

# Setup Node Js development environment

<https://nodejs.org/en/>

## Install Angular CLI

```
npm install @angular/cli -g
```

## How to set up Angular 7 Project using Angular CLI from scratch?

```
ng new my-app
```

1. Would you like to add angular routing ? Select y and hit enter.
2. Which stylesheet format would you like to use?(use arrow keys)  
Choose scss/css/less and hit enter

```
npm install bootstrap
```

```
"styles": ["node_modules/bootstrap/dist/css/bootstrap.min.css", "src/styles.css"]
```

```
ng serve --open
```

```
ng g c student-create
```

```
ng g c student-edit
```

```
ng g c students-list
```

```
npm i json-server --save
```

```
mkdir server && cd server
```

```
touch server/db.json
```

```

{
  "students": [
    {
      "name": "Tarang Sachdev",
      "email": "tarangsachdev@gmail.com",
      "phone": "2",
      "id": 1
    }
  ]
}

```

In package.json

```
"start-json-server": "json-server --watch server/db.json",
```

Now you can check that backend server is running on localhost:3000

In update routes in app-routing.module.ts file

Now it's time to import http module for the api calling

HTTP-client

```
import { HttpClientModule } from '@angular/common/http';
```

```

@NgModule({
  imports: [
    HttpClientModule
  ]
})

```

```
ng g cl shared/Student
```

```
ng g s shared/rest-api
```

```

export class Student {
  id: string;
  name: string;
}

```

```
    email: string;
    phone: number;
  }
```

ng g s shared/rest-api

All the http call will be here

Now design create/edit and employee list component  
And make service call from here

For ex.

```
import { Injectable } from '@angular/core';
import { HttpClient, HttpHeaders } from '@angular/common/http';
import { Observable, throwError } from 'rxjs';
import { retry, catchError } from 'rxjs/operators';
import { Student } from './student';
```

```
@Injectable({
  providedIn: 'root'
})
```

```
export class RestApiService {
```

```
  // Define API
```

```
  apiURL = 'http://localhost:3000';
```

```
  constructor(private http: HttpClient) { }
```

```
  /*=====
    CRUD Methods for consuming RESTful API
  =====*/
```

```
  // Http Options
```

```
  httpOptions = {
```

```
    headers: new HttpHeaders({
```

```

        'Content-Type': 'application/json'
    })
};

// HttpClient API get() method => Fetch students list
getStudents(): Observable<Student> {
    return this.http.get<Student>(this.apiUrl + '/students')
        .pipe(
            retry(1),
            catchError(this.handleError)
        );
}

// Error handling
handleError(error) {
    let errorMessage = "";
    if (error.error instanceof ErrorEvent) {
        // Get client-side error
        errorMessage = error.error.message;
    } else {
        // Get server-side error
        errorMessage = `Error Code: ${error.status}\nMessage: ${error.message}`;
    }
    window.alert(errorMessage);
    return throwError(errorMessage);
}
}

```

Now how to use that service file in our component?

For ex.in our student-list component we want to display all the students list data

For that we will call that getStudents method from the component

```

studentList: any = [];
constructor(
    public restApi: RestApiService
) {}

```

```
ngOnInit() {  
  this.loadStudents();  
}  
  
// Get students list  
loadStudents(): void {  
  this.restApi.getStudents().subscribe((data: {}) => {  
    this.studentList = data;  
  });  
}
```

Here we assign all the student to the variable called *studentList*

Now in html we will display that

```
<tr *ngFor="let student of studentList">  
  <td>{{student.id}}</td>  
  . . . .  
</tr>
```

That's it.