

6/4/2024

Modul Praktikum

Pemrograman Mobile

Pertemuan 11

Pokok Bahasan :

Mengonlinekan Restful API dengan Ngrok

Mengakses RESTful API menggunakan Flutter dengan
Library HTTP

Kebutuhan

Komputer / Laptop

Visual Studio Code

XAMPP

Ngrok

Postman

CodeIgniter 4

Restful API yang sudah dibuat pada pertemuan
sebelumnya

Browser (Google Chrome)

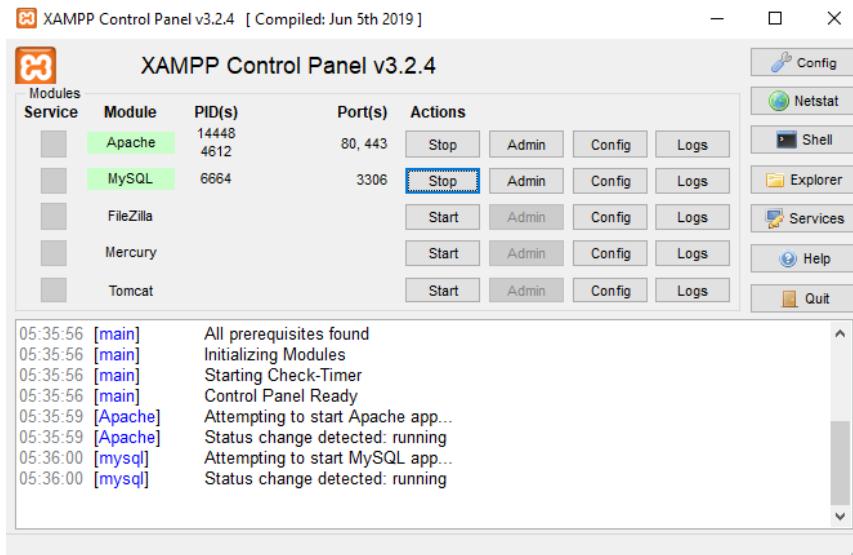
Nandang Hermanto
UNIVERSITAS AMIKOM PURWOKERTO

Video bisa diakses melalui link berikut ini

https://youtu.be/Dw-4TPRN1bk?si=8owpHQ_bpwBIK3pB

Bagian 1 Mengonlinekan Restful api menggunakan ngrok

1. Pastikan XAMPP, Composer dan Postman sudah terinstall di computer anda
2. Aktifkan MySQL dan Apache



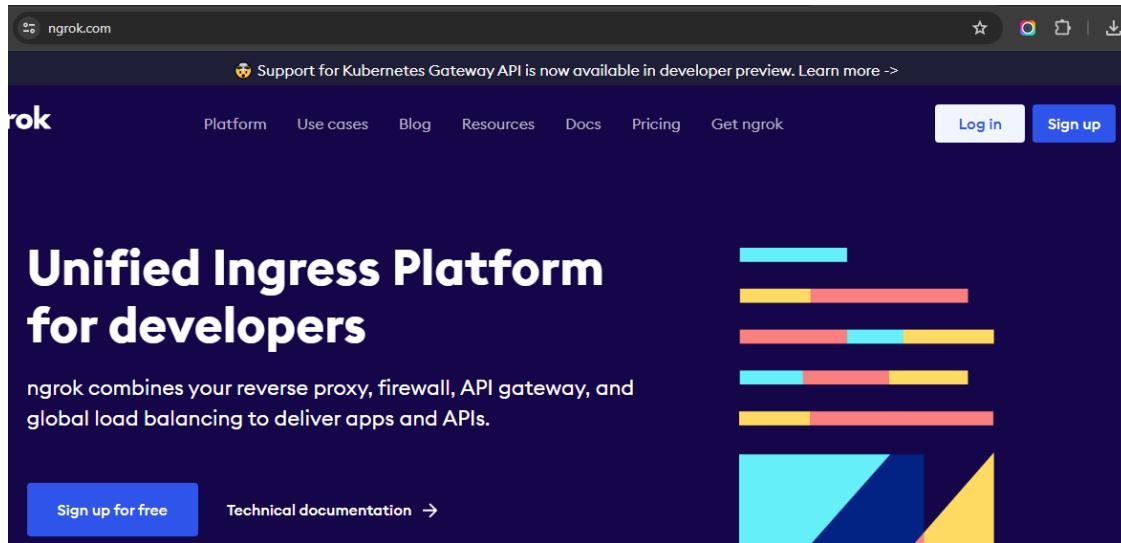
3. Jalankan resful api yang sudah dibuat pada pertemuan sebelumnya di localhost port 8080 dengan cara `php spark serve`

```
PS D:\xampp\htdocs\pmo2024api> php spark serve

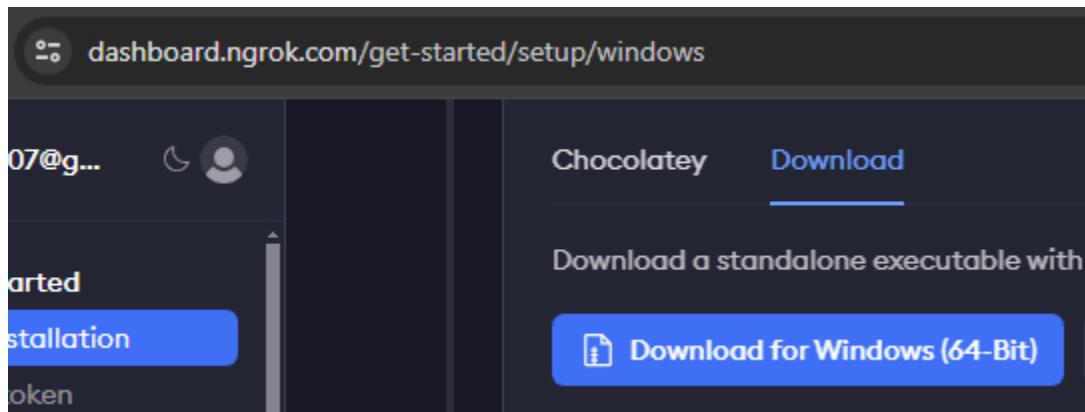
CodeIgniter v4.5.1 Command Line Tool - Server Time: 2024-06-03 22:56:56 UTC+00:00

CodeIgniter development server started on http://localhost:8080
Press Control-C to stop.
[Tue Jun 4 05:56:56 2024] PHP 8.2.12 Development Server (http://localhost:8080) started
```

