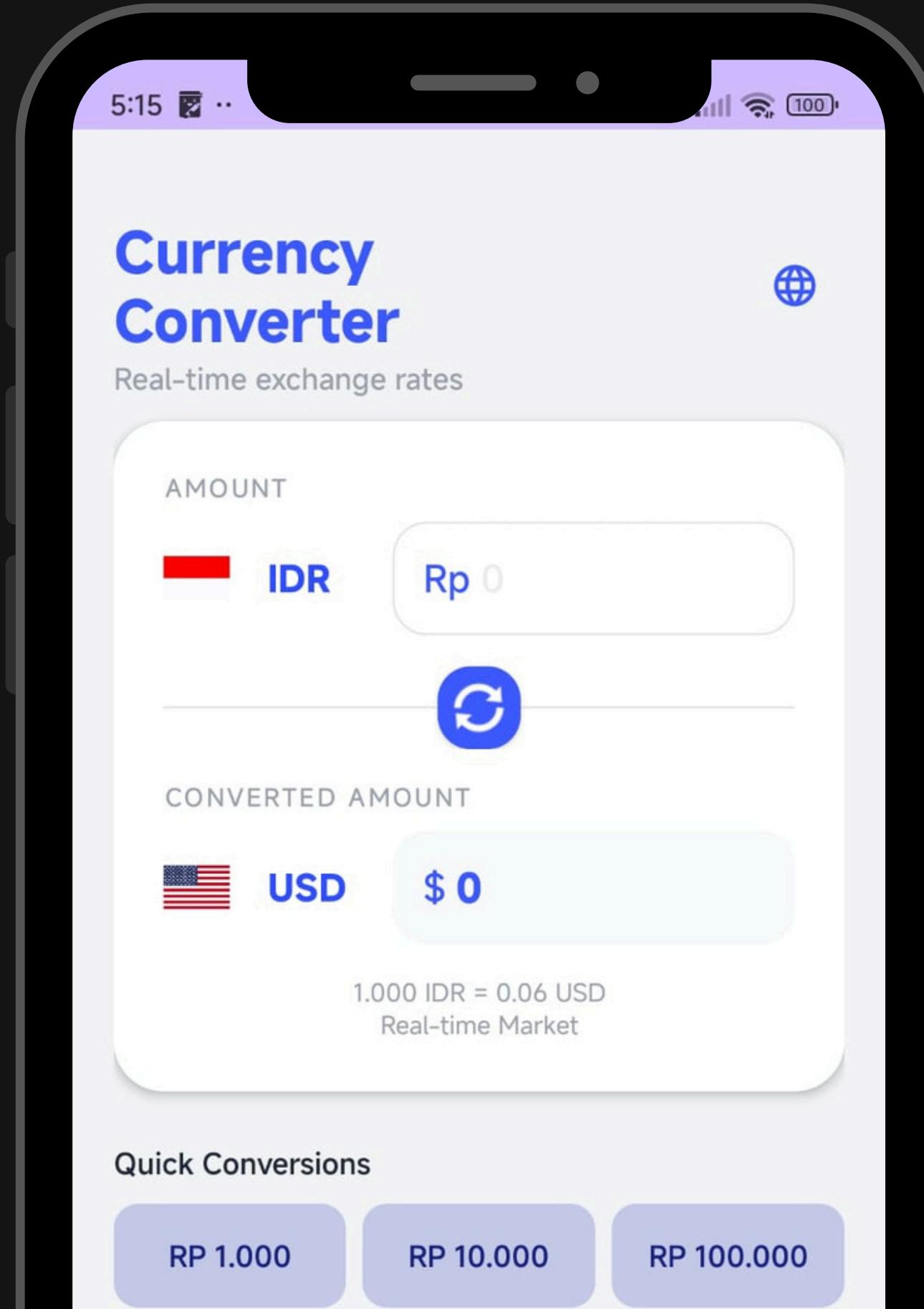


# APLIKASI CURRENCY CONVERTER

Presentasi Aplikasi Mobile

@selenarutala



Nama aplikasi: sofcurrency

Kategori aplikasi: Productivity / Fintech tools

