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TRƯỜNG ĐẠI HỌC BÁCH KHOA HÀ NỘI

HANOI UNIVERSITY OF SCIENCE AND TECHNOLOGY

ONE LOVE. ONE FUTURE.

TRƯỜNG ĐẠI HỌC
BÁCH KHOA HÀ NỘI
HANOI UNIVERSITY
OF SCIENCE AND TECHNOLOGY

LẬP TRÌNH ỨNG DỤNG DI ĐỘNG

Mobile Application Programming

ET4710

PGS. TS. Đỗ Trọng Tuấn
Viện Điện tử Viễn thông * Đại học Bách Khoa Hà Nội

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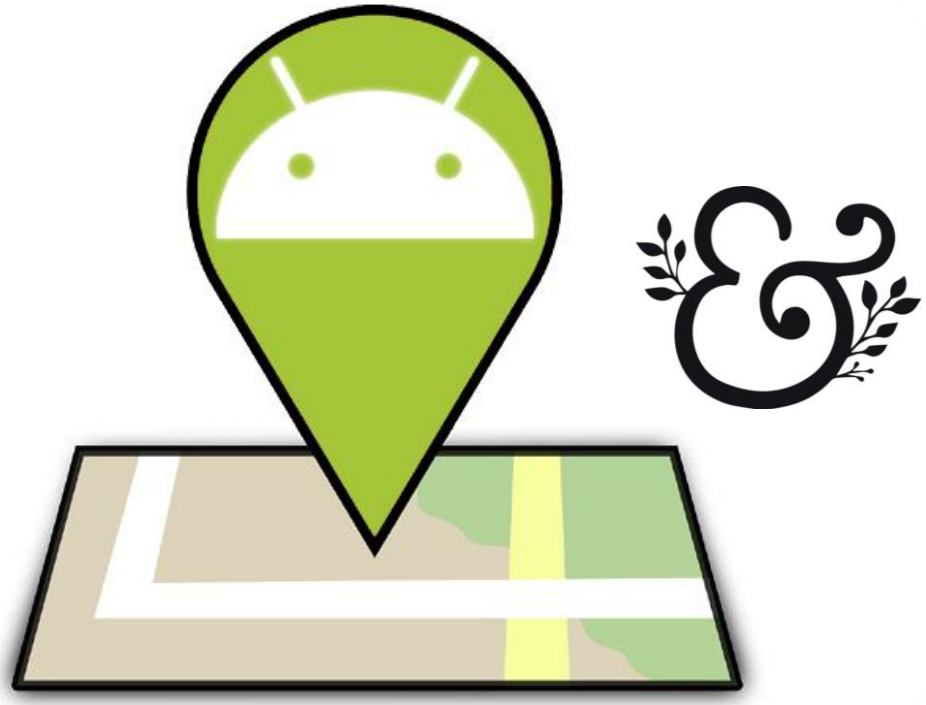
CHƯƠNG 6.

Lập trình dựa vào vị trí, lập trình sử dụng cử chỉ

(Location-base programming and gesture-based programming)



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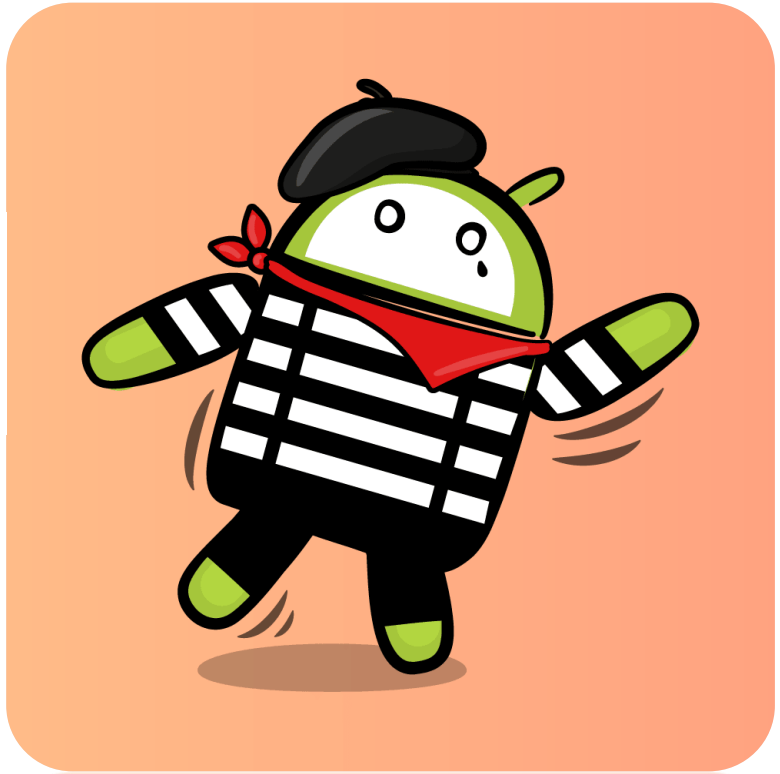

