

Mobile Development



React Native

#8 Accessing API with Axios



API

- **API (Application Programming Interface)** is a software intermediary which allows applications to talk to each other.
- When you use an application on your mobile phone, the application connects to the Internet and sends data to a server. The server then retrieves that data, interprets it, performs the necessary actions and sends it back to your phone. The application then interprets that data and presents to you with the information that you wanted, in a readable way. This is what an API is - all of this happens via API.



API





HTTP Methods

- **HTTP** (*The Hypertext Transfer Protocol*) is designed to enable communications between clients & servers. It works as a request & response protocol between a client & server.
- A web browser may be the client, and an application on a computer that hosts a web site may be the server.
- The most commonly used HTTP Methods are POST, GET, PUT, PATCH & DELETE.



RESTful APIs

- ***RESTful (Representational State Transfer)*** web services is a way of providing interoperability between computer system on the internet.
- A RESTful API is an application program interface that uses HTTP requests to GET, PUT, POST or UPDATE data, based on representational state transfer (RESTful) architecture technology.



JSON

■ JSON (*Javascript Object Notation*)

is a lightweight data-interchange format that based on a subset of JS. It's easy to read, write and can be used with any modern language.

JSON is not a JavaScript Object!

JSON rules:

- Uses property/value pairs = `{"nama" : "Andi"}`
- Uses dblquote on its prop & val (ex number)
- Must use specified data type
- File type is `".json"`
- Mime type is `"application/json"`



Validate JSON

jsonlint.com

```
1 {  
2   "nama": "Andi",  
3   "usia": 24,  
4   "job": "PNS"  
5 }
```

Validate JSON

Clear

Results

valid JSON

```
1 {  
2   nama: "Andi",  
3   usia: 24,  
4   job: "PNS"  
5 }
```

Validate JSON

Clear

Results

Error: Parse error on line 1:
{ nama: "Andi", usia:
--^
Expecting 'STRING', '}', got 'undefined'



Object → JSON

```
var orang = {  
  nama: "Andi",  
  usia: 21,  
  asal: "Lampung"  
}
```

```
orang = JSON.stringify(orang);
```

```
console.log(orang);  
console.log(orang.nama);
```




JSON → Object

```
var orang = {  
  nama: "Andi",  
  usia: 21,  
  asal: "Lampung"  
}
```

```
orang = JSON.stringify(orang);  
orang = JSON.parse(orang);
```

```
console.log(orang);  
console.log(orang.nama);
```



- A powerful GUI platform to make API development faster & easier, from building API requests through testing, documentation & sharing.
- Postman has features for every API developer: request building, tests & pre-request scripts, variables, environments & request descriptions, designed to work seamlessly together.
- Download from getpostman.com



Using Axios Package

Axios is an NPM built-in package that allows us to:

- Make http requests from node.js
- Supports the Promise API
- Intercept request and response
- Transform request and response data
- Cancel requests
- Automatic transforms for JSON data

