Kajian Dwi Mingguan

Introduction of
Android Programming & Material Design

Arrival Dwi Sentosa

INDONESIA
android kejar

Powered by
Google Developers

Background

Computer Science
Student
北京理工大学

Experiences

Dicoding Academy Reviewer Team (Android and Xamarin Academy)

Indonesia Android Kejar Mentor for Beginner and Intermediate Class, GDG Indonesia

Achievements

2016

Indosat IWIC Ooredoo 12, Runner Up with apps "UangKu"

Indonesia Intel Top Developer

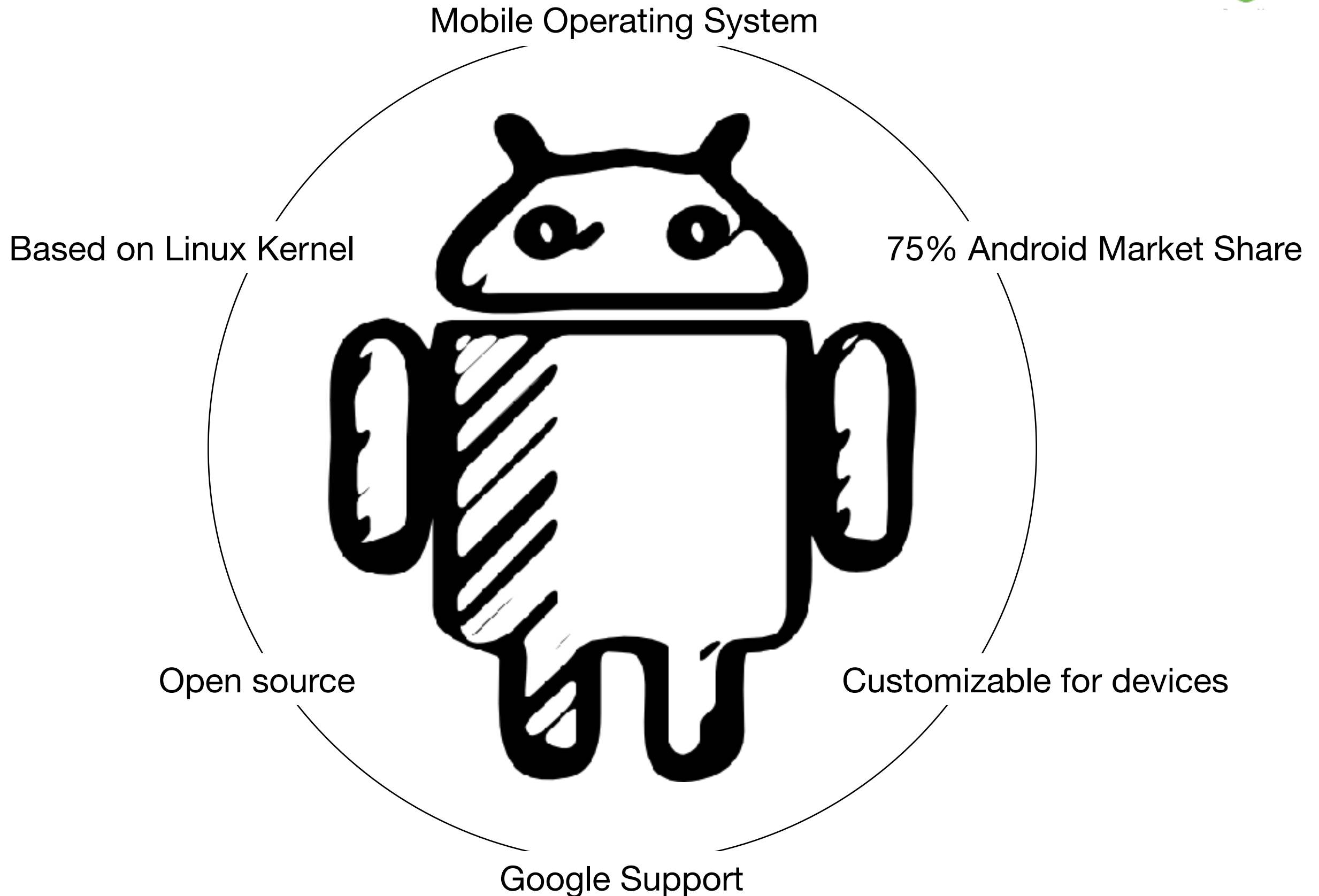Medallion for Excellence, ASEAN Skills Competition Malaysia in field IT Software

Winner of IBM Bluemix Challenge with apps "iWatchYou"

2017

Medallion for Excellence, World Skills Competition Abu Dhabi in field IT Software

Winner of Samsung Indonesia Next Apps 4.0 with apps "Mona"

What is Android?

