

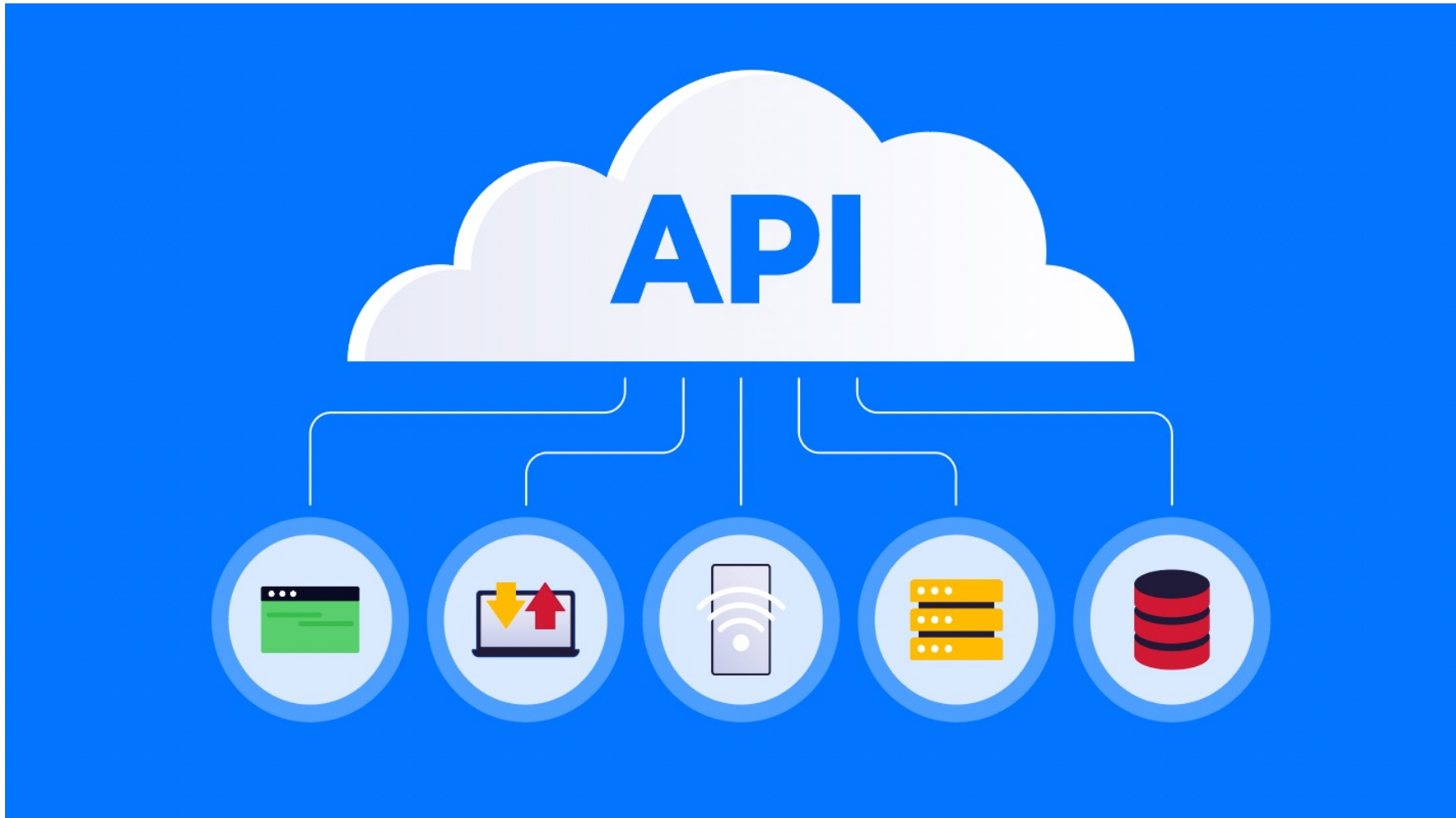
# Mobile Applications for Sensing and Control

