Prototyping a Social Network

AngularJS: Firebase integration with AngularFire
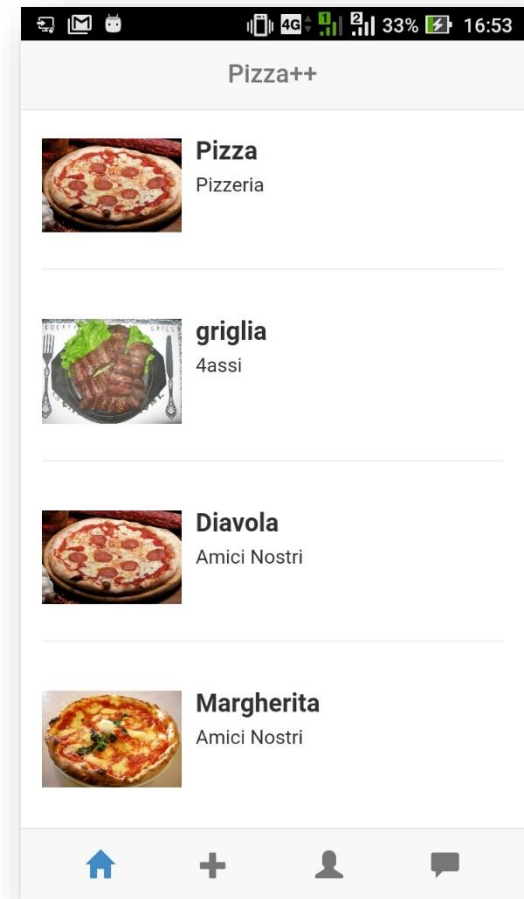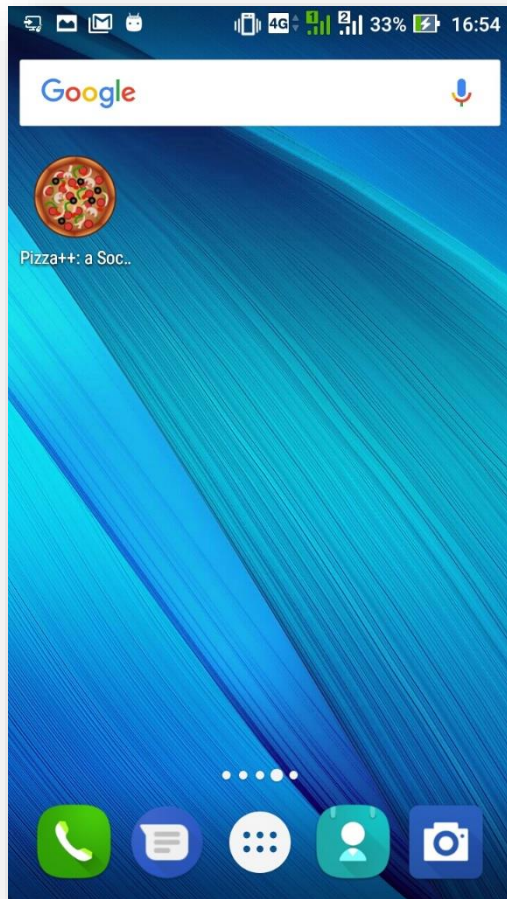
Pizza++

AngularJS: Firebase integration with AngularFire
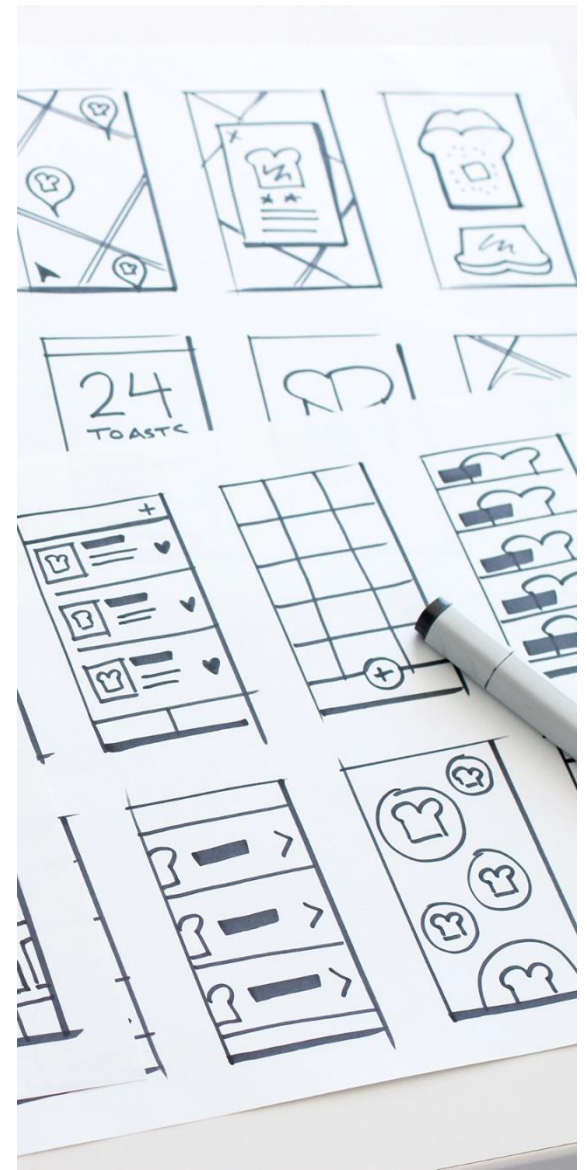
Pizza++ Feature Set

