# Angular HttpClient Demo

## 1. Setup Project

### 1.1 Install JSON Server Dependencies

1. Change directory to json-server:

* cd json-server

1. Install dependencies by running the following command:

* npm install

### 1.2 Start JSON Server

1. Start JSON server:

* npx json-server MOCK\_DATA.json -p 3001

### 1.3 Install Angular Dependencies

1. Open new Terminal window.
2. Change directory to calab:

* cd calab

1. Install dependencies by running the following command:

* npm install

### 1.4 Start The Application

1. Start Angular Development Server if not yet started:

* npx -p @angular/cli ng serve
* *Otherwise refresh the browser tab to see updated view.*

## 2. Setup HttpClient

### 2.1 Update App Configuration

1. Open src/app/app.config.ts file and do the following:
   * Import provideHttpClient:
   * import { provideHttpClient } from '@angular/common/http';
   * Provide provideHttpClient helper function:
   * export const appConfig: ApplicationConfig = {  
      providers: [ provideRouter(routes), provideClientHydration(), provideHttpClient() ]  
     };

## 3. Create and configure a new Service

### 3.1 Create a new Service

1. Create a new component using CLI and name it MovieService:

* npx -p @angular/cli ng generate service services/movie

### 3.2 Inject The HttpClient Service

1. Open src/app/services/movie.service.ts file and do the following:
   * Import HttpClient:
   * import { HttpClient } from '@angular/common/http';
   * Inject HttpClient as a dependency into MovieService constructor.
   * export class MovieService {  
      constructor(private httpClient: HttpClient) { }  
     }

## 4. Create a Movie Model

### 4.1 Create a new class representing a movie model

1. Create a new directory in src/app/ called models.
2. Change directory to src/app/models
3. Create new TypeScript file called movie.ts
4. Add the following code inside movie.ts:

* export class Movie {  
   constructor(  
   public title: string,  
   public genre: string,  
   public release\_date: string,  
   public director: string,  
   public rating: number,  
   public duration\_minutes: number,  
   ) {}  
  }

## 5. Making Http Requests

### 5.1 Create a GET http request

1. Open src/app/services/movie.service.ts file and do the following:
   * Import Movie model:
   * import { Movie } from '../models/movie';
   * Declare a new function called getAllMovies that calls http get() method.
   * getAllMovies(){  
      this.httpClient.get<Movie>('http://localhost:3001/movies').subscribe(data => {  
      console.log(data);  
      });  
     }

### 5.2 Call method containing GET http request

1. Open src/app/app.component.ts file and do the following:
   * Import MovieService:
   * import { MovieService } from './services/movie.service';
   * Inject MovieService as dependency into AppComponent.
   * export class AppComponent {  
      constructor(private movieService: MovieService){}  
      ...  
     }
   * Inside constructor, make a call to getAllMovies() method.
   * export class AppComponent {  
      constructor(private movieService: MovieService){  
      movieService.getAllMovies();  
      }  
      ...  
     }

### 5.3 Review Changes

1. Start Angular Development Server if not yet started:

* npx -p @angular/cli ng serve
* *Otherwise refresh the browser tab to see updated view.*

1. Inspect developer console if using Chrome for any logs. You should see the following geting printed:

* (20) [{…}, {…}, {…}, {…}, {…}, {…}, {…}, {…}, {…}, {…}, {…}, {…}, {…}, {…}, {…}, {…}, {…}, {…}, {…}, {…}]

### 5.3 Create a POST http request

1. Open src/app/services/movie.service.ts file and do the following:
   * Declare a new function called createMovie that takes Movie as a parameter and calls http post() method.
   * createMovie(movie: Movie){  
      this.httpClient.post<Movie>('http://localhost:3001/movies', movie).subscribe(res => {  
      console.log('Created movie:', res);  
      });  
     }

### 5.4 Call method containing POST http request

1. Open src/app/app.component.ts file and do the following:
   * Import Movie model:
   * import { Movie } from './models/movie';
   * Inside constructor, create an instance of a movie.
   * const movie = new Movie(   
      "Forrest Gump",  
      "Drama",  
      "1994",  
      "Robert Zemeckis",  
      8.8,  
      142  
     );
   * Inside constructor, make a call to createMovie() method.
   * movieService.createMovie(movie);

### 5.5 Review Changes

1. Start Angular Development Server if not yet started:

* npx -p @angular/cli ng serve
* *Otherwise refresh the browser tab to see updated view.*

1. Inspect developer console if using Chrome for any logs. You should see the following geting printed: .sh Created movie: {id: 'af2c', title: 'Forrest Gump', genre: 'Drama', release\_date: '1994', director: 'Robert Zemeckis', …}

## 6. Interceptors

### 6.1 Define an Interceptor

1. Open src/app/app.config.ts file and do the following:
   * Import withInterceptors, HttpEvent, HttpHandlerFn, HttpRequest and Observable:
   * import { HttpEvent, HttpHandlerFn, HttpRequest, provideHttpClient, withInterceptors } from '@angular/common/http';  
     import { Observable } from 'rxjs';
   * Define a loggingInterceptor helper function:
   * export function loggingInterceptor(req: HttpRequest<unknown>, next: HttpHandlerFn): Observable<HttpEvent<unknown>> {  
      console.log(`Request URL is: ${req.url}`);  
      return next(req);  
     }
   * Declare an interceptor inside provideHttpClient helper function:
   * export const appConfig: ApplicationConfig = {  
      providers: [provideRouter(routes), provideHttpClient(  
      withInterceptors([loggingInterceptor]),  
      ),]  
     };

### 6.2 Start The Application

1. Start Angular Development Server if not yet started:

* npx -p @angular/cli ng serve
* *Otherwise refresh the browser tab to see updated view.*

1. Inspect developer console if using Chrome for any logs. You should see the following geting printed: .sh Request URL is: http://localhost:3001/movies