Install Axios package:

```
$ npm install axios --save
```

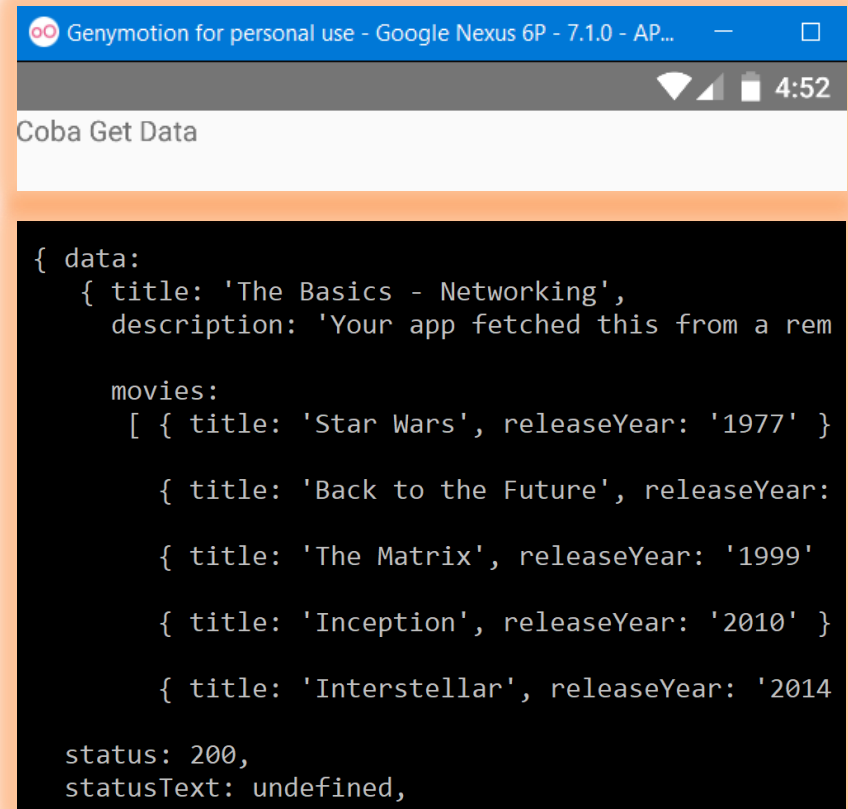
Axios #1

GET all data

```
import React, { Component } from 'react';
import { Text, View } from 'react-native';
import axios from 'axios';

class App extends Component {
  componentDidMount(){
    var url='https://facebook.github.io/react-native/movies.json';
    axios.get(url)
      .then((ambilData) => {
        console.log(ambilData);
      })
  };
  render() {
    return (
      <View>
        <Text>Coba Get Data</Text>
      </View>
    );
  }
}

export default App;
```



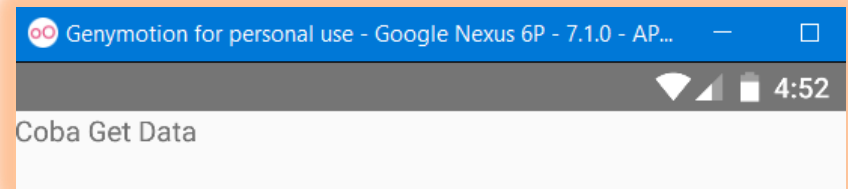
Axios #2

main data

```
import React, { Component } from 'react';
import { Text, View } from 'react-native';
import axios from 'axios';

class App extends Component {
  componentDidMount(){
    var url='https://facebook.github.io/react-native/movies.json';
    axios.get(url)
      .then((ambilData) => {
        console.log(ambilData.data);
      })
  };
  render() {
    return (
      <View>
        <Text>Coba Get Data</Text>
      </View>
    );
  }
}

export default App;
```



```
{ title: 'The Basics - Networking',
  description: 'Your app fetched this from a remote'

  movies:
    [ { title: 'Star Wars', releaseYear: '1977' },
      { title: 'Back to the Future', releaseYear: '1

      { title: 'The Matrix', releaseYear: '1999' },
      { title: 'Inception', releaseYear: '2010' },
      { title: 'Interstellar', releaseYear: '2014' }
```