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(Location-base programming and gesture-based programming)

6.1. Truy cập tọa độ vị trí trên thiết bị di động

(Accessing Location information on a mobile device)

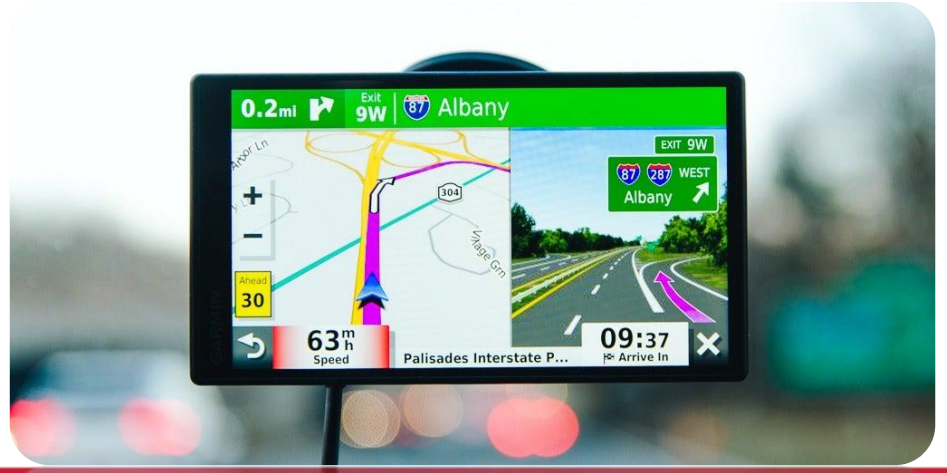
6.2 Lập trình bản đồ googlemap API v2

(Googlemap API V2 Programming)

6.3 Lập trình phát hiện cử chỉ (Gestures Detection Programming)

Lập trình dựa vào vị trí * Location-base programming

- Today, almost every smartphone has a GPS receiver, and many digital cameras do, too. GPS is well on its way to becoming truly ubiquitous in devices.
- Google gets much of its data from commercial mapping services, but in Android, Google has been very driven by the availability of GPS receivers in Android devices.
- This chapter thus concentrates on using Google Maps in Android devices.



Lập trình dựa vào vị trí * Location-base programming

- Android provides the developers with its location API. This makes it easy for us to make applications that support location.
- Location-based services in android are those services that deal with the device's geographical location.
- Location-Based Services in Android provides us with this feature to help us in various ways. It enables us to create an application that is capable of detecting the current location of our devices. Android makes use of information from GPS and WiFi networks to get the location of the device on this Earth.
- So LBS is the feature that Android provides us using the Location Framework. This framework provides us basically with certain classes and interfaces, which are key components. These components make it easier for us to implement the location feature in our application.