- Find top pizzas to eat near me

- Post pizzas

- Rate pizzas

- Review (comment) pizzas

- Discuss about pizzas with my friends

Pizza++

- Ingredients for frontend
    - HTML5
    - CSS3, with the help of the Bootstrap framework (http://getbootstrap.com)
    - JS, with the AngularJS framework (http://angularjs.org/)
- **Ingredients for backend**
    - *None*
    - We will rely on Firebase (https://firebase.google.com)

Getting started…

FIREBASE

Firebase

- A powerful platform for mobile or web applications
    - https://firebase.google.com
- Overview (video)
    - https://youtu.be/ySmWlU9j3j4
- Quickstart for the Web
    - https://firebase.google.com/docs/web/setup

Realtime Database

- The Firebase Realtime Database is a **cloud-hosted database**

- Data in our Firebase database
  - stored as JSON
  - synchronized in realtime to every connected client

- Automatically scales with your app

- Works offline

Realtime Database

Realtime Database: Structuring Data

- "Everything is a JSON"
- Avoid nesting data:
  - with nested design, iterating through the data becomes problematic

```json
{
  // This is a poorly nested data architecture, because iterating the children
  // of the "chats" node to get a list of conversation titles requires
  // potentially downloading hundreds of megabytes of messages
  "chats": {
    "one": {
      "title": "Historical Tech Pioneers",
      "messages": {
        "m1": { "sender": "ghopper", "message": "Relay malfunction found. Cause: mot
        "m2": { ... },
        // a very long list of messages
      }
    },
    "two": { ... }
  }
}
```

Realtime Database: Structuring Data

- Prefer flattened data:
  - split data into separate paths

```
{
  // Chats contains only meta info about each conversation stored under the chats's unique ID
  "chats": {
    "one": {
      "title": "Historical Tech Pioneers",
      "lastMessage": "ghopper: Relay malfunction found. Cause: moth.",
      "timestamp": 1459361875666
    },
    "two": { ... },
    "three": { ... }
  },

  // Conversation members are easily accessible and stored by chat conversation ID
  "members": {
    // we'll talk about indices like this below
    "one": {
      "ghopper": true,
      "alovelace": true,
      "eclarke": true
    },
    "two": { ... },
    "three": { ... }
  },

  // Messages are separate from data we may want to iterate quickly but still easily paginated and
  // queried, and organized by chat conversation
  "messages": {
    "one": {
```

Authentication

- Built-in support for user authentication
- Support
  - Social Login (Facebook, Twitter, GitHub, Google)
  - Anonymous Login
  - Login with username and password
  - Custom auth system integration
- Handle user login entirely with client-side code
- Integrate authentication with your existing backend
  - if needed

Authentication

Hosting

- Deploy your web app in seconds
  - Hosting gives you the infrastructure, features, and tooling tailored to **deploying and managing static websites**
- Hosting gives your project a subdomain on the firebaseapp.com domain
- All of your content is served over HTTPS
  - SSL by default