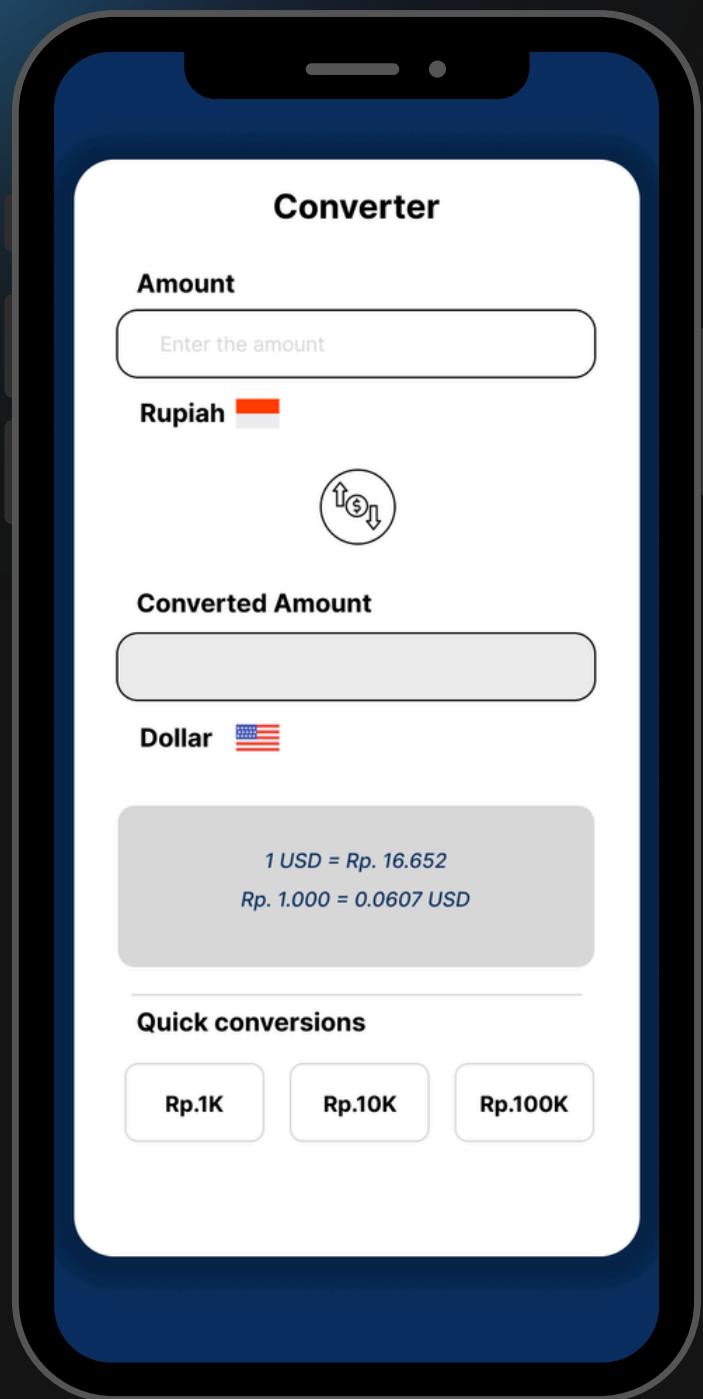
Tujuan aplikasi:

Membantu pengguna melakukan konversi mata uang asing secara akurat, real-time, dan mudah digunakan dengan tampilan yang modern.