Mobile Operating System

Based on Linux Kernel

75% Android Market Share

Open source

Customizable for devices

Google Support

Android Native Development

FIRST LANGUAGE

Java

```
System.out.println("Hello World");
```

Kotlin

```
print("Hello World")
```

C++

```
cout<<"Hello World";
```

NEW TECHNOLOGY

Flutter (Dart)

```
print('Hello World')
```

ReactNative
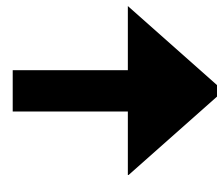
```
<Text>Hello world!</Text>
```

Which you preferred?

or

```java
public class Person {
    private String name;
    private int age = 0;

    public Person(String name, int age) {
        this.name = name;
        this.age = age;
    }

    public String getName() {
        return name;
    }

    public void setName(String name) {
        this.name = name;
    }

    public int getAge() {
        return age;
    }

    public void setAge(int age) {
        this.age = age;
    }
}
```

```kotlin
data class Person(var name: String, var age: Int)
```

Android Development Tools

android studio

Download latest versions

https://developer.android.com/studio/

*Install Kotlin Packages for Kotlin Developer

Apps Development

- There's a Screen called "**Activity**" and flexible Screen called "**Fragment**"

- Written using **Java/Kotlin** and **Extensible Markup Language** (XML)

- Uses the Android Software Development Kit (**SDK**)

- Uses Android **libraries** and Android **Application Framework**

- Executed by Android Runtime Virtual machine (**ART**)

Challenges of Android Development

- **Multiple screen** sizes and resolutions

- **Performance**: make your apps responsive and smooth

- **Security**: keep source code and user data safe

- **Compatibility**: run well on older platform versions
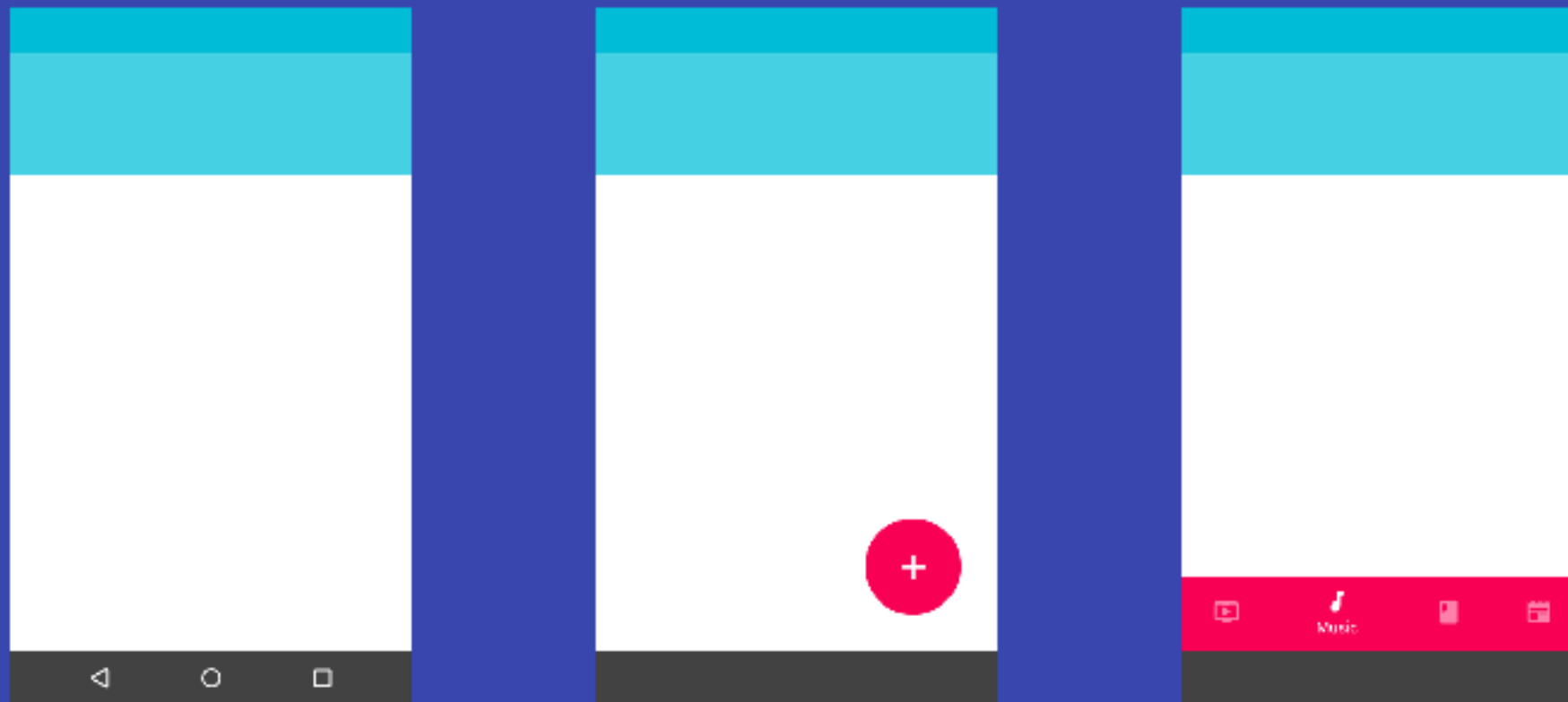
Apps Project Structures