Hosting
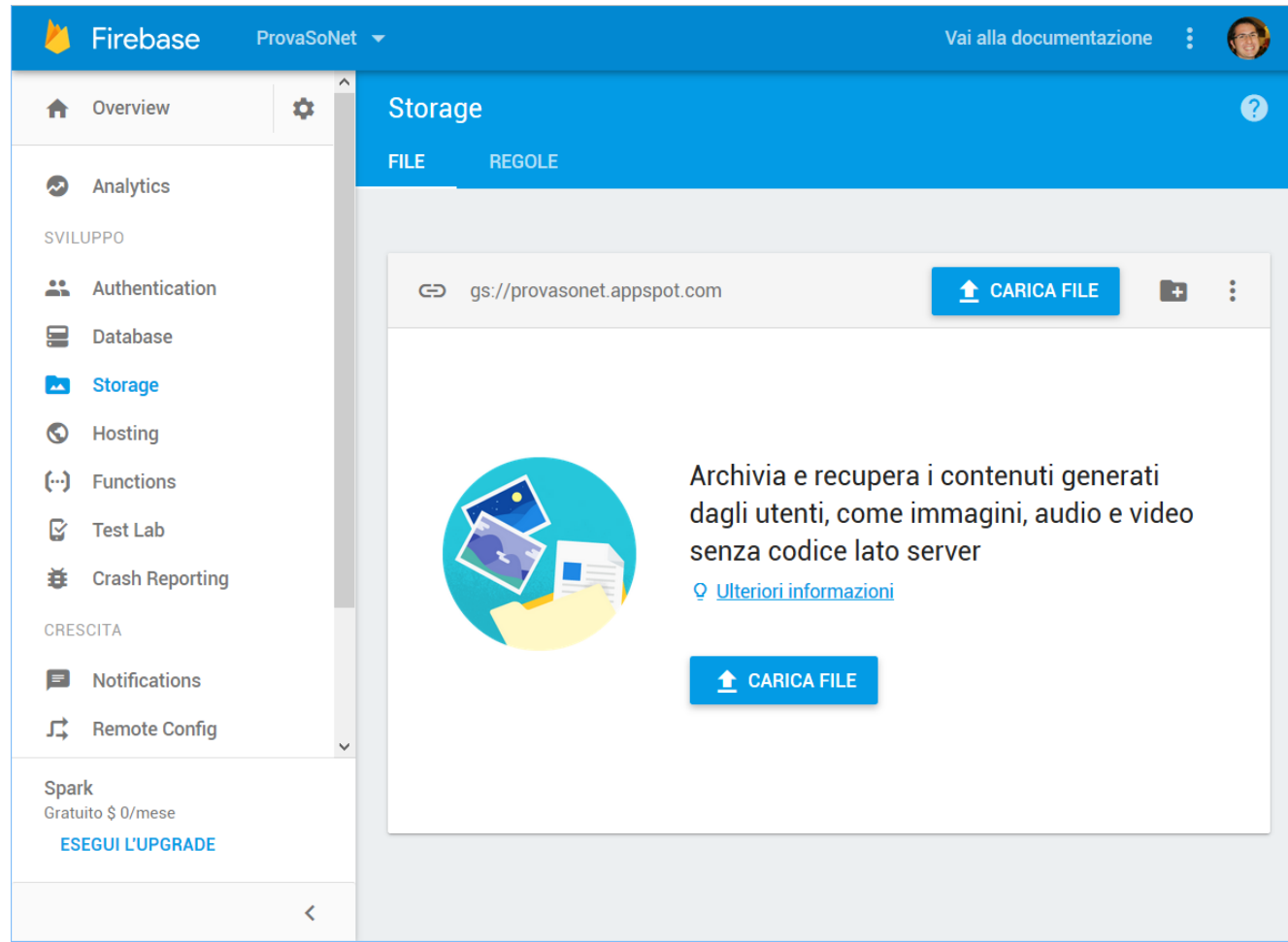
Cloud storage

- store and serve user-generated content
  - It is possible to store images, audio, video, or other user-generated content

- It adds Google security to file uploads and downloads

- On the server, use Google Cloud Storage to access the same files

Cloud storage

Getting started with Pizza++ and Firebase

HOW TO INTEGRATE FIREBASE IN ANGULARJS

Integrate Firebase in AngularJS

angularjs firebase 🔍

Tutti   Video   Immagini   Notizie   Shopping   Altro   Impostazioni   Strumenti

Circa 380.000 risultati (0,53 secondi)

Suggerimento: Cerca risultati solo in **italiano**. Puoi specificare la lingua di ricerca in Preferenze.

GitHub - firebase/angularfire: AngularJS bindings for Firebase
https://github.com/firebase/angularfire ▾ Traduci questa pagina
AngularFire is the officially supported **AngularJS** binding for **Firebase**. **Firebase** is a backend service
that provides data storage, file storage, authentication, and ...
Issues 10 · Firereader · Quickstart.md · 29 releases

AngularFire - A real-time backend for AngularJS from Firebase.
https://www.firebase.com/docs/web/libraries/angular/api.html ▾ Traduci questa pagina
AngularFire is the officially supported **AngularJS** binding for **Firebase**. This binding lets you associate
Firebase references with Angular models so that they will ...

Creiamo una Web App da zero usando AngulaJS e Firebase
https://code.tutsplus.com/.../creating-a-web-app-from-scratch-using-angularjs-and-fire... ▾
16 nov 2014 - In questa serie useremo **AngularJS** e **Firebase** per creare una semplice applicazione
web da zero. Sarà una semplice applicazione di blogging ...

