responses

Login

Fetch Product Data

Creating New Data

Register



Checkout Product

# API Examples



## Google API Features

- Sign in with Google
- Google Geolocation
- Google Play Game Services
- Books API
- Google Search
- Google Analytics

## Zomato API Features

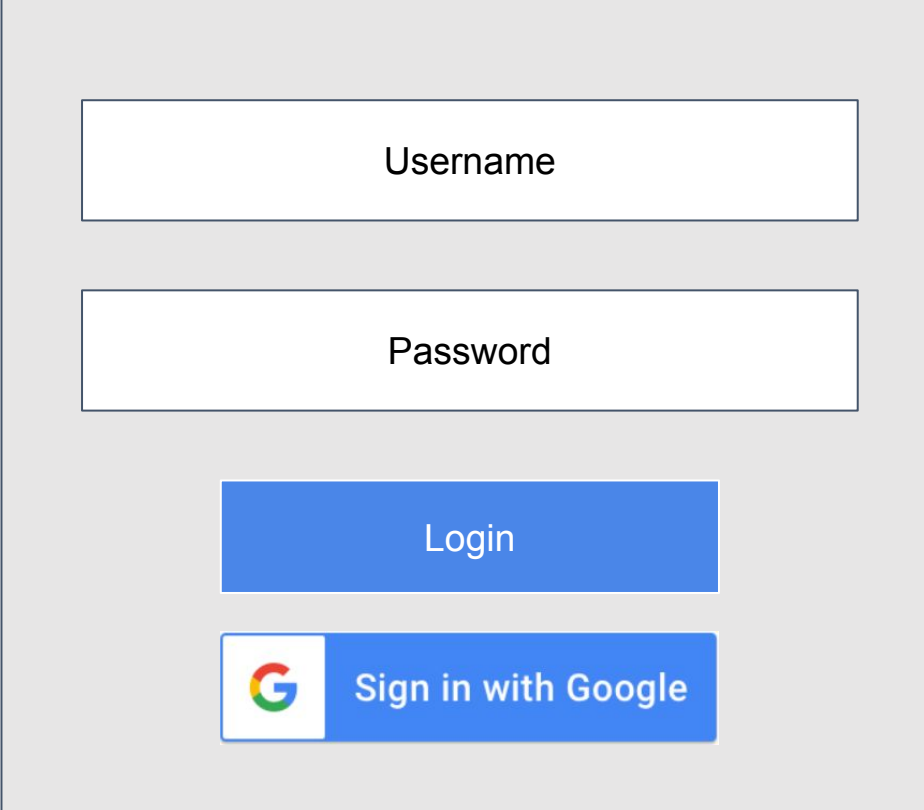
- Access to 1.5 million restaurants
- Search restaurants, cuisines, name or location
- Display rating
- Recommendation based on users



# Front End & Back End (Login Screen)

## Front End

1. Create Layout
2. Provide input from users
3. Compiles data
4. Send Data as Request
5. Receive response
6. Provide feedback



## Back End

1. Receive Request Data
2. Compares request data and stored data
3. Conditionally send a response eg. Login Success or Login Failed

# Purpose of Back End Developers

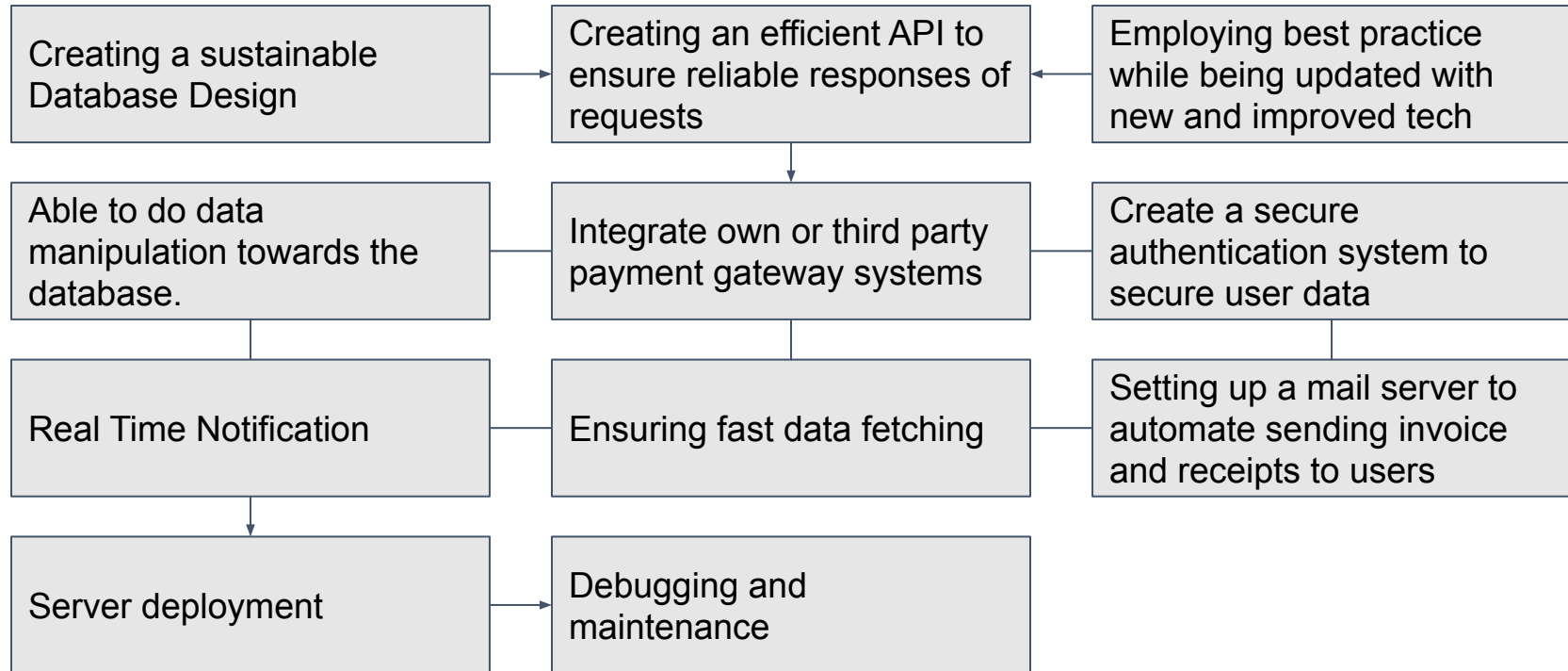
- Design database
- Develop web services to handle business processes.
- Give access to the database, server files, and cloud services



# Requirements

- Database Knowledge
  - MySQL
  - Mongo
  - Oracle
- Fluency in programming languages
  - .NET
  - Python
  - PHP
  - Ruby
- API (REST & SOAP)
- Awareness in Security

# Real Case (Ecommerce)



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