4. Langkah mengonlinekan Restful Api dengan Ngrok
 - a. Buat akun baru/daftar ke ngrok dengan mengikuti link <https://ngrok.com/>



- b. Download kemudian Extract Ngrok dari link berikut ini <https://dashboard.ngrok.com/get-started/setup/windows>



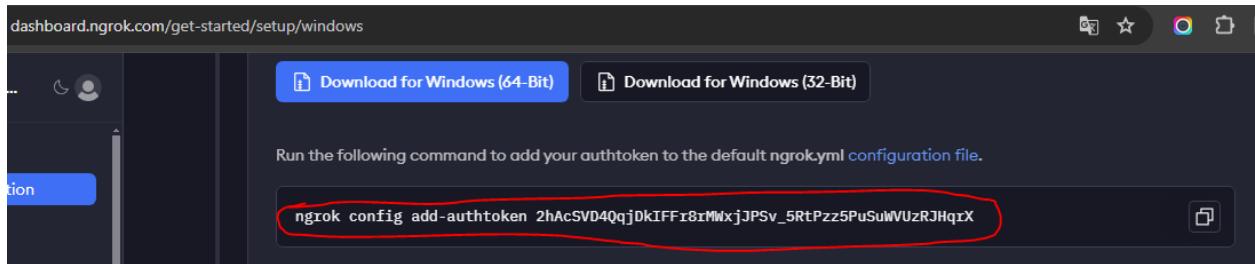
- c. Tambahkan token ke **ngrok.yml** dengan menjalankan perintah berikut ini dari **command line** tempat Dimana ngrok di extract
ngrok config add-authToken <>token yang anda dapatkan dari web ngrok>>

A screenshot of a Windows Command Prompt window. It shows the following text:

```
C:\ Command Prompt
Microsoft Windows [Version 10.0.19045.4474]
(c) Microsoft Corporation. All rights reserved.

C:\Users\ADMIN>ngrok config add-authToken 2hAcSVD4QqjDkIFFr8rMwxjJPSv_5RtPzz5PuSuWVUzRJHqrX
```

Catatan : token dapat anda peroleh dari link <https://dashboard.ngrok.com/get-started/setup/windows>



Perlu diperhatikan : token akan berbeda untuk setiap user jadi pastikan bukan menyalin dari gambar diatas

- d. Online kan restful api anda dengan mengetikan **ngrok http <http://localhost:8080>** dari command line tempat ngrok di extract

Jika sudah keluar tampilan seperti dibawah ini berarti restful api anda sudah online dan sudah bisa diakses dari jaringan internet

