Modul Praktikum Pemrograman Aplikasi Bergerak
Mengambil Data Geolokasi

Source code lengkap https://github.com/ardhiesta/flutter_geolocation

1. Buat project Flutter baru

2. Tambahkan library geolocator
```
flutter pub add geolocator
```

3. Tambahkan permission ACCESS_FINE_LOCATION dan ACCESS_COARSE_LOCATION di android/app/src/main/AndroidManifest.xml
```
<uses-permission android:name="android.permission.ACCESS_FINE_LOCATION" />
<uses-permission android:name="android.permission.ACCESS_COARSE_LOCATION" />
```

4. Import library geolocator ke lib/main.dart
```
import 'package:geolocator/geolocator.dart';
```

5. Tambahkan function _determinePosition() ke dalam class _MyHomePageState
```
/// Determine the current position of the device.
///
/// When the location services are not enabled or permissions
/// are denied the `Future` will return an error.
Future<Position> _determinePosition() async {
  bool serviceEnabled;
  LocationPermission permission;

  // Test if location services are enabled.
  serviceEnabled = await Geolocator.isLocationServiceEnabled();
  if (!serviceEnabled) {
    // Location services are not enabled don't continue
    // accessing the position and request users of the
    // App to enable the location services.
    return Future.error('Location services are disabled.');
  }

  permission = await Geolocator.checkPermission();
  if (permission == LocationPermission.denied) {
    permission = await Geolocator.requestPermission();
    if (permission == LocationPermission.denied) {
      // Permissions are denied, next time you could try
      // requesting permissions again (this is also where
      // Android's shouldShowRequestPermissionRationale
      // returned true. According to Android guidelines
      // your App should show an explanatory UI now.
      return Future.error('Location permissions are denied');
    }
  }

  if (permission == LocationPermission.deniedForever) {
    // Permissions are denied forever, handle appropriately.
    return Future.error(
      'Location permissions are permanently denied, we cannot request
permissions.');
  }

  // When we reach here, permissions are granted and we can
  // continue accessing the position of the device.
  return await Geolocator.getCurrentPosition();
}
```

6. Ubah floatingActionButton

```
floatingActionButton: FloatingActionButton(
  onPressed: _determinePosition, //_incrementCounter,
  tooltip: 'Get Location', //'Increment',
  child: Icon(Icons.location_on), //.add),
)
```

7. Tambah variabel _myPosition di dalam class _MyHomePageState, inisialisasi nilai awal

```
Position _myPosition = Position(
      longitude: 0,
      latitude: 0,
      timestamp: DateTime.now(),
      accuracy: 0,
      altitude: 0.0,
      heading: 0.0,
      speed: 0.0,
      speedAccuracy: 0.0);
```

8. Ubah _determinePosition jadi void

```
Future<void> _determinePosition() async {
```

9. Ubah return value di bagian akhir function _determinePosition menjadi

```
// return await Geolocator.getCurrentPosition();
Position myPosition = await Geolocator.getCurrentPosition();
setState(() ⇒ _myPosition = myPosition);
```

10. Ubah widget Text setelah baris mainAxisAlignment: MainAxisAlignment.center,

```
children: <Widget>[
  // const Text(
  //   'You have pushed the button this many times:',
  // ),
  Text(
    '$_myPosition',
    style: Theme.of(context).textTheme.headline4,
  ),
],
```

11. Run di smartphone (real device) atau menggunakan emulator yang support lokasi virtual

sumber
https://flutterrepos.com/lib/baseflow-flutter-geolocator-flutter-device