📁 app

└─── 📁 manifests

      └─── 📄 AndroidManifest.xml

└─── 📁 java

      └─── 📁 com.your.projectname

            └─── 📄 Your java files

└─── 📁 res

      └─── 📁 drawable

      └─── 📁 values

      └─── 📁 xml

Build > Test > Publish > Deploy

Material: Android Design Guidelines

https://material.io/guidelines/style/

Material: Typography

Roboto is the standard typeface on Android

Roboto has 6 weights

- Thin

- Light

- Regular

- Medium

- Bold

- Black

Roboto Thin
Roboto Light
Roboto Regular
Roboto **Medium**
Roboto Bold
Roboto Black
Roboto Thin Italic
Roboto Light Italic
Roboto Italic
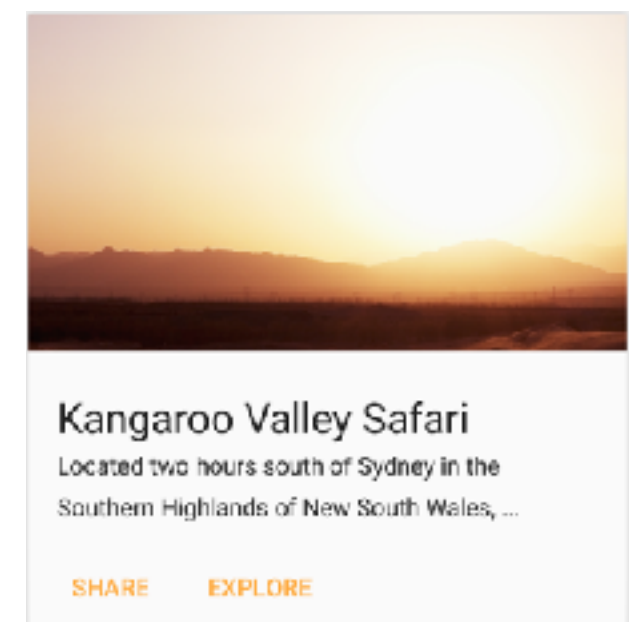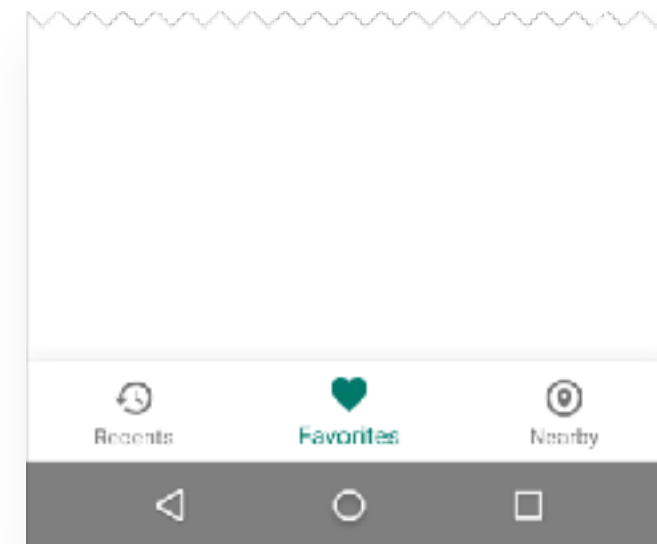*Roboto Medium Italic*
Roboto Bold Italic
Roboto Black Italic

Material: Components

Material Design has guidelines on the use and implementation of Android components

- Bottom Navigation
- Buttons
- Cards
- Chips
- Data Tables
- Dialogs
- Dividers

- Sliders
- Snackbar
- Toasts
- Steppers
- Subheaders
- Text Fields
- Toolbars