Lập trình dựa vào vị trí * Location-base programming

Components of Location-Based Services in Android

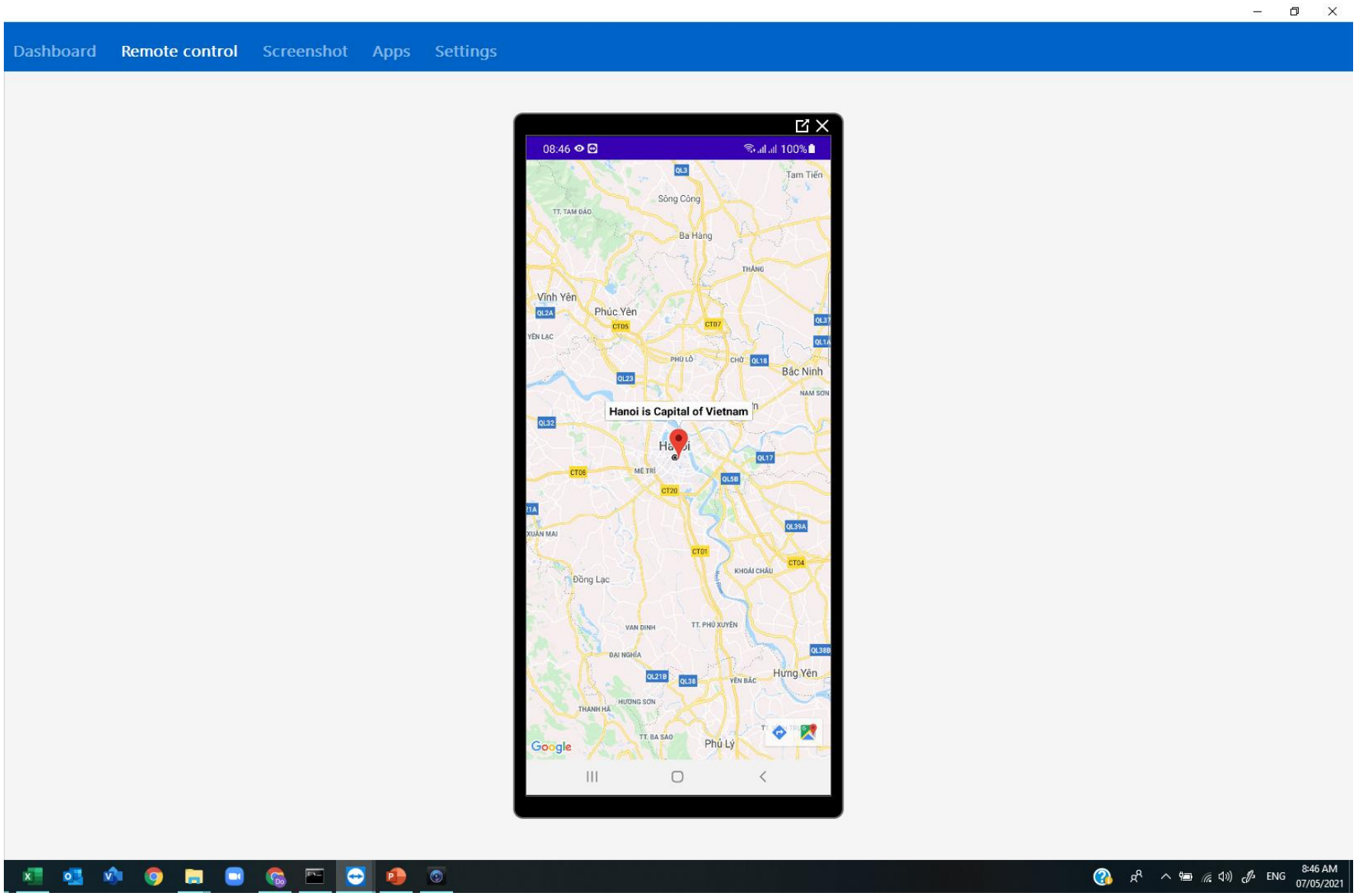
- **LocationManager Class** – It helps to get the location service of the System.
- **LocationListener Interface** – It receives notification from the Manager.
- **LocationProvider** – Devices provide a location from a set of providers.
- **Location Class** – It represents the geographic location at a particular time.