Axios #3

GET syntax

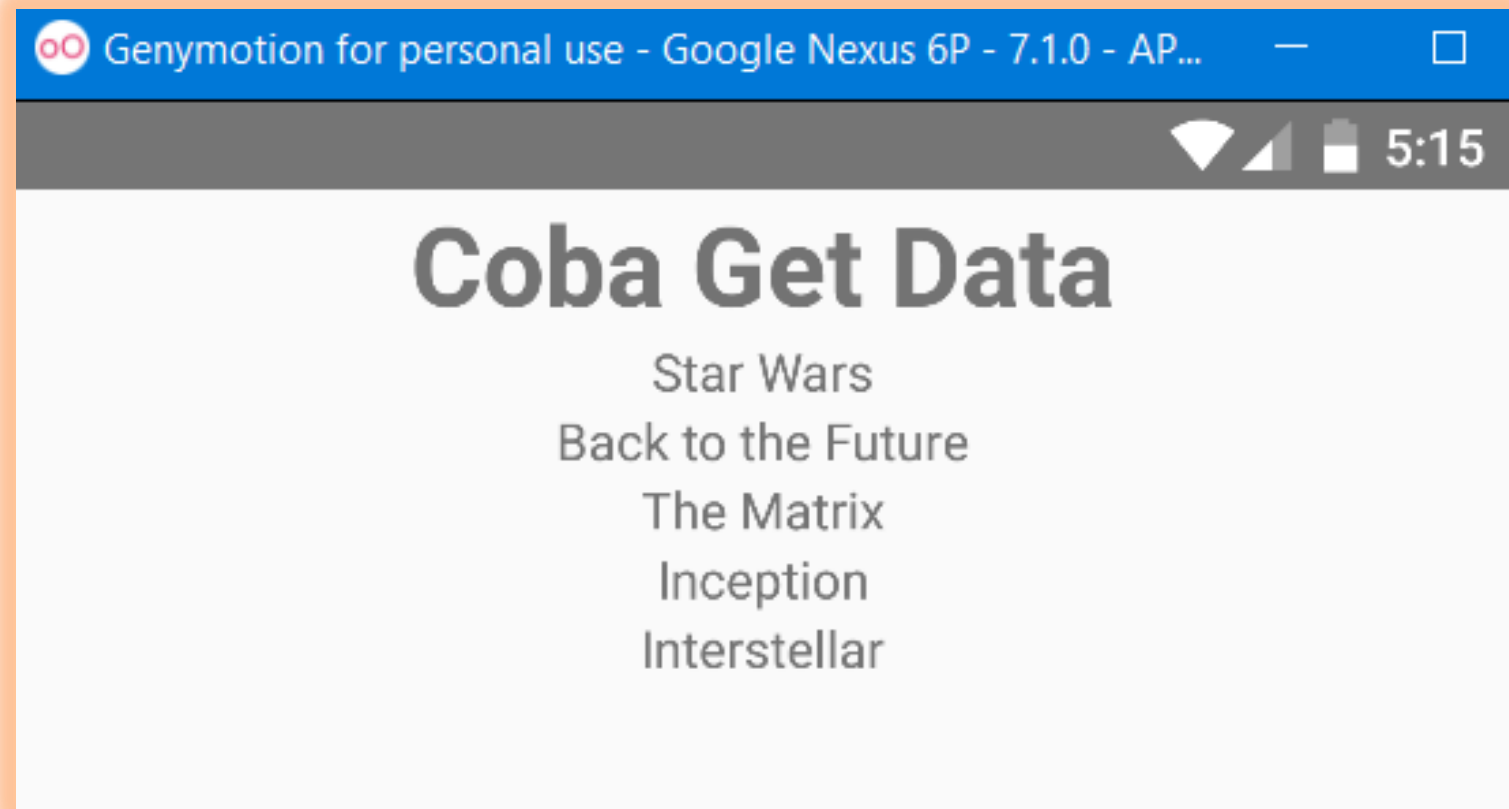
```
axios.get('https://URL.json')
  .then((ambilData) => {
    console.log(ambilData.data.title);
    console.log(ambilData.data.description);
    console.log(ambilData.data.movies);
  })
};
```

===== Can be written as

```
axios({
  url: 'https://URL.json',
  method: 'GET',
}).then((ambilData) => {
  console.log(ambilData.data.title);
  console.log(ambilData.data.description);
  console.log(ambilData.data.movies);
})
```