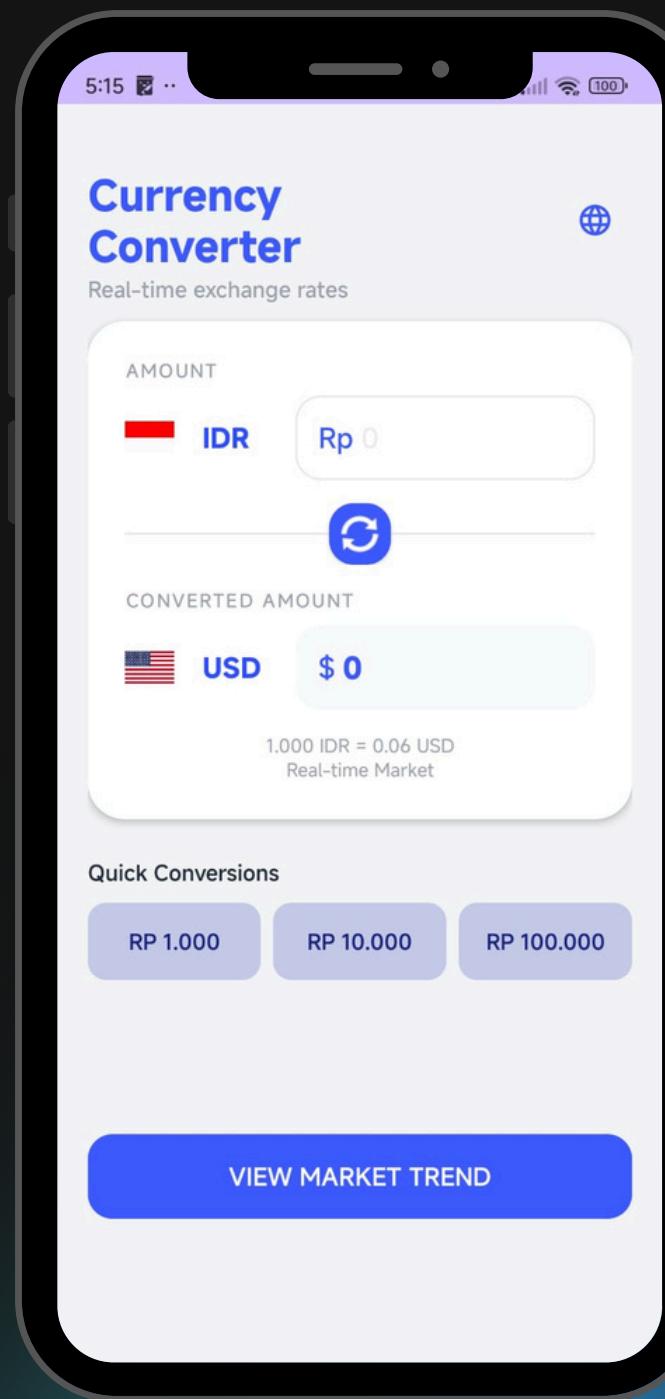
# INTRODUCTION

# TRANSFORMASI

V1



V2



There's a big change between the first version and the final one

# PERUBAHAN YANG TERJADI

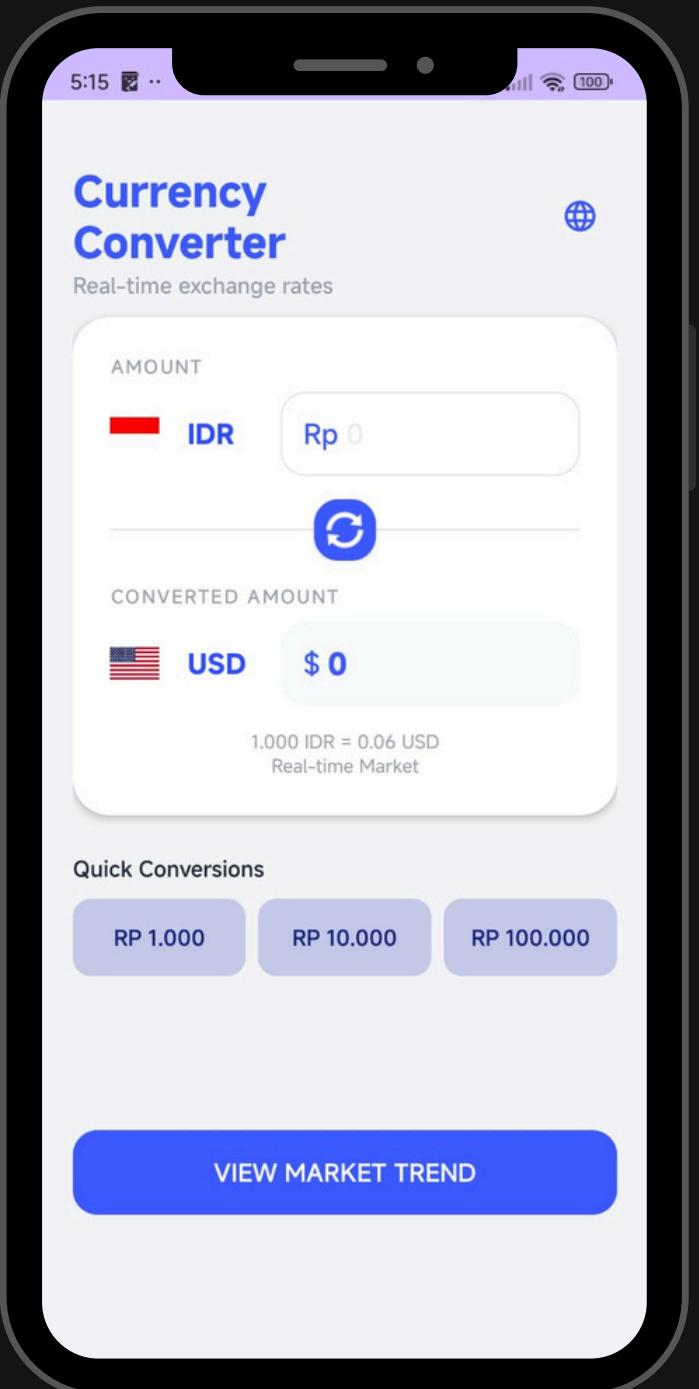
Sumber Data: Real-time API (Menggunakan Frankfurter API) yang selalu update mengikuti pasar global.

UI: Modern Minimalist UI: Tema "Azure Blue", konsep Card Layout, tombol membulat (Rounded), dan ikon bendera.

Input Angka: Menggunakan Smart Formatting, otomatis memberi titik pemisah ribuan (1.000.000) dan simbol mata uang (Rp, \$) di dalam kolom input.

Fitur spesial: GPS Adaptive Splash Screen, Tampilan pembuka merubah warna loading & welcome text sesuai dengan lokasi pengguna (Negara). Tombol Quick conversion, tombol cepat untuk konversi nominal umum.