Firebase & AngularJS • TodoMVC
todomvc.com/examples/firebase-angular/ ▾ Traduci questa pagina
Firebase. **Firebase** + **AngularJS** Realtime Example. Source. **Firebase** is a scalable realtime backend
that lets you build apps fast without managing servers.

http://lmgtfy.com/?q=angularjs+firebase

AngularFire

- Firebase library for AngularJS
  - https://github.com/firebase/angularfire
- The officially supported AngularJS binding for Firebase
- Getting started guide
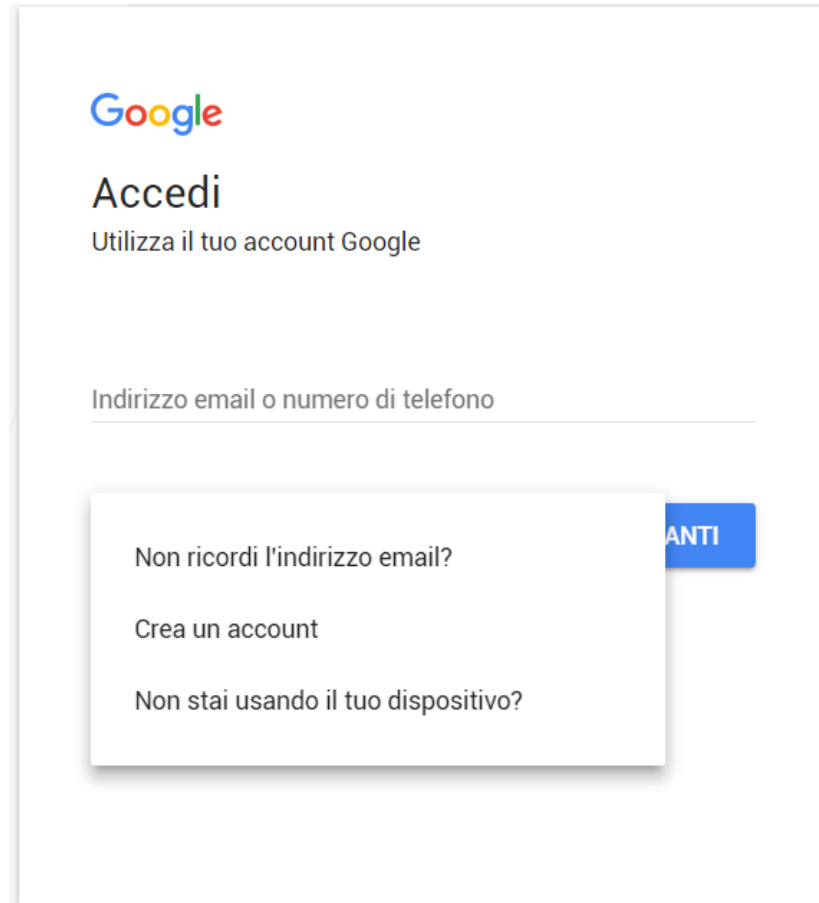 - https://github.com/firebase/angularfire/blob/master/docs/quickstart.md

Getting started with Pizza++ and Firebase

(GUIDED) EXERCISE

(Guided) Exercise

- Starting from the knowledge of the previous lab…
    - https://github.com/SoNet-2017/angularjs-lab7/releases
1. integrate AngularFire and Firebase
2. read/write the JSON data from/to Firebase

Step 1: create a Google account

AngularJS: Firebase integration with AngularFire

Step 2: create a new project

Step 3: recreate the pizza++ data structure

- Open the file data/pizzas.json
- Modify the structure so that it has a "pizzas" path as origin of the tree:

```json
{
  "pizzas": {
    "amiciNostriDiavola": {
      "id": "amiciNostriDiavola",
      "nome_pizza": "Diavola",
      "nome_pizzeria": "Amici Nostri",
      "img_url": "images/amici-nostri-diavola.jpg",
      "img_alt": "Diavola di Amici Nostri"
    },
    "amiciNostriMargherita": {
      "id": "amiciNostriMargherita",
      "nome_pizza": "Margherita",
      "nome_pizzeria": "Amici Nostri",
      "img_url": "images/amici-nostri-margherita.jpg",
      "img_alt": "Margherita di Amici Nostri"
    },
    ...
  }
}
```