Location Object

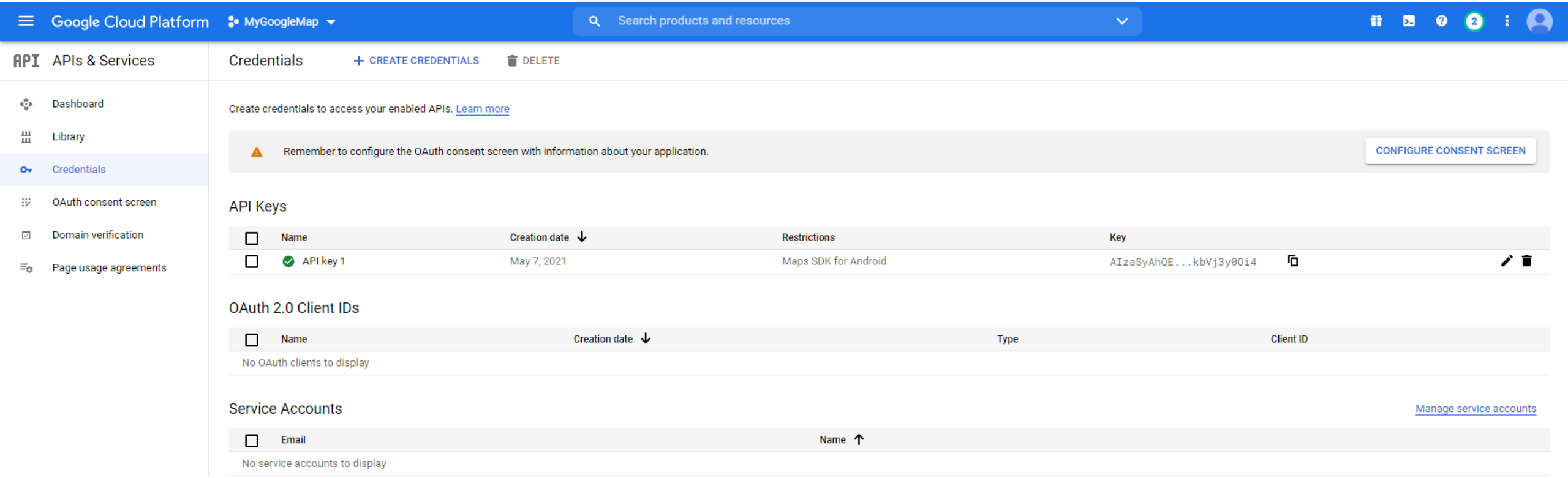
- The location object stores the geographic location of the device in terms of Longitude, Latitude, Altitude, velocity, etc.

1. float distanceTo(Location destination)
It returns an approx. distance between the destination and current location (in meters).
2. float getAccuracy()
It returns an estimated accuracy of location (in meters).
3. double getAltitude()
It returns altitude from the sea level (in meters).
4. double getLatitude()
It returns the Latitude (in degrees).
5...etc .....