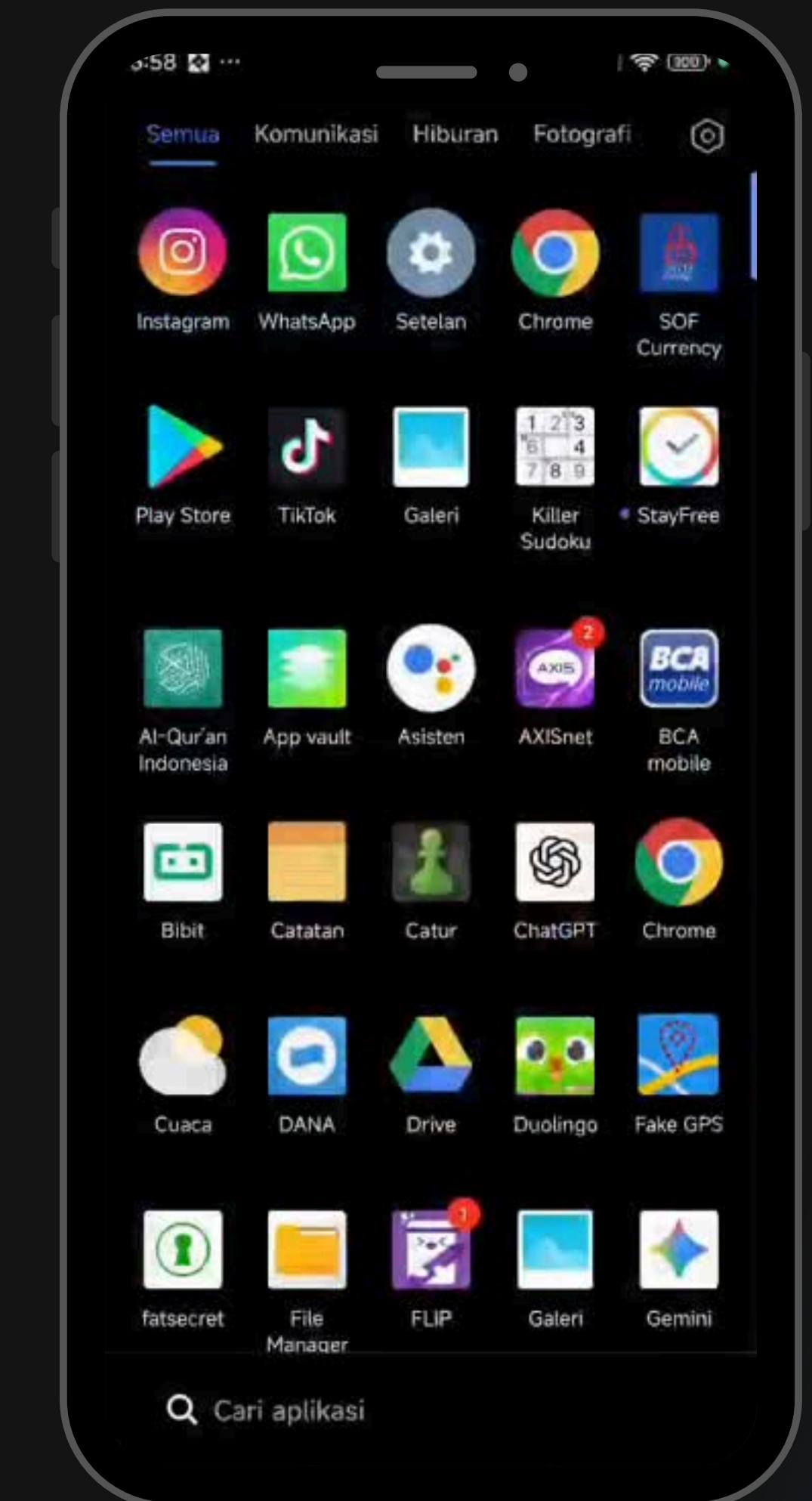
Analisis: Grafik Tren 30 Hari, Visualisasi kenaikan/penurunan harga mata uang.



# DEMO APLIKASI

Dalam demo ini pengaturan lokasi menggunakan metode mocking location. Aplikasi yang digunakan adalah Fake GPS.

@selenarutala



# EXAMPLE CODE

"Otak" / API

```
● ● ●

1 new Thread(() -> {
2     try {
3         String urlString = "https://api.frankfurter.app/latest?from=" + from + "&to=" + to;
4         URL url = new URL(urlString);
5         HttpURLConnection conn = (HttpURLConnection) url.openConnection();
6         conn.setRequestMethod("GET");
7         BufferedReader reader = new BufferedReader(new InputStreamReader(conn.getInputStream()));
8         StringBuilder response = new StringBuilder();
9         String line;
10        while ((line = reader.readLine()) != null) response.append(line);
11        reader.close();
12        JSONObject jsonResponse = new JSONObject(response.toString());
13        double rate = jsonResponse.getJSONObject("rates").getDouble(to);
14        currentRate = rate;
15        runOnUiThread(() -> {
16            updateInfoBox(from, to, rate);
17            calculateResult();
18        });
19    } catch (Exception e) {
20        e.printStackTrace();
21        runOnUiThread(() -> {
22            binding.tvRateInfo.setText(getString(R.string.info_failed));
23            currentRate = 0;
24        });
25    }
26}).start();
```