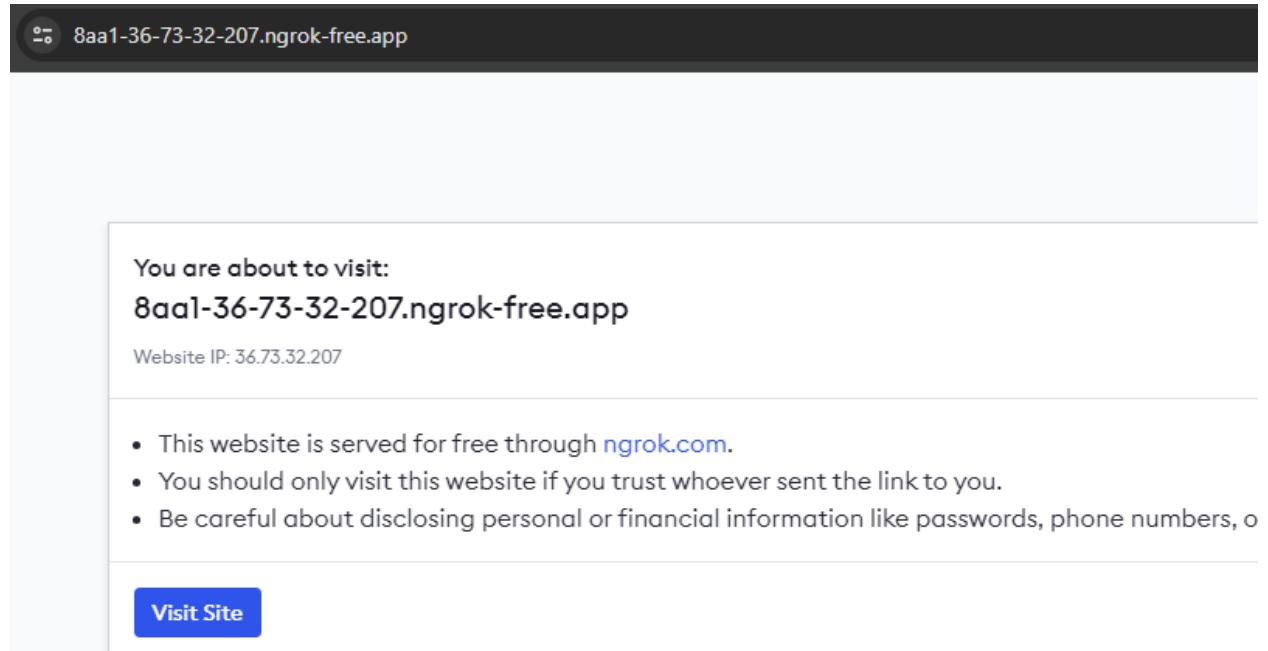
```
Select C:\Windows\System32\cmd.exe - ngrok http://localhost:8080
ngrok                                     (Ctrl+C to quit)

K8s Gateway API support available now: https://ngrok.com/r/k8sgb

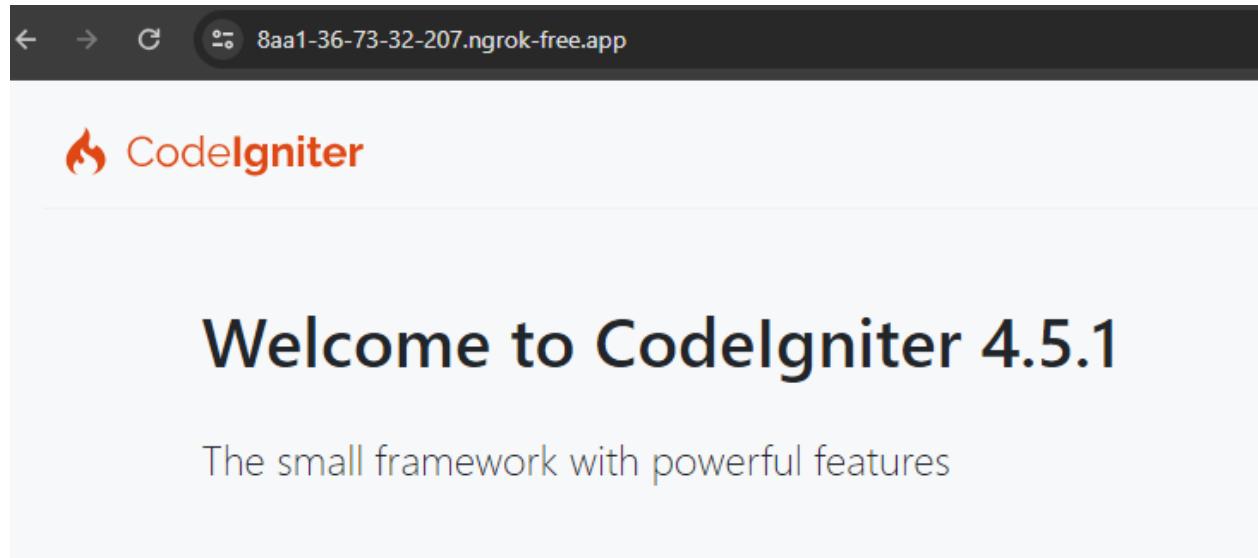
Session Status      online
Account            nandang007@gmail.com (Plan: Free)
Version            3.10.0
Region             Asia Pacific (ap)
Latency            35ms
Web Interface     http://127.0.0.1:4040
Forwarding         https://8aa1-36-73-32-207.ngrok-free.app -> http://
Connections        ttl     opn         rt1        rt5        p50        p90
                      0       0        0.00      0.00      0.00      0.00
```

A screenshot of a terminal window titled "ngrok" with the instruction "(Ctrl+C to quit)". It displays the output of the ngrok command. The output includes a message about K8s Gateway API support and a list of session status details. One of the forwarding entries is highlighted with a red oval, showing the URL <https://8aa1-36-73-32-207.ngrok-free.app>.