Axios #4

render data



Axios #4

Part 1

```
import React, { Component } from 'react';
import { View, Text } from 'react-native';
import axios from 'axios';

class App extends Component {
  constructor() {
    super();
    this.state = {judul: ''};
  }

  componentDidMount(){
    axios.get('https://facebook.github.io/react-native/movies.json')
      .then((ambilData) => {
        console.log(ambilData);
        this.setState({
          judul0: ambilData.data.movies[0].title,
          judul1: ambilData.data.movies[1].title,
          judul2: ambilData.data.movies[2].title,
          judul3: ambilData.data.movies[3].title,
          judul4: ambilData.data.movies[4].title })
      })
  });
}
```


Axios #4

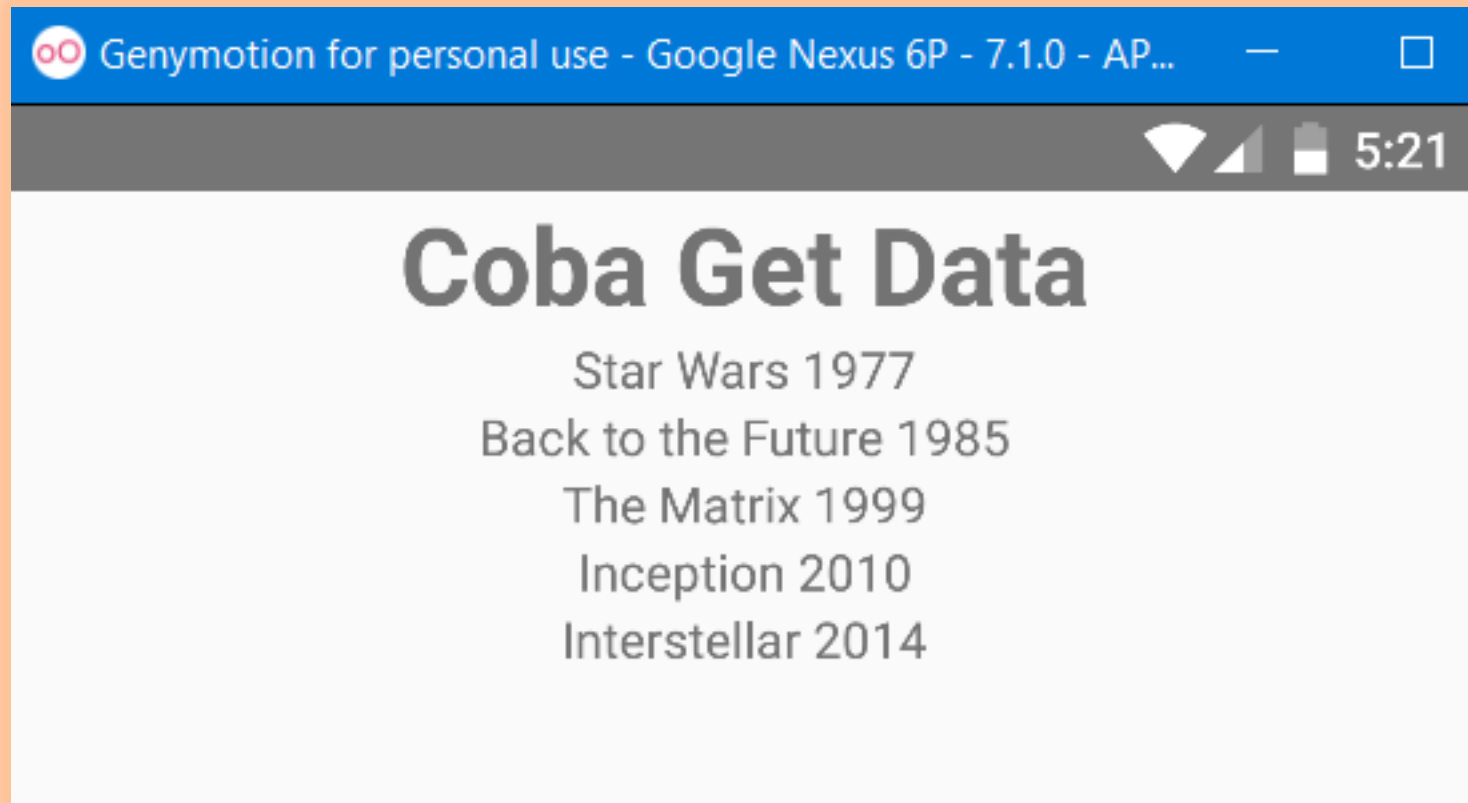
Part 2

```
render() {  
  return (  
    <View>  
      <Text>{this.state.judul0}</Text>  
      <Text>{this.state.judul1}</Text>  
      <Text>{this.state.judul2}</Text>  
      <Text>{this.state.judul3}</Text>  
      <Text>{this.state.judul4}</Text>  
    </View>  
  );  
}
```

```
export default App;
```