Lập trình dựa vào vị trí * Location-base programming

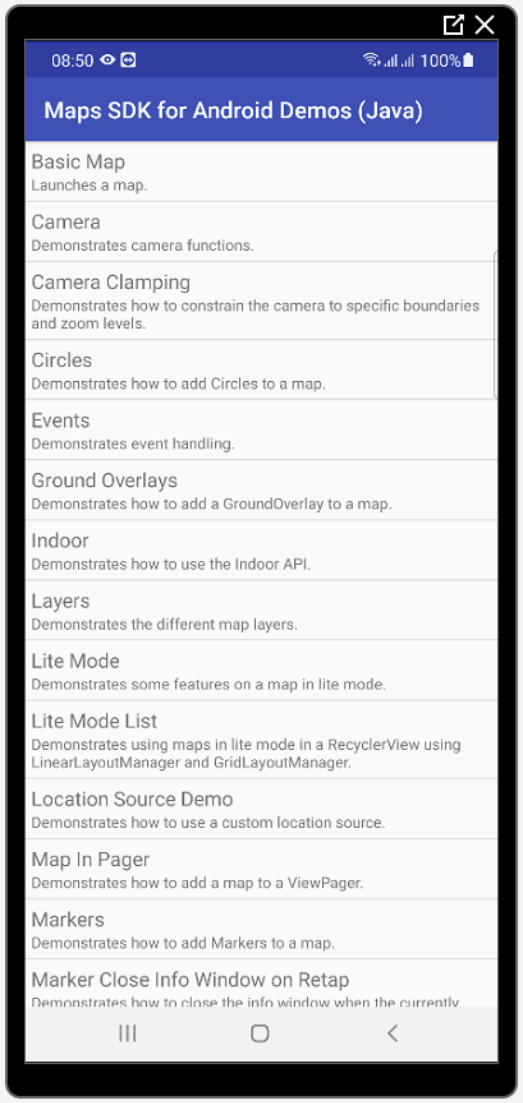


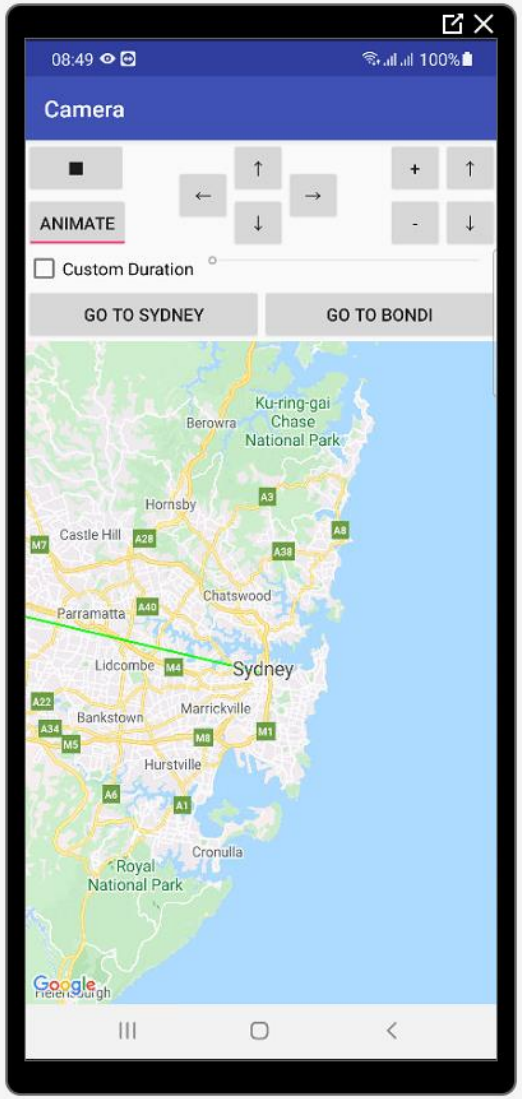
Lập trình dựa vào vị trí * Location-base programming



API Keys AIzaSyAh ... _pJ0FkbVj3y0Oi4

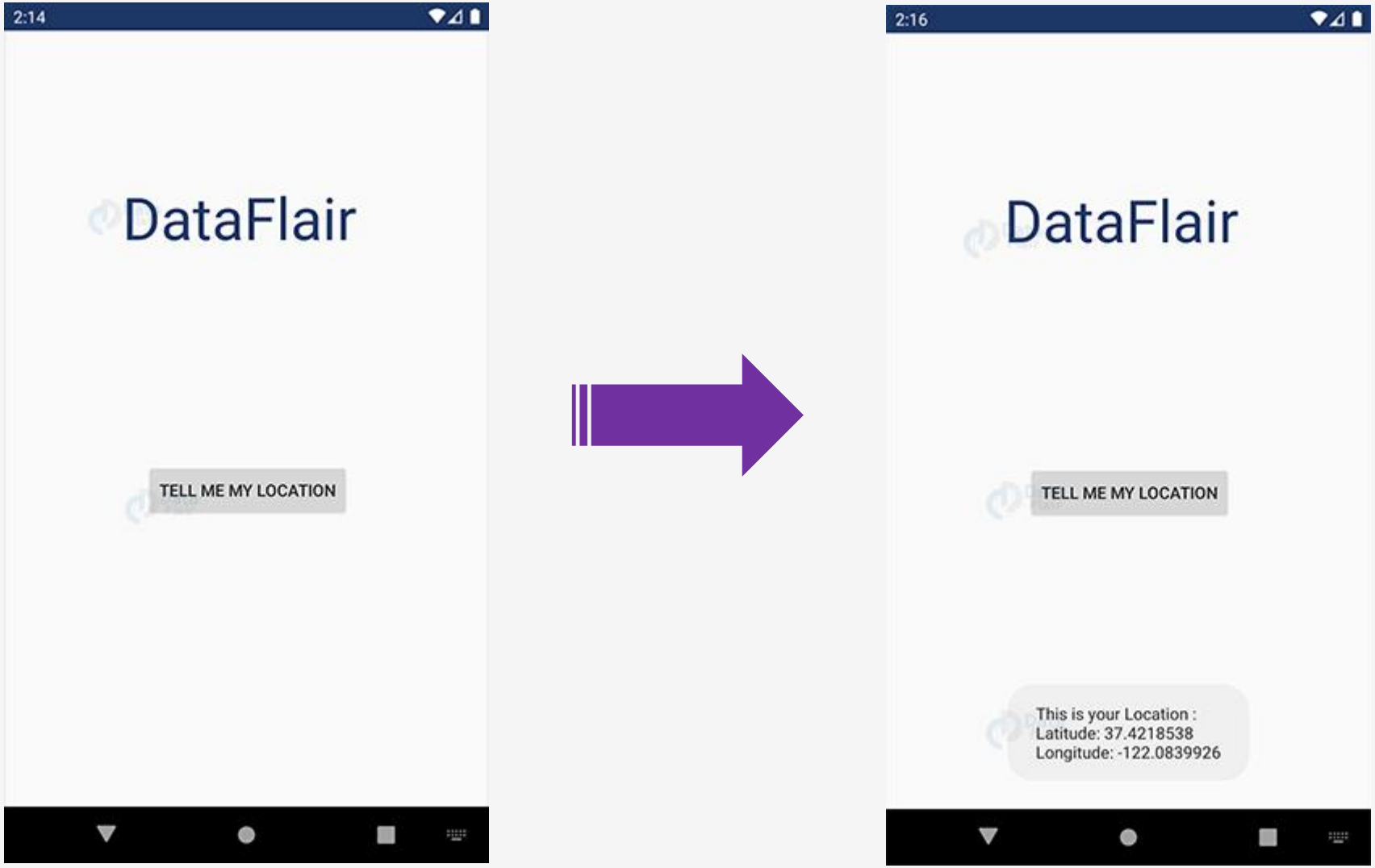
Lập trình dựa vào vị trí * Location-base programming





