Full API Structure for Angular19 + Node.js Express Project

This document defines the complete API structure for your Angular19 project with Node.js + Express backend. It includes all endpoints, request and response examples, and the detailed key-value structure for each component: **Login, Register, Users, Product, and Categories**.

1. Login Component

Endpoint: POST /api/login

Request Body

```
{ "email": "user@example.com", "password": "secret123" }
```

Response Example

```
{ "token": "eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9...", "user": { "id": "u123",
"fullname": "John Doe", "username": "johndoe", "email": "user@example.com", "role":
"user", "image": "https://example.com/uploads/johndoe.jpg" } }
```

2. Register Component

Endpoint: POST /api/register

Request Body

```
{ "fullname": "John Doe", "username": "johndoe", "email": "user@example.com",
"password": "secret123", "dateOfBirth": "2000-06-15", "gender": "male" }
```

Response Example

```
{ "id": "u123", "fullname": "John Doe", "username": "johndoe", "email":
"user@example.com", "dateOfBirth": "2000-06-15", "gender": "male", "role": "user",
"registerDate": "2025-10-12T09:00:00Z", "image":
"https://example.com/uploads/default.png" }
```

3. Users Component

Endpoints:

- GET /api/users - GET /api/users/:id - POST /api/users - PUT /api/users/:id - DELETE /api/users/:id

User Object Structure

```
{ "id": "u123", "fullname": "Jane Smith", "username": "janesmith", "email":
"jane@example.com", "dateOfBirth": "1998-04-25", "gender": "female", "role":
"admin", "registerDate": "2025-05-01T10:30:00Z", "image":
"https://example.com/uploads/jane.jpg" }
```

4. Product Component

Endpoints:

- GET /api/products - GET /api/products/:id - POST /api/products - PUT /api/products/:id - DELETE /api/products/:id

Product Object Structure

```
{ "id": "p001", "name": "Wireless Mouse", "description": "Ergonomic mouse with
Bluetooth", "price": 29.99, "stock": 150, "categoryId": "c001", "createdAt":
"2025-10-12T08:30:00Z", "updatedAt": "2025-10-12T09:00:00Z", "image":
"https://example.com/uploads/mouse.jpg" }
```

5. Categories Component

Endpoints:

- GET /api/categories - GET /api/categories/:id - POST /api/categories - PUT /api/categories/:id - DELETE /api/categories/:id

Category Object Structure
```
{ "id": "c001", "name": "Electronics", "description": "All electronic devices and
accessories", "createdAt": "2025-10-12T07:30:00Z", "updatedAt":
"2025-10-12T07:30:00Z" }
```

6. Summary of User Keys

Key	Type	Example	Description
id	string	u123	Unique user ID
fullname	string	John Doe	Full name of the user
username	string	johndoe	Unique username
email	string	user@example.com	Login email
dateOfBirth	string (ISO date)	2000-06-15	Birth date of the user
gender	string	male/female	User gender
role	string	user/admin	User access level
registerDate	string (ISO datetime)	2025-10-12T09:00:00Z	Date registered
image	string (URL)	https://example.com/uploads/user.jpg	Profile picture