- e. Buka melalui browser Alamat yang diberi lingkaran merah untuk mengakses restful api anda
- f. Tekan visit site untuk menuju ke halaman restful anda



- g. Jika setelah ditekan visit site keluar halaman seperti dibawah ini barati anda sudah berhasil mengonlinkan restful api anda



About this page

The page you are looking at is being generated dynamically by Codelgniter.

If you would like to edit this page you will find it located at:

```
app/Views/welcome_message.php
```

The corresponding controller for this page can be found at:

- h. Pastikan command line tempat anda menjalankan ngrok dan restful api yang dijalankan di localhost:8080 tidak ditutup selama anda mengakses restful api anda

Bagian 2 Mengakses Restful api dari Flutter menggunakan http

1. Pastikan visual studio code dan Dart sudah siap di komputer anda
2. Jalankan Visual Studio Code
3. Buat project flutter baru dengan cara **View – Command Pallete – Flutter:New Project – Application** – arahkan ke folder tempat aplikasi akan disimpan – select a folder to create the project in – beri nama file – tekan enter
4. Buat file dart baru beri nama **konstanta.dart**

```
1 const baseUrl = "https://2d6e-36-73-32-207.ngrok-free.app/";
```

Pastikan baseUrl berisi alaman restful api anda yang benar

5. Buat file dart baru beri nama **pendaftaran_model.dart**

```
lib\pendaftaran_model.dart

1 class PendaftaranModel {
2   String? id;
3   String? nama;
4   String? email;
5   String? noTelpon;
6   String? jenisKelamin;
7   String? bahasa;
8   String? agama;
9   String? tanggalDaftar;
10  String? jamDaftar;
11
12  PendaftaranModel(
13    {this.id,
14     this.nama,
15     this.email,
16     this.noTelpon,
17     this.jenisKelamin,
18     this.bahasa,
19     this.agama,
20     this.tanggalDaftar,
21     this.jamDaftar});
22
23  PendaftaranModel.fromJson(Map<String, dynamic> json) {
24    id = json['id'];
25    nama = json['nama'];
26    email = json['email'];
27    noTelpon = json['no_telpo'];
28    jenisKelamin = json['jenis_kelamin'];
29    bahasa = json['bahasa'];
30    agama = json['agama'];
31    tanggalDaftar = json['tanggal_daftar'];
32    jamDaftar = json['jam_daftar'];
33  }
34
35  Map<String, dynamic> toJson() {
36    final Map<String, dynamic> data = <String, dynamic>{};
37    data['id'] = id ?? "";
38    data['nama'] = nama ?? "";
39    data['email'] = email ?? "";
40    data['no_telpo'] = noTelpon ?? "";
41    data['jenis_kelamin'] = jenisKelamin ?? "";
42    data['bahasa'] = bahasa ?? "";
43    data['agama'] = agama ?? "";
44    data['tanggal_daftar'] = tanggalDaftar ?? "";
45    data['jam_daftar'] = jamDaftar ?? "";
46    return data;
47  }
48}
49
```

6. Buat file dart baru beri nama **pendaftaran_add.dart**

```

lib\pendaftaran_add.dart

1 import 'dart:convert';
2 import 'package:flutter/material.dart';
3 import 'package:flutter_http_latihan2/main.dart';
4 import 'package:flutter_http_latihan2/pendaftaran_model.dart';
5 import 'package:http/http.dart' as http;
6 import 'constant.dart';
7
8 class PendaftaranAdd extends StatefulWidget {
9   const PendaftaranAdd({super.key});
10
11   @override
12   State<PendaftaranAdd> createState() => _PendaftaranAddState();
13 }
14
15 class _PendaftaranAddState extends State<PendaftaranAdd> {
16   @override
17   Widget build(BuildContext context) {
18     return Scaffold(
19       appBar: AppBar(
20         title: Text("Tambah data Pendaftaran"),
21       ),
22       body: PopScope(
23         canPop: false,
24         onPopInvoked: (didPop) {
25           Navigator.pushReplacement(
26             context,
27             MaterialPageRoute(
28               builder: (context) => DataPendaftaran(),
29             ));
30         },
31         child: ListView(
32           children: [
33             ElevatedButton(
34               onPressed: () async {
35                 var url = Uri.parse(baseUrl + 'pendaftaran');
36                 var respons = await http.post(url,
37                   body: PendaftaranModel(
38                     nama: "jokoabc4",
39                     email: "jokoabc4@gmail.com",
40                     noTelpon: "08964",
41                     jenisKelamin: "Pria",
42                     bahasa: "Indonesia,Inggris,Batak",
43                     agama: "Katolik",
44                     tanggalDaftar: "2024-01-01",
45                     jamDaftar: "20:00:00",
46                     ).toJson());
47
48                 Map<String, dynamic> responsDecode =
49                   json.decode(respons.body) as Map<String, dynamic>;
50
51                 if (responsDecode.toString().contains('error')) {
52                   ScaffoldMessenger.of(context).showSnackBar(SnackBar(
53                     content: Text(responsDecode['messages']
54                         .toString()
55                         .replaceAll(", ", "\n\n")));
56                 } else {
57                   Navigator.pushReplacement(

