**1. Setup Project**

mkdir my-node-ts-crud

cd my-node-ts-crud

npm init -y

npm install express body-parser mongoose

npm install typescript ts-node @types/node @types/express @types/mongoose --save-dev

npx tsc –init

### 2. Folder Structure

my-node-ts-crud

├── src

│ ├── controllers

│ ├── models

│ ├── routes

│ ├── views

│ ├── app.ts

│ └── server.ts

├── package.json

├── tsconfig.json

### 3. Configuration

**tsconfig.json**:

{

"compilerOptions": {

"target": "ES6",

"module": "commonjs",

"rootDir": "./src",

"outDir": "./dist",

"esModuleInterop": true,

"strict": true

},

"include": ["src/\*\*/\*.ts"],

"exclude": ["node\_modules"]

}

### 4. Define Models

Create a model in src/models:

**src/models/User.ts**:

### 5. Define Controllers

Create a controller in src/controllers:

**src/controllers/userController.ts**:

### 6. Define Routes

Create routes in src/routes:

**src/routes/userRoutes.ts**:

### 7. Create Express Application

**src/app.ts**:

### 8. Start the Server

**src/server.ts**:

### 9. Run the Application

npx tsc

node dist/server.js

**1.How to run Nodemon**

npm install nodemon ts-node --save-dev

### 2. Configure nodemon

**nodemon.json**:

{

"watch": ["src"],

"ext": "ts",

"ignore": ["src/\*\*/\*.spec.ts"],

"exec": "ts-node src/server.ts"

}

### 3. Add a Script to package.json

**package.json**:

{

"scripts": {

"start": "node dist/server.js",

"dev": "nodemon"

}

}

**tsconfig.json:**

{

"compilerOptions": {

"target": "ES6",

"module": "commonjs",

"rootDir": "./src",

"outDir": "./dist",

"esModuleInterop": true,

"strict": true

},

"include": ["src/\*\*/\*.ts"],

"exclude": ["node\_modules"]

}

### 4. Run the Application

npm run dev

### 5. Full Project Setup

my-node-ts-crud

├── node\_modules

├── src

│ ├── controllers

│ │ └── userController.ts

│ ├── models

│ │ └── User.ts

│ ├── routes

│ │ └── userRoutes.ts

│ ├── views

│ ├── app.ts

│ └── server.ts

├── dist

├── package.json

├── tsconfig.json

└── nodemon.json