



FIREBASE AUTHENTICATION (GOOGLE)

ΑΣΦΑΛΕΙΑ ΥΠΟΛΟΓΙΣΤΩΝ & ΔΙΚΤΥΩΝ 2024-2025

Κανούσης Αλέξανδρος	1083813
Στεργιόπουλος Γεώργιος	1083861

Features

01



Μια υπηρεσία της Google για ασφαλή διαχείριση ταυτότητας χρήστη.

Απλοποιεί την διαδικασία σύνδεσης και εγγραφής χρήστη



02

03



Υποστηρίζει πολλαπλές μεθόδους αυθεντικοποίησης.

Προφέρει έτοιμες λύσεις για ενσωμάτωση σε ιστοσελίδα (pre-build UI)



04

Υπηρεσίες



1

Υποστήριξη Αυθεντικοποίησης

- Email / password Login
- Social Login (πχ. Facebook, Apple)
- Phone authentication
- Passwordless Login
- Anonymous authentication

2

Multi-Factor Authentication (MFA)

- Εφαρμογές με αυξημένες απαιτήσεις ασφάλειας
- SMS
- time-based one-time password (TOTP)

3

Εξατομικευμένα συστήματα ελέγχου ταυτότητας

- Ενσωμάτωση των προσαρμοσμένων συστημάτων ελέγχου
- Υλοποίηση οποιουδήποτε τρόπου αυθεντικοποίησης (πχ. single sign-on (SSO))

4

Ολοκλήρωση με το οικοσύστημα Firebase

- Εύκολη ενσωμάτωση άλλων υπηρεσιών Firebase (πχ. Firestore, Firebase Realtime Database)
- Απλοποιεί την διαδικασία ανάπτυξης εφαρμογών για τους developers

5

Διαχείριση Χρηστών και Πρόσβασης

- Ολοκληρωμένα εργαλεία για την διαχείριση λογαριασμών
- Διαχείριση πρόσβασης και εξουσιοδοτημένη χρήση εφαρμογής

6

Παραμετροποιήσεις

- Διάφορες επιλογές ανάλογα με τις ανάγκες των developers

Case Studies

Για την μελέτη των δυνατοτήτων του Firebase, υλοποιήθηκε μια Web εφαρμογή που αξιοποιεί μια σειρά απο τις δυνατότητες του.

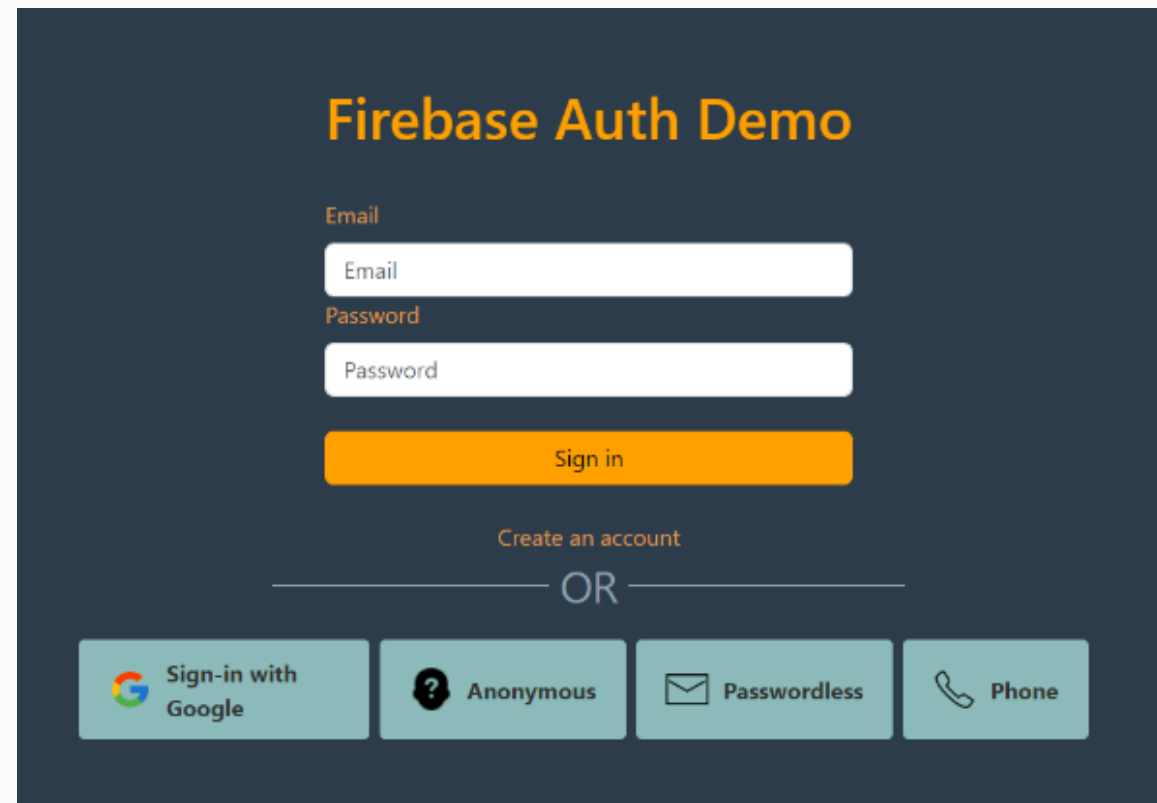
Έγινε χρήση των παρακάτω τεχνολογιών:



Ο κώδικας για την εφαρμογή που υλοποιεί τα Case Studies βρίσκεται [εδώ](#) 

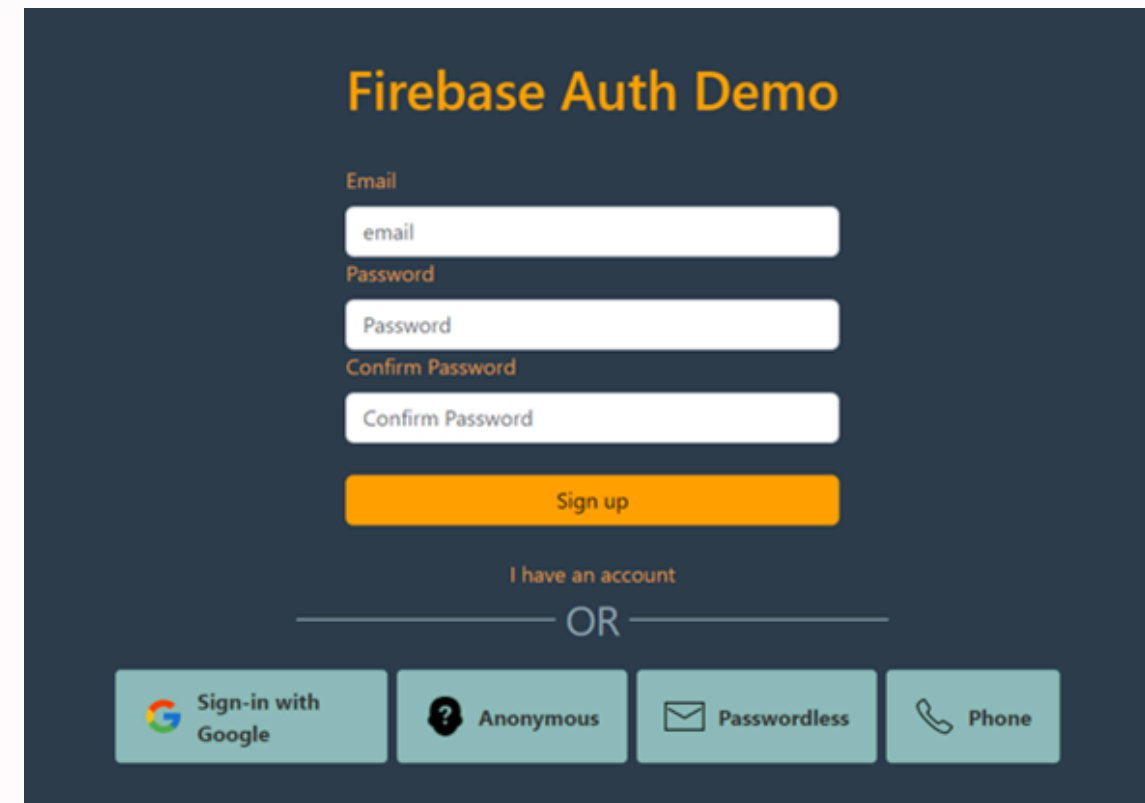


Application Overview



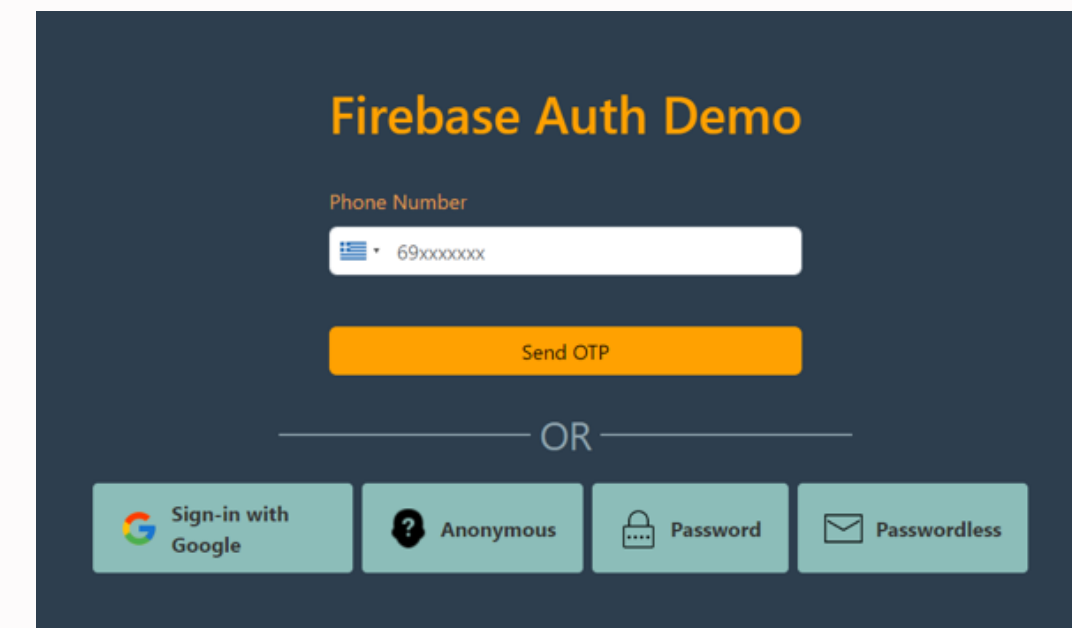
Sign-in screen: A dark blue background with the title "Firebase Auth Demo" in orange. It features two white input fields labeled "Email" and "Password". Below them is an orange "Sign in" button. A link "Create an account" is centered below the button. At the bottom, there's a horizontal line with "OR" in the center, and four buttons: "Sign-in with Google" (with Google logo), "Anonymous" (with a question mark icon), "Passwordless" (with an envelope icon), and "Phone" (with a phone icon).

Sign-in screen



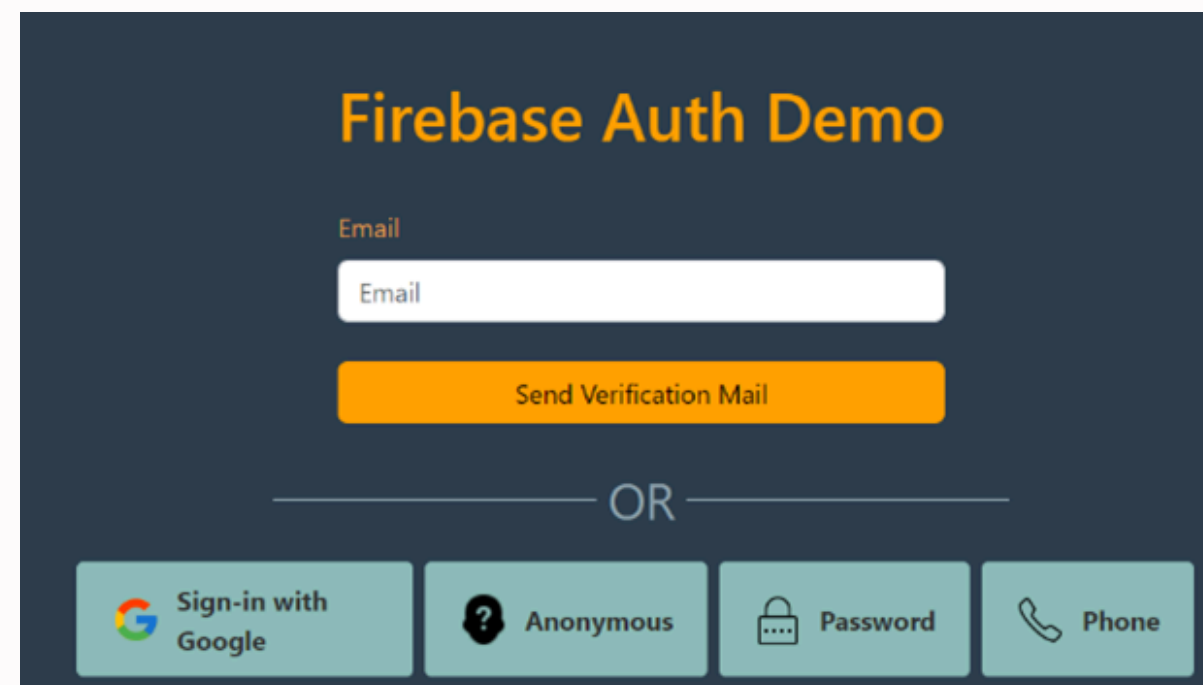
Sign-up screen: A dark blue background with the title "Firebase Auth Demo" in orange. It features three white input fields labeled "Email", "Password", and "Confirm Password". Below them is an orange "Sign up" button. A link "I have an account" is centered below the button. At the bottom, there's a horizontal line with "OR" in the center, and four buttons: "Sign-in with Google" (with Google logo), "Anonymous" (with a question mark icon), "Passwordless" (with an envelope icon), and "Phone" (with a phone icon).

Sign-up screen



Phone login screen: A dark blue background with the title "Firebase Auth Demo" in orange. It features a white input field labeled "Phone Number" with a country code dropdown showing "69xxxxxxx". Below it is an orange "Send OTP" button. A horizontal line with "OR" in the center is below the button. At the bottom, there are four buttons: "Sign-in with Google" (with Google logo), "Anonymous" (with a question mark icon), "Password" (with a lock icon), and "Passwordless" (with an envelope icon).

Phone login screen



Passwordless login screen: A dark blue background with the title "Firebase Auth Demo" in orange. It features a white input field labeled "Email". Below it is an orange "Send Verification Mail" button. A horizontal line with "OR" in the center is below the button. At the bottom, there are four buttons: "Sign-in with Google" (with Google logo), "Anonymous" (with a question mark icon), "Password" (with a lock icon), and "Phone" (with a phone icon).

Password less login screen



Home-screen: A dark blue background. The top section has the title "Welcome Guest" in orange, followed by "Sign-in method: Anonymous Login" and an orange "Logout" button. The middle section has the title "Project for 'Computer & Network Security' Course" in orange, followed by "Department of Electrical and Computer Engineering" and "Developed by: Alexandros Kanousis | up1083813 & Georgios Stergiopoulos | up1083861". Below this is a paragraph: "For this project, we explored the secure sign-in options provided by Google's Firebase Auth and developed this web application presenting some use cases." The bottom section has the text "Our application provides the following sign-in methods:" followed by a list of five items: "Email/Password Sign-in", "Google Sign-in", "Anonymous Sign-in", "Phone Sign-in", and "Passwordless Sign-in". At the very bottom, it says "Find the code in our GitHub Repo" with a GitHub icon.

Home-screen

Case Studies

01

Email and Password Login

02

Social Login (Google)

03


Anonymous Login

04

Password-less Login (via Email)

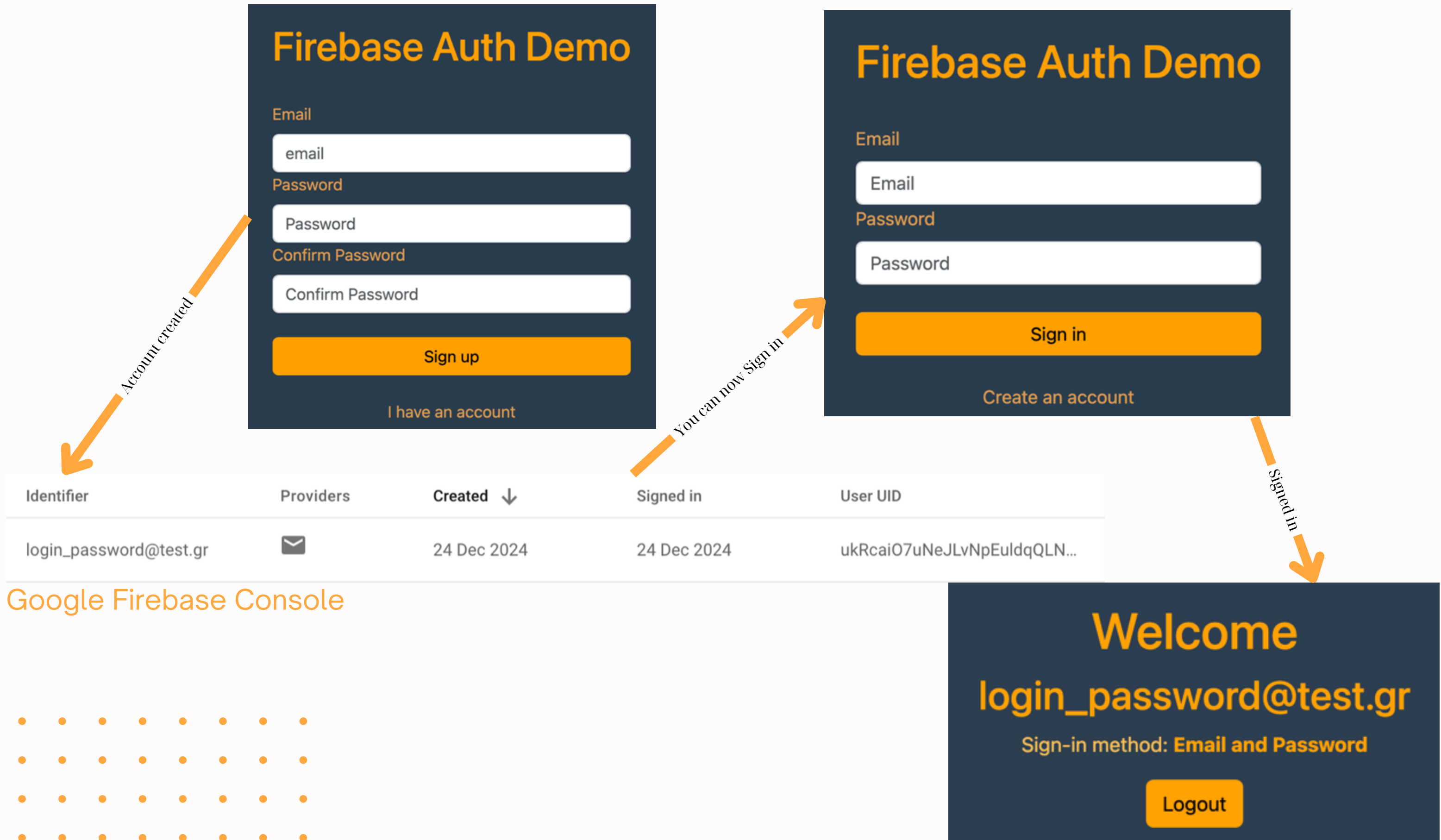
05

Phone Login

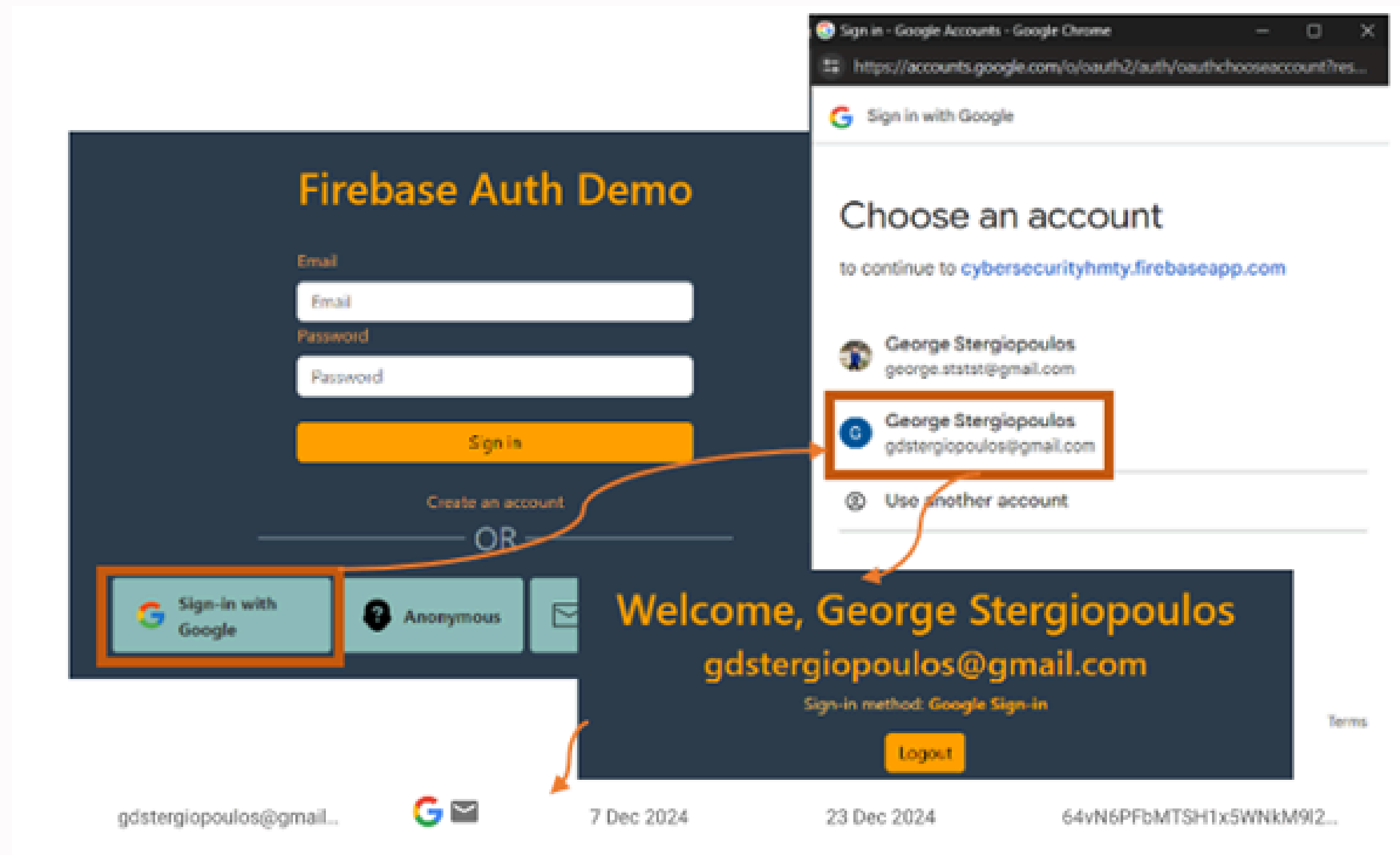
Μπορείτε να παρακολουθήσετε αναλυτικά τον τρόπο λειτουργίας όλων των case studies στο [demo video](#) που δημιουργήσαμε. 



01 Email and Password Login



02 Social Login (Google)



03 Anonymous Login



04 Password-less Login (via verification email)

Firestore Auth Demo

Email

Send Verification Mail

Type your email

Email sent. Please check your inbox.

Firestore Auth Demo

Email

Send Verification Mail

you will receive this email



this link will redirect you

https://cybersecurityhmtly.firebaseio.com/_/auth/action?apiKey=AlzaSyDujX1x0z1214HTNiesiez-hdEPmRaO4g8mode=signIn&code=ovgg6gmRWEobco0W7z-d50RiaSQXET...

you are signed in

Welcome

Guest

Sign-in method: **Password less (verification email)**

Logout

05 Phone Login



The background features abstract geometric shapes in shades of orange and yellow. On the left, there is a large orange shape and a smaller yellow one. On the right, there is a single orange shape. The central text is positioned between these shapes.

THANK YOU