```

```
58         context,
59         MaterialPageRoute(
60             builder: (context) => DataPendaftaran(),
61         );
62     }
63
64     // print(responsDecode);
65     },
66     child: Text("Simpan"),
67     ),
68     ],
69     ),
70     ),
71     );
72 }
73 }
74 }
```

7. Buka File **main.dart** kemudian edit menjadi seperti dibawah ini

lib\main.dart

```
1 import 'dart:convert';
2
3 import 'package:flutter/material.dart';
4 import 'package:flutter_http_latihan2/constanta.dart';
5 import 'package:flutter_http_latihan2/pendaftaran_add.dart';
6 import 'package:flutter_http_latihan2/pendaftaran_model.dart';
7 import 'package:http/http.dart' as http;
8
9 void main(List<String> args) {
10   runApp(MyApp());
11 }
12
13 class MyApp extends StatelessWidget {
14   const MyApp({super.key});
15
16   @override
17   Widget build(BuildContext context) {
18     return MaterialApp(
19       debugShowCheckedModeBanner: false,
20       home: DataPendaftaran(),
21     );
22   }
23 }
24
25 class DataPendaftaran extends StatefulWidget {
26   const DataPendaftaran({super.key});
27
28   @override
29   State<DataPendaftaran> createState() => _DataPendaftaranState();
30 }
31
32 class _DataPendaftaranState extends State<DataPendaftaran> {
33   List<PendaftaranModel> pendaftarnList = [];
34
35   Future ambilDataPendaftaran() async {
36     // await Future.delayed(Duration(seconds: 5));
37     var url = Uri.parse(baseUrl + 'pendaftaran');
38     var respons = await http.get(url);
39     List responsDecode = json.decode(respons.body);
40     pendaftarnList.clear();
41     for (var element in responsDecode) {
42       pendaftarnList.add(PendaftaranModel.fromJson(element));
43     }
44     // print(responsDecode);
45     // print(pendaftarnList.length);
46     // print(pendaftarnList[0].nama);
47   }
48
49   @override
50   Widget build(BuildContext context) {
51     return Scaffold(
52       appBar: AppBar(
53         title: Text("Data pendaftaran"),
54       ),
55       body: FutureBuilder(
56         future: ambilDataPendaftaran(),
57         builder: (context, snapshot) {
```

```

58         if (snapshot.connectionState == ConnectionState.waiting) {
59             return Center(
60                 child: CircularProgressIndicator(),
61             );
62         } else {
63             if (pendaftarnList.length == 0) {
64                 return Center(
65                     child: Text("Data tidak ditmukan"),
66                 );
67             }
68
69             return ListView.builder(
70                 itemCount: pendaftarnList.length,
71                 itemBuilder: (context, index) => Card(
72                     color: Colors.green.shade50,
73                     child: ListTile(
74                         trailing: Container(
75                             width: 100,
76                             child: Row(
77                                 children: [
78                                     IconButton(
79                                         onPressed: () async {
80                                             showDialog(
81                                                 context: context,
82                                                 builder: (context) => AlertDialog(
83                                                     title: Text("Hapus Data"),
84                                                     content: Text(
85                                                         "Apakah anda yakin akan menghapus data"),
86                                                     actions: [
87                                                         ElevatedButton(
88                                                             onPressed: () async {
89                                                                 var url = Uri.parse(baseUrl +
90                                                                     'pendaftaran/${pendaftarnList[index].id!}');
91                                                                 var respons = await http.delete(url);
92                                                                 setState(() {});
93                                                                 Navigator.pop(context);
94                                                         },
95                                                         child: Text("Ya")),
96                                                         ElevatedButton(
97                                                             onPressed: () {
98                                                                 Navigator.pop(context);
99                                                         },
100                                                        child: Text("Tidak")),
101                                                        ],
102                                                    ),
103                                                );
104                                            },
105                                            icon: Icon(Icons.delete),
106                                        ),
107                                        IconButton(
108                                            onPressed: () async {
109                                                showDialog(
110                                                    context: context,
111                                                    builder: (context) => AlertDialog(
112                                                        title: Text("Edit Data"),
113                                                        content: Text(
114                                                            "Apakah anda yakin akan Mengedit data"),
115                                                        actions: [
116                                                            ElevatedButton(
117                                                                onPressed: () {