# EXAMPLE CODE

Geofencing

@selenarutala

```
1  private void adaptUI(double lat, double lon) {  
2  
3      String welcomeText = "Welcome to SOF Currency";  
4      int loadingColor = Color.WHITE;  
5      int flagResource = R.drawable.flag_us; // Default Global  
6  
7      // 1. INDONESIA  
8      if (lat > -11 && lat < 6 && lon > 95 && lon < 141) {  
9          welcomeText = "Selamat Datang di SOF Currency";  
10         loadingColor = Color.parseColor("#FF5252");  
11         flagResource = R.drawable.flag_id;  
12     }  
13  
14     // 2. AMERIKA SERIKAT  
15     else if (lat > 24 && lat < 50 && lon > -125 && lon < -66) {  
16         welcomeText = "Welcome to SOF Currency";  
17         loadingColor = Color.WHITE;  
18         flagResource = R.drawable.flag_us;  
19     }  
20  
21     // 3. EROPA  
22     else if (lat > 36 && lat < 70 && lon > -10 && lon < 30) {  
23         welcomeText = "Willkommen bei SOF Currency";  
24         loadingColor = Color.parseColor("#FFD700");  
25         flagResource = R.drawable.flag_eu;  
26     }  
27  
28     // 4. JEPANG  
29     else if (lat > 30 && lat < 46 && lon > 128 && lon < 146) {  
30         welcomeText = "ようこそ SOF Currency ^"; // Format: Youkoso (Welcome) ...  
31         loadingColor = Color.parseColor("#F44336");  
32         flagResource = R.drawable.flag_jp;  
33     }  
34  
35     // 5. INGGRIS  
36     else if (lat > 50 && lat < 60 && lon > -8 && lon < 2) {  
37         welcomeText = "Welcome to SOF Currency UK";  
38         loadingColor = Color.parseColor("#EF5350");  
39         flagResource = R.drawable.flag_uk;  
40     }
```

# EXAMPLE CODE

Time series data

```
● ● ●  
1  
2 SimpleDateFormat sdf = new SimpleDateFormat("yyyy-MM-dd", Locale.US);  
3 Calendar cal = Calendar.getInstance();  
4  
5 String endDate = sdf.format(cal.getTime());  
6 cal.add(Calendar.DAY_OF_YEAR, -30);  
7 String startDate = sdf.format(cal.getTime());  
8  
9 String urlString = "https://api.frankfurter.app/" + startDate + ".." + endDate + "?from=" + sourceCurr + "&to=" + targetCurr;
```

# EXAMPLE CODE

## Smart Formatting



```
1  public void afterTextChanged(Editable s) {
2      // Hapus Listener sementara agar tidak Looping (infinite Loop)
3      binding.etAmount.removeTextChangedListener(this);
4
5      try {
6          String originalString = s.toString();
7
8          if (!originalString.isEmpty()) {
9              // 1. Bersihkan format Lama (hapus koma/titik)
10             // Kita hapus semua karakter yang BUKAN angka
11             String cleanString = originalString.replaceAll("[,.]", "");
12
13             // 2. Parsing ke Double
14             double parsed = Double.parseDouble(cleanString);
15
16             // 3. Format ulang (Contoh: 1000 -> 1,000 atau 1.000)
17             String formatted = df.format(parsed);
18
19             // 4. Set teks baru ke EditText
20             binding.etAmount.setText(formatted);
21
22             // 5. Taruh kursor di paling belakang agar enak ngetiknya
23             binding.etAmount.setSelection(formatted.length());
24         }
25     } catch (NumberFormatException e) {
26         // Abaikan jika error
27     }
}
```