Step 3: recreate the pizza++ data structure

- Import the data in Firebase
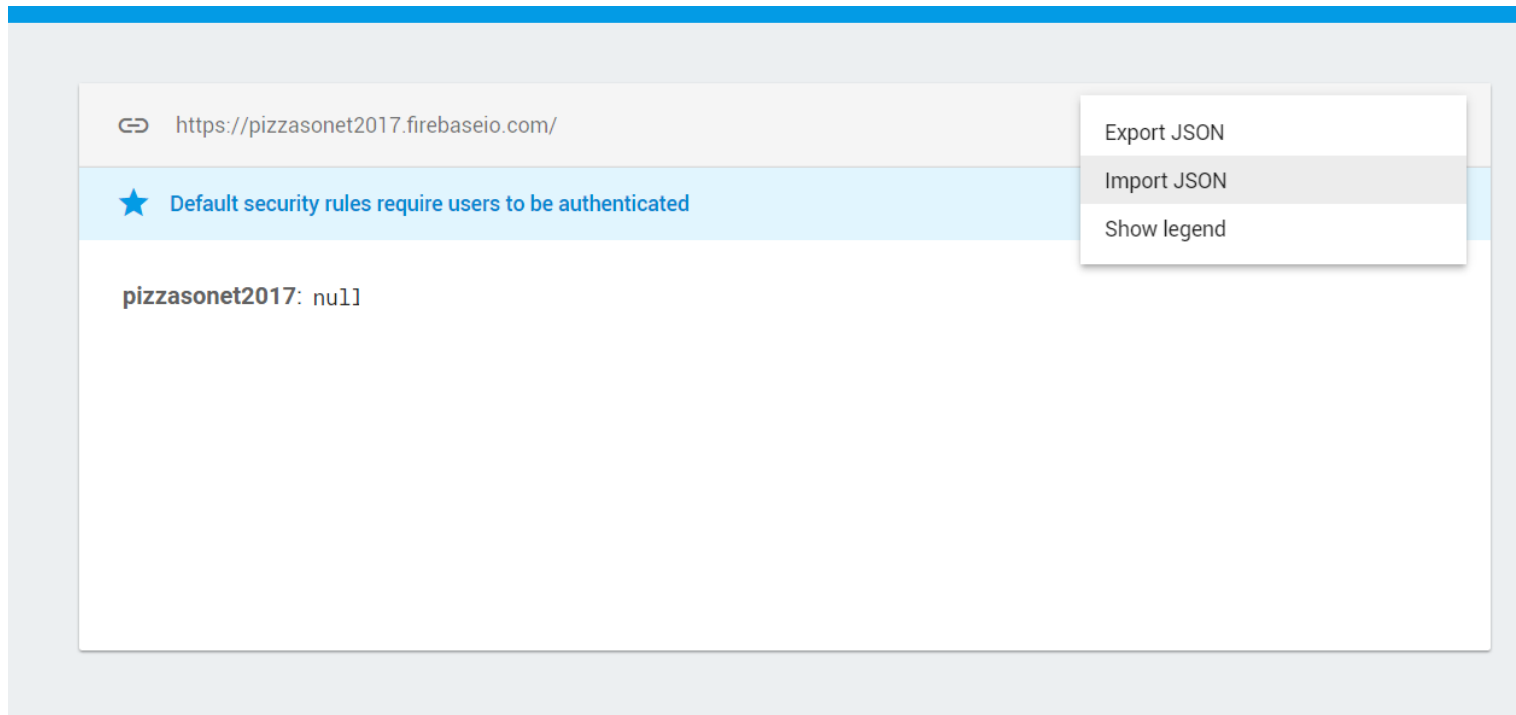
Step 3: recreate the pizza++ data structure

- Import the data in Firebase
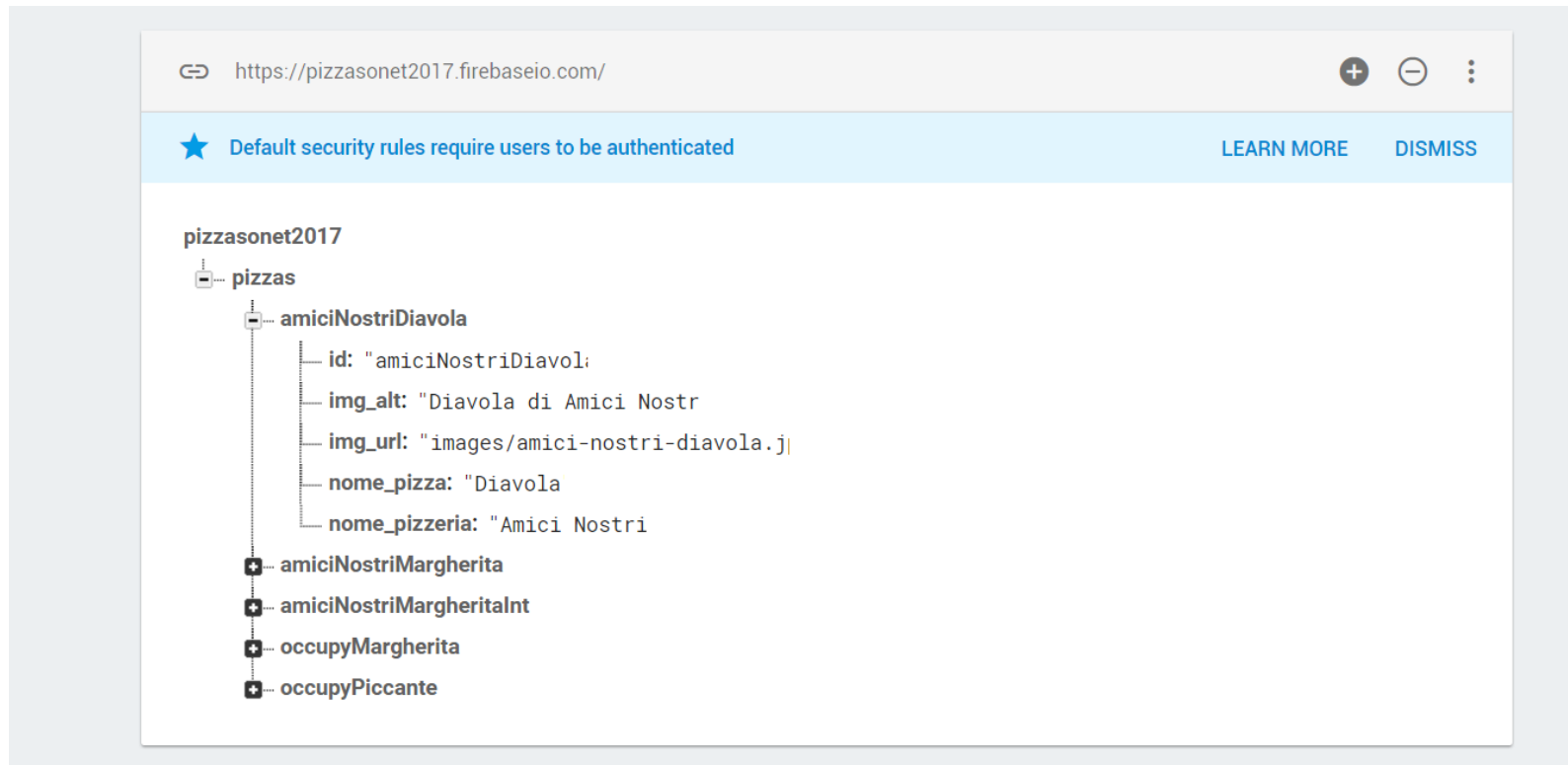
Step 4: Don't forget RULES