```

```

118     var url = Uri.parse(baseUrl +
119         'pendaftaran/${pendaftarnList[index].id!}');
120
121     var respons = await http.put(url,
122         body: PendaftaranModel(
123             nama: "Joko Edit",
124             email: "Jokoedit@gmail.com",
125             noTelpon: "08964",
126             jenisKelamin: "Pria",
127             bahasa: "Indonesia,Inggris,Batak",
128             agama: "Katolik",
129             tanggalDaftar: "2024-01-01",
130             jamDaftar: "20:00:00",
131         ).toJson());
132         setState(() {});
133         Navigator.pop(context);
134     },
135     child: Text("Ya")),
136     ElevatedButton(
137         onPressed: () {
138             Navigator.pop(context);
139         },
140         child: Text("Tidak")),
141     ],
142     ),
143 );
144 ],
145 icon: Icon(Icons.edit),
146 ),
147 ],
148 ),
149 ),
150 title: Text(pendaftarnList[index].id!),
151 subtitle: Column(
152     crossAxisAlignment: CrossAxisAlignment.start,
153     children: [
154         Text('nama : ${pendaftarnList[index].nama!}'),
155         Text('email : ${pendaftarnList[index].email!}'),
156         Text('noTelpon : ${pendaftarnList[index].noTelpon!}'),
157         Text(
158             'jenis Kelamin : ${pendaftarnList[index].jenisKelamin!}'),
159         Text('bahasa : ${pendaftarnList[index].bahasa!}'),
160         Text('agama : ${pendaftarnList[index].agama!}'),
161         Text(
162             'tanggal Daftar : ${pendaftarnList[index].tanggalDaftar!}'),
163         Text('jam Daftar : ${pendaftarnList[index].jamDaftar!}'),
164     ],
165     ),
166     ),
167     ),
168     );
169   }
170 ),
171 floatingActionButton: FloatingActionButton(
172     onPressed: () {
173         Navigator.pushReplacement(
174             context,
175             MaterialPageRoute(
176                 builder: (context) => PendaftaranAdd(),
177

```

```
178      );
179      },
180      child: Icon(Icons.add),
181      ),
182      );
183  }
184 }
185 }
```