Lập trình dựa vào vị trí * Location-base programming

The best live example is finding restaurants, petrol pumps or stores near you. How can we get an accurate location using Location-Based Services (LBS) in android?



https://data-flair.training/blogs/location-based-services-in-android/

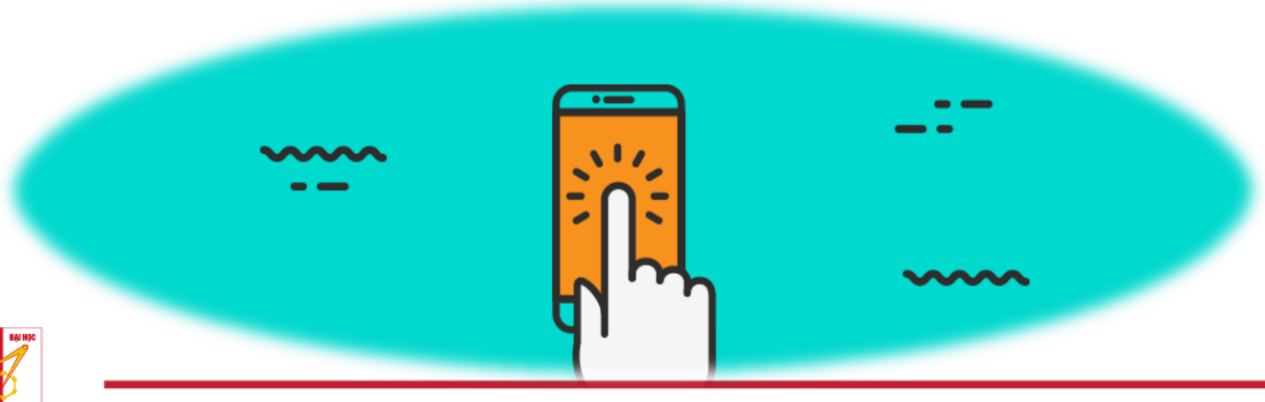
Lập trình phát hiện cử chỉ (Gestures Detection Programming)

A "touch gesture" occurs when a user places one or more fingers on the touch screen, and your application interprets that pattern of touches as a particular gesture. There are correspondingly two phases to gesture detection:

1.Gather data about touch events.

2.Interpret the data to see if it meets the criteria for any of the gestures your app supports.

https://developer.android.com/training/gestures/detector



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THANK YOU !

Lập trình ứng dụng di động

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