• Default security rules require users to be authenticated
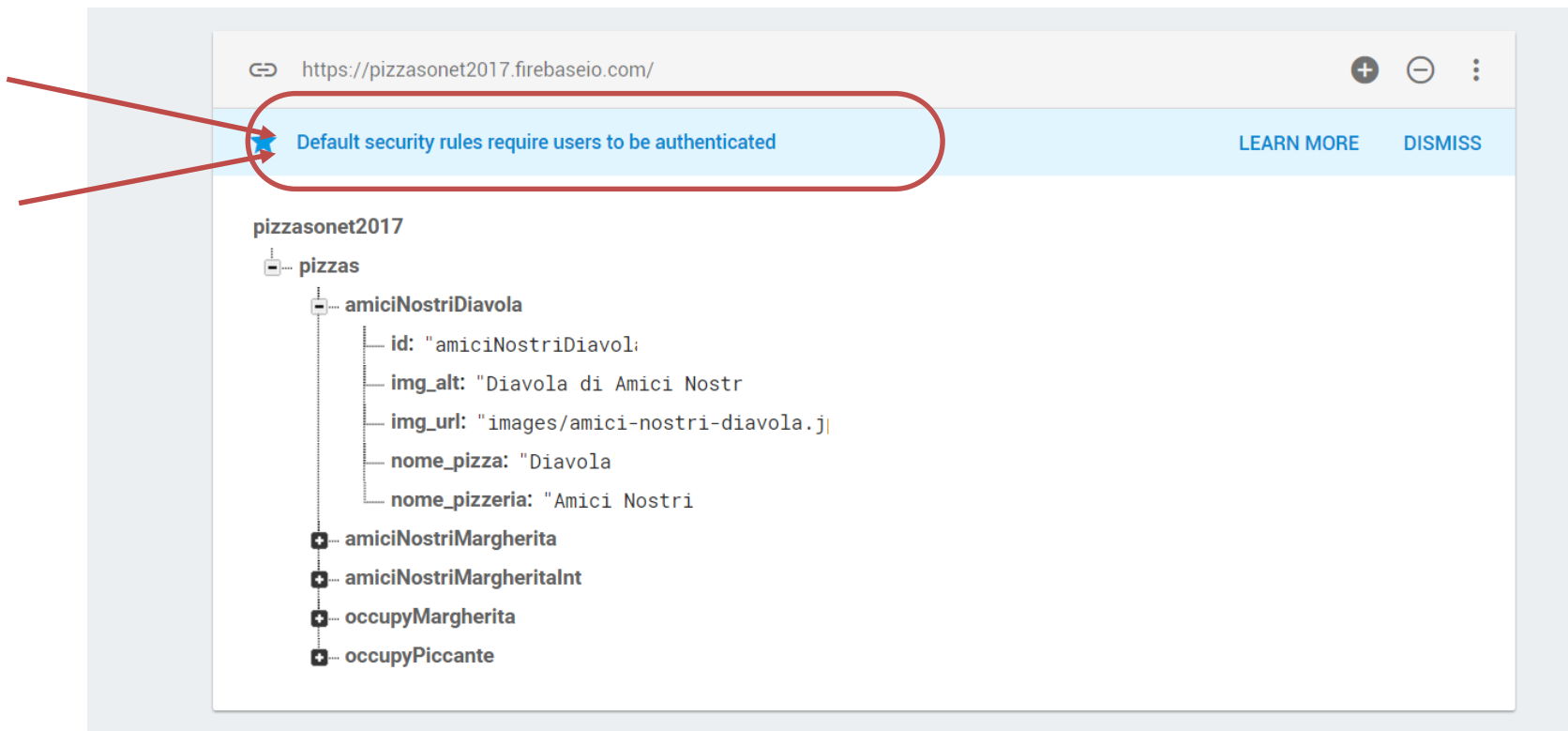
Step 4: Don't forget RULES