Axios #5

map & render data



Axios #5

Part 1

```
import React, { Component } from 'react';
import { View, Text } from 'react-native';
import axios from 'axios';

class App extends Component {
  constructor() {
    super();
    this.state = {judul: [],};
  }

  componentDidMount(){
    axios.get('https://facebook.github.io/react-native/movies.json')
      .then((ambilData) => {
        console.log(ambilData);
        this.setState({
          judul: ambilData.data.movies,
        })
      })
  };
}
```

.

.

```
render() {  
  const data = this.state.judul.map((item, index)=>{  
    var fullfilm = [item.title,item.releaseYear].join(" ");  
    return <Text key={index}>{fullfilm}</Text>;  
  })  
  return (  
    <View>  
      {data}  
    </View>  
  );  
}
```

```
export default App;
```

<https://jsonplaceholder.typicode.com/>



JSONPlaceholder

Fake Online REST API for Testing and Prototyping

powered by [JSON Server](#) and [lowdb](#)

JSONPlaceholder is a free online REST service that you can use whenever you need some fake data.



JSONPlaceholder

<https://jsonplaceholder.typicode.com/>

Resources

/posts	100 items
/comments	500 items
/albums	100 items
/photos	5000 items
/todos	200 items
/users	10 items

Routes

GET	/posts
GET	/posts/1
GET	/posts/1/comments
GET	/comments?postId=1
GET	/posts?userId=1
POST	/posts
PUT	/posts/1
PATCH	/posts/1
DELETE	/posts/1

الأذان

aladhan.com



alquran.cloud/api

Free API

Part 1 CoPas only

QUOTES
on DESIGN

quotesondesign.com



BLOCKCHAIN

[blockchain.info/api/
exchange_rates_api](http://blockchain.info/api/exchange_rates_api)

COUNTRY API



[fabian7593.github.io/
CountryAPI/](http://fabian7593.github.io/CountryAPI/)

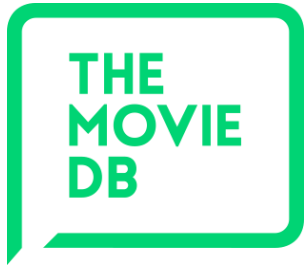
TheSportsDB

thesportsdb.com/api.php

 **Purwadhika**
Startup and Coding School

Free API

Part 2 Auth Key



themoviedb.org



openweathermap.org



api.nasa.gov



wunderground.com

Food2Fork

food2fork.com

last.fm

last.fm



xsight

telkomxsight.com



mainAPI

mainapi.net

Free API
Indonesian!



JAKARTA
SMART CITY

api.jakarta.go.id

 **Purwadhika**
Startup and Coding School

Free API

Part 3 Header Key

The Zomato logo consists of a solid red rounded square. Inside the square, the word "zomato" is written in a white, lowercase, sans-serif font, centered horizontally and vertically.

zomato

zomato.com

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