EE P 523 Sp23 M W 4:00—5:50p ECE 045

Sep Makhsous

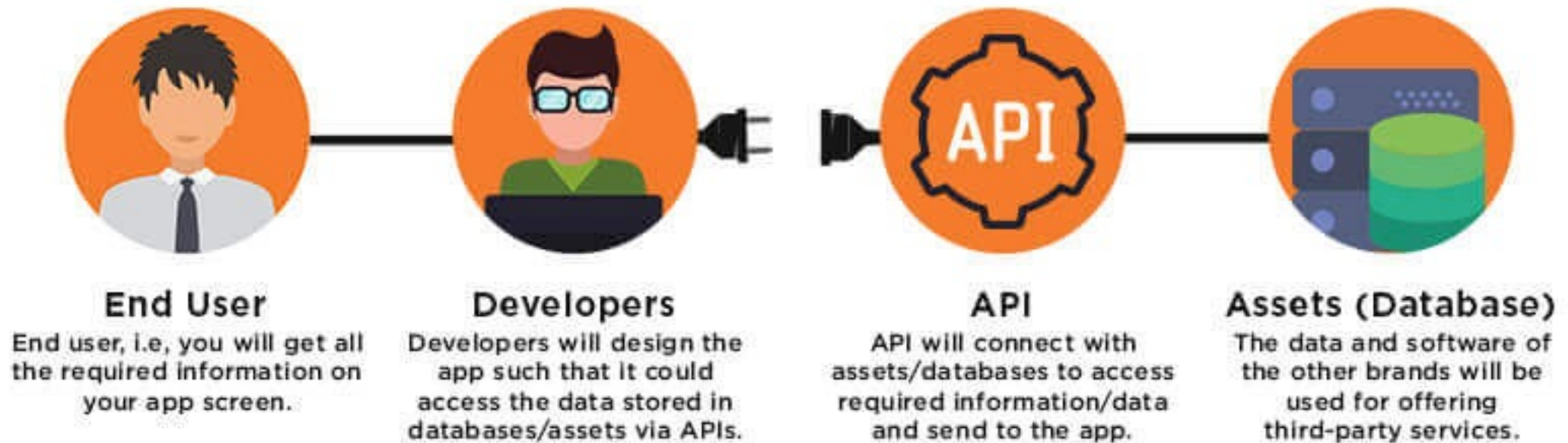
Week 4

# What is an Application Programming Interface



# How does an API work?

## Working of API



# Why do we need use APIs

- Most mobile apps require data from external sources such as servers, databases, or other APIs.
- APIs allow React Native developers to access and consume data from external sources and services.
- By using APIs, React Native developers can build apps that can interact with other applications and systems.

# How do we use API calls in React Native?

- React Native provides built-in components such as `Fetch` and `XMLHttpRequest` that can be used to make API calls.
- These components allow developers to send HTTP requests to remote servers and receive responses in JSON or XML format.
- The data returned from the API can be used to update the state of the React Native component and display the data on the screen.
- The most common HTTP methods used in API calls are `GET`, `POST`, `PUT`, and `DELETE`.

# How do we use API calls in React Native?

- **Making requests**

- In order to fetch content from an arbitrary URL, you can pass the URL to fetch:

- `fetch('Your URL to fetch data from');`

- Fetch also takes an optional second argument that allows you to customize the HTTP request. You may want to specify additional headers, or make a POST request:

- ```
fetch('Your URL to fetch data from', {  
  method: 'POST',  
  headers: { Accept: 'application/json',  
             'Content-Type': 'application/json',  
            },  
  body: JSON.stringify({  
    firstParam: 'yourValue',  
    secondParam: 'yourOtherValue',  
  }),  
});
```

# Lets do an example

Create a new React Native function component that fetches and displays movie data from the following API endpoint:

*<https://reactnative.dev/movies.json>.*

- The app should have the following features:
  - The ability to display the movie data in a scrollable list or table.
- To complete this exercise, you can follow these steps:
  - Write the code to fetch the movie data from the API and store it in the component's state.
  - Use the useEffect hook to call the API once when the component is mounted.
  - Write the code to render the movie data in a scrollable list or table.
  - Test the app to ensure that it is fetching and displaying the data correctly.
  - Add any additional features or functionality as desired.

# ICTE 2

- See:

[https://canvas.uw.edu/courses/1633582/assignments/8319339?module\\_item\\_id=18282732](https://canvas.uw.edu/courses/1633582/assignments/8319339?module_item_id=18282732)