- We want to read data without authentication, so -> Deactivate this rule by typing the following code (and pressing PUBLISH):
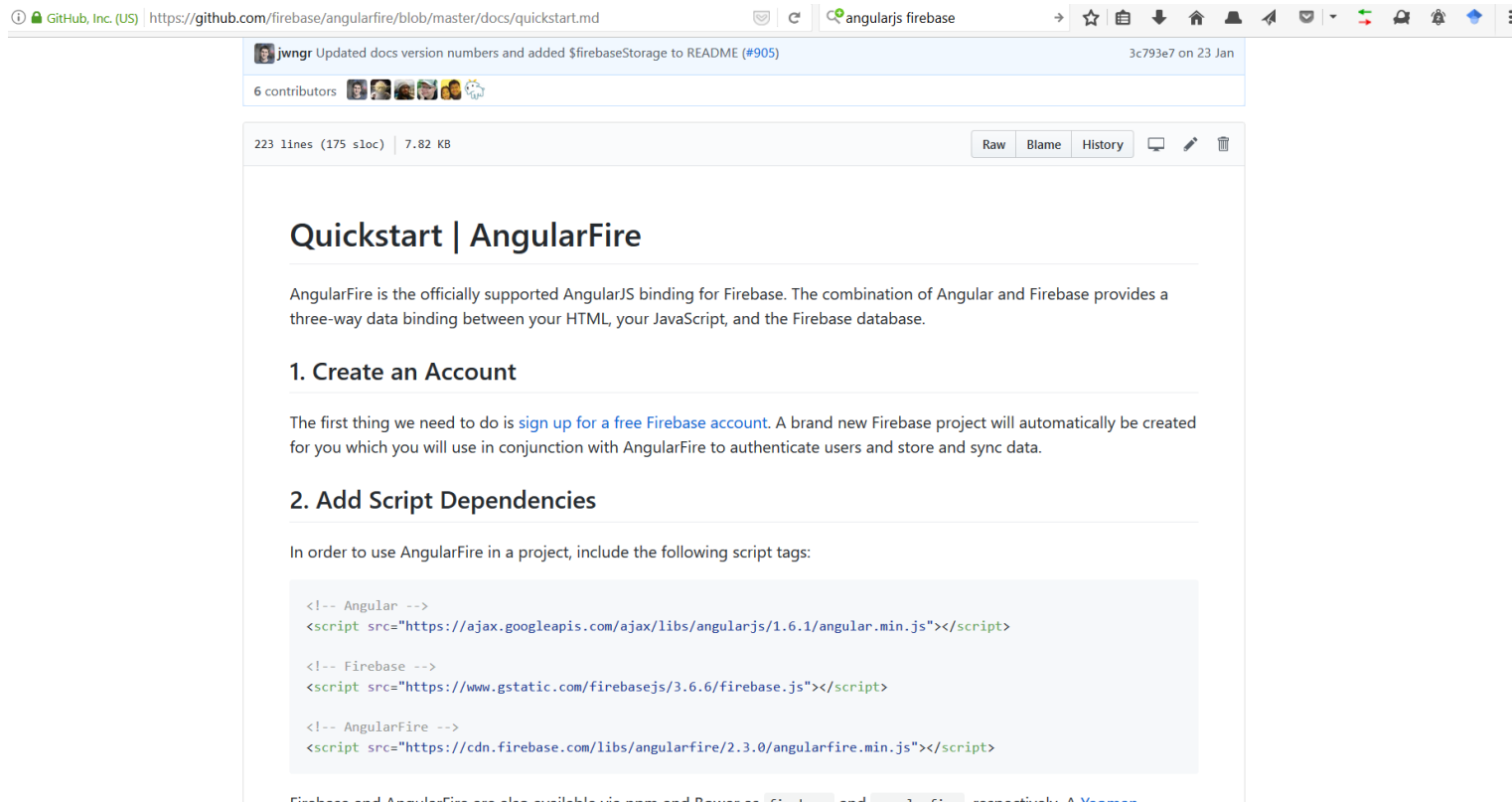
Step 5: Use the documentation

- https://github.com/firebase/angularfire/blob/master/docs/quickstart.md

Tip: to get config info

Step 1: ⚙

Tip: to get config info

Step 1: ⚙

Step 2: Project Settings

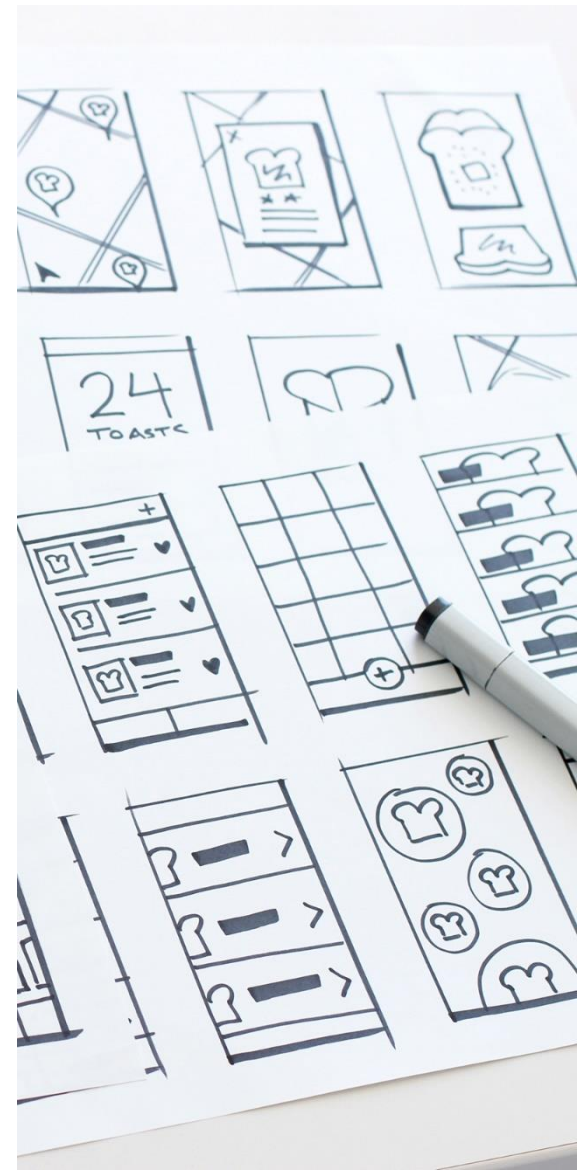# Tip: to get config info
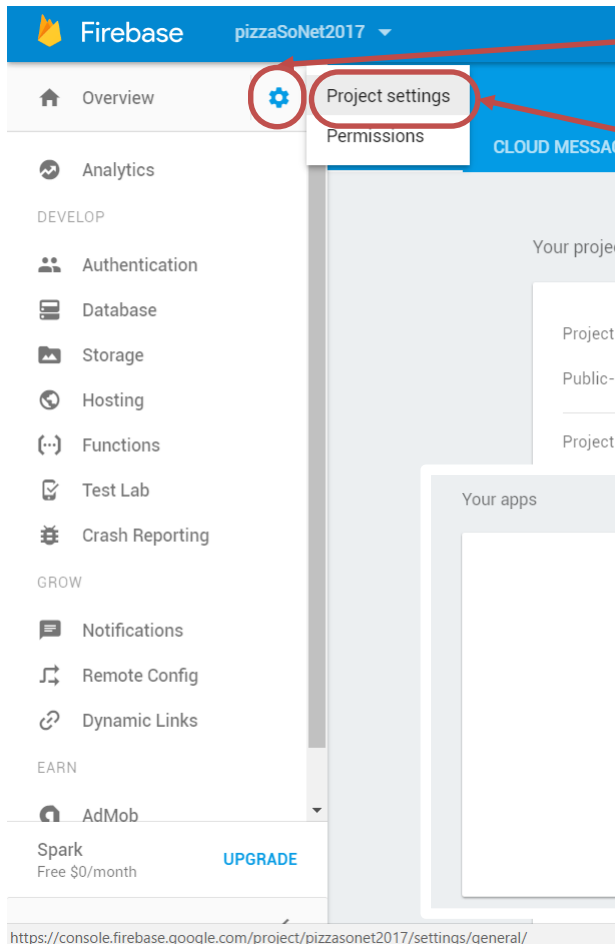
Step 1: ⚙

Step 2: Project Settings

Step 3: Add Firebase to your web app

Questions?

01QYAPD SOCIAL NETWORKING: TECHNOLOGIES AND APPLICATIONS

Teodoro Montanaro

teodoro.montanaro@polito.it

License

- This work is licensed under the Creative Commons "Attribution-NonCommercial-ShareAlike Unported (CC BY-NC-SA 3,0)" License.
- You are free:
    - to **Share** - to copy, distribute and transmit the work
    - to **Remix** - to adapt the work
- Under the following conditions:
    - **Attribution** - You must attribute the work in the manner specified by the author or licensor (but not in any way that suggests that they endorse you or your use of the work).
    - **Noncommercial** - You may not use this work for commercial purposes.
    - **Share Alike** - If you alter, transform, or build upon this work, you may distribute the resulting work only under the same or similar license to this one.
- To view a copy of this license, visit http://creativecommons.org/license/by-nc-sa/3.0/