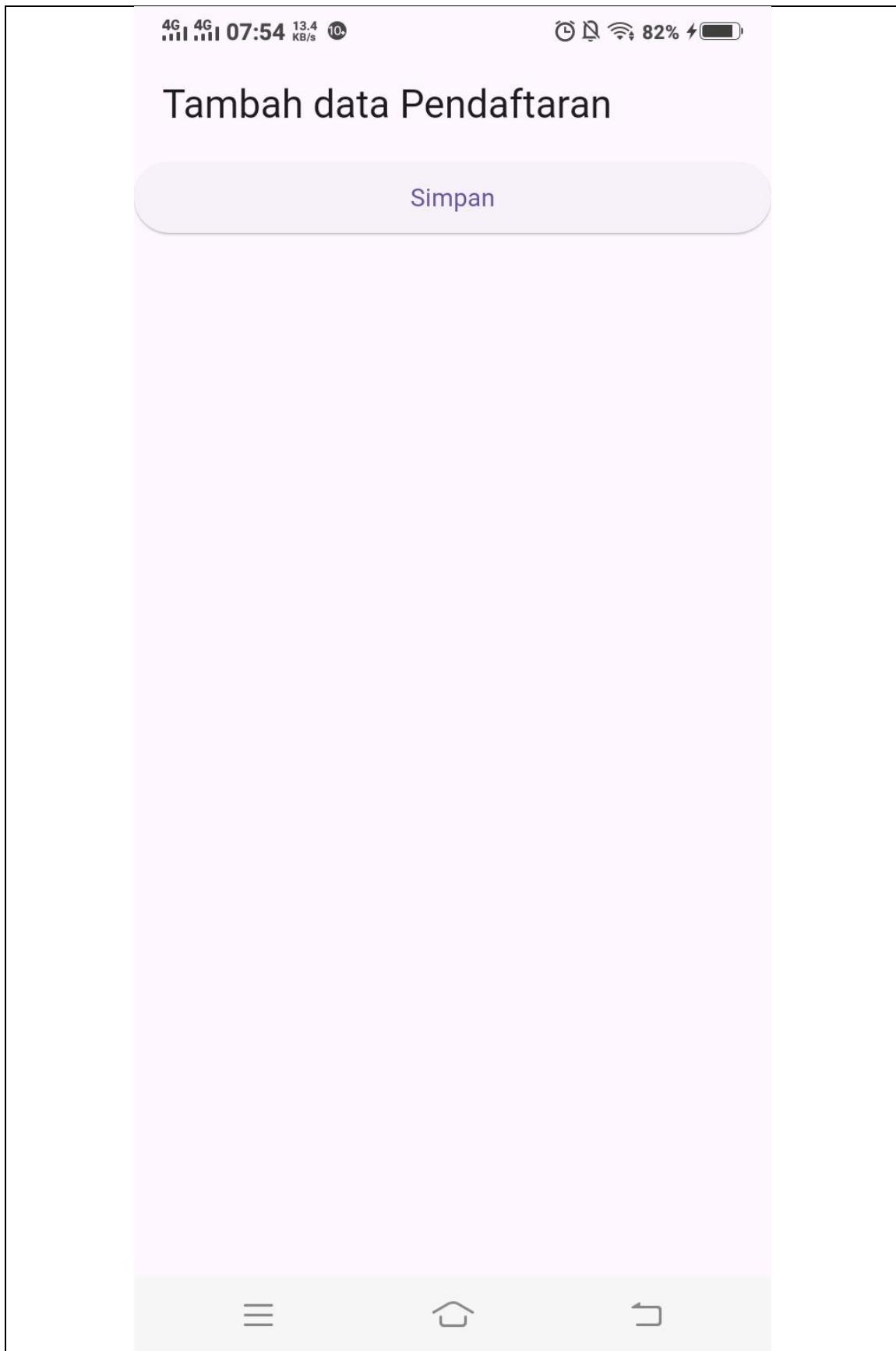
8. Jalankan program

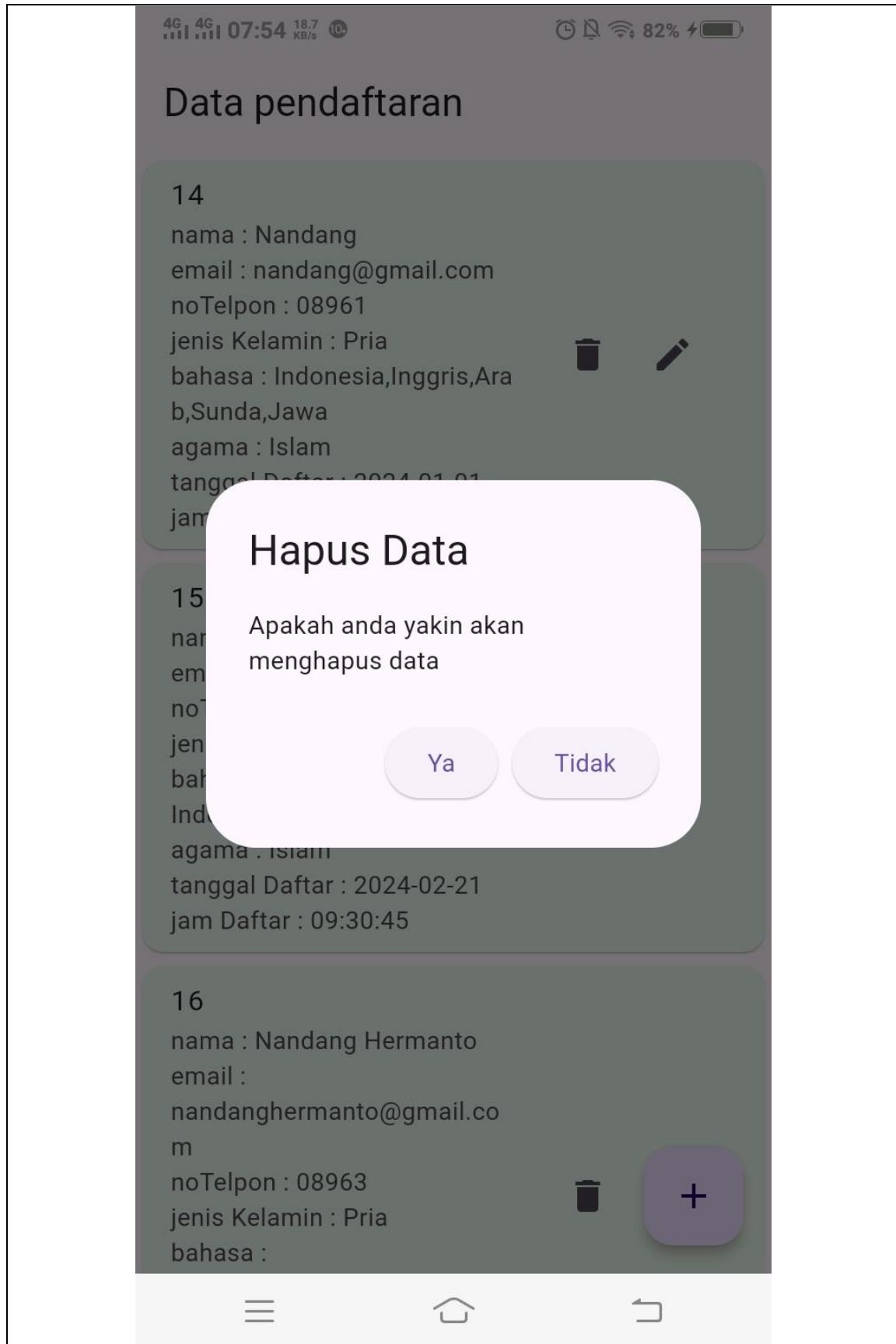
Hasil Program

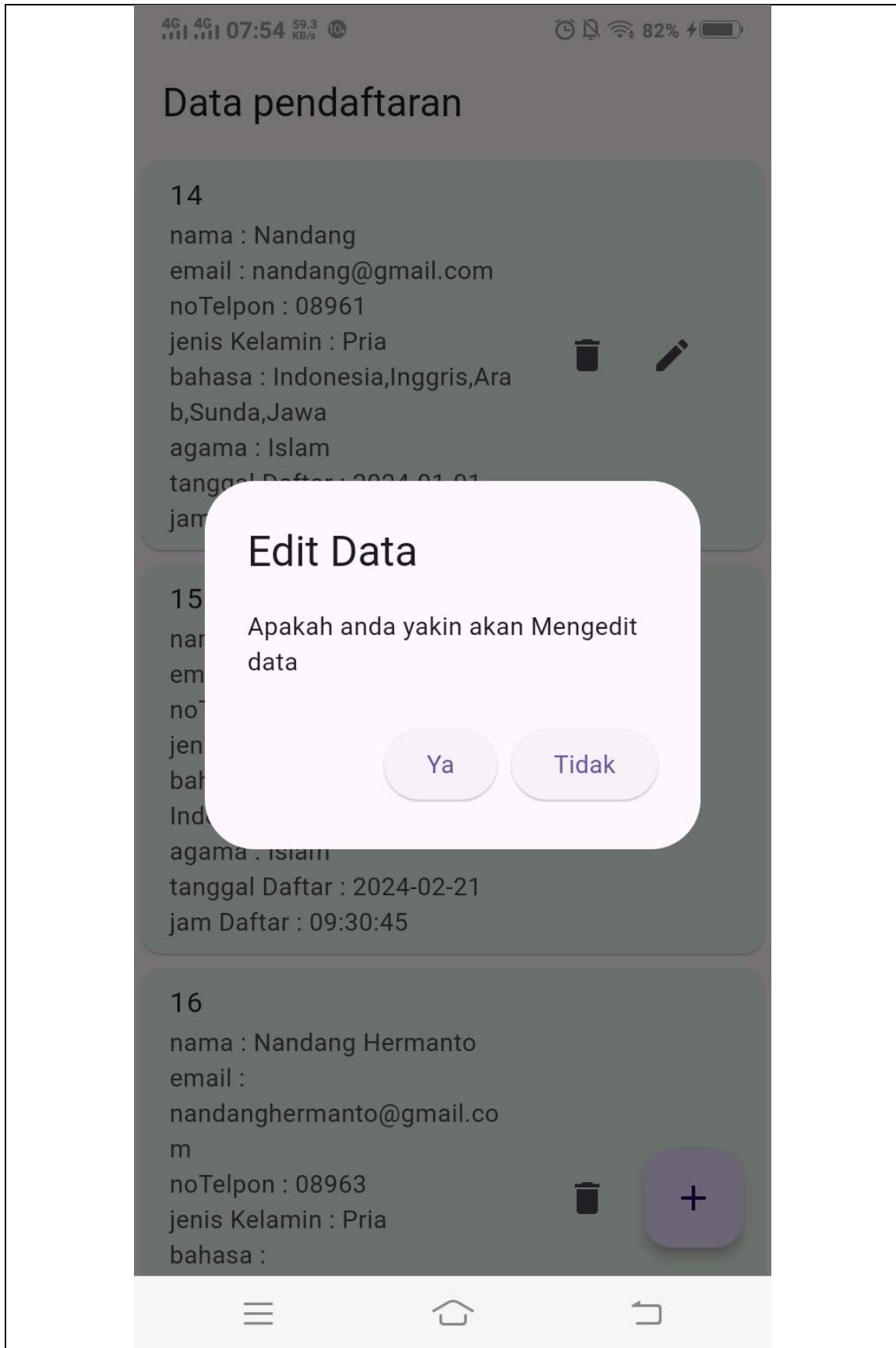
The screenshot shows a mobile application interface for managing user registrations. At the top, there are status icons for signal strength, battery level (82%), and time (07:53). Below the header, the title "Data pendaftaran" is displayed. Three user entries are listed in green rounded rectangles:

- 14**
nama : Nandang
email : nandang@gmail.com
noTelpon : 08961
jenis Kelamin : Pria
bahasa : Indonesia,Inggris,Arab,Sunda,Jawa
agama : Islam
tanggal Daftar : 2024-01-01
jam Daftar : 08:30:45
- 15**
nama : Hermanto
email : hermanto@gmail.com
noTelpon : 08962
jenis Kelamin : Pria
bahasa :
Indonesia,Inggris,Arab
agama : Islam
tanggal Daftar : 2024-02-21
jam Daftar : 09:30:45
- 16**
nama : Nandang Hermanto
email :
nandanghermanto@gmail.co
m
noTelpon : 08963
jenis Kelamin : Pria
bahasa :

Each entry includes a trash can icon for deletion and a pencil icon for editing. A large purple button with a plus sign is located at the bottom right, indicating a feature to add new users.







9. Tantangan

Perbaiki form tambah data dan edit data menggunakan materi formulir sehingga tampilannya menjadi seperti berikut ini

The screenshot shows a mobile application interface for a form titled "Latihan Formulir". The top bar includes signal strength, battery level at 32%, and the time 05:53. The form fields are as follows:

- Nama Lengkap**: A text input field.
- Email**: A text input field.
- Nomor Telpon**: A text input field.
- Pria** and **Wanita**: Radio button options for gender.
- Kemampuan Berbahasa**: A section with three columns of checkboxes:
 - Indonesia, Sunda, Jepang
 - Inggris, Jawa, Korea
 - Arab, Madura, Mandarin
- Silakan Pilih Agama Yang Anda Anut**: A dropdown menu.
- Tanggal Daftar**: A text input field with a calendar icon.
- Jam Daftar**: A text input field with a clock/timer icon.
- Simpan** and **Lihat Data**: Teal-colored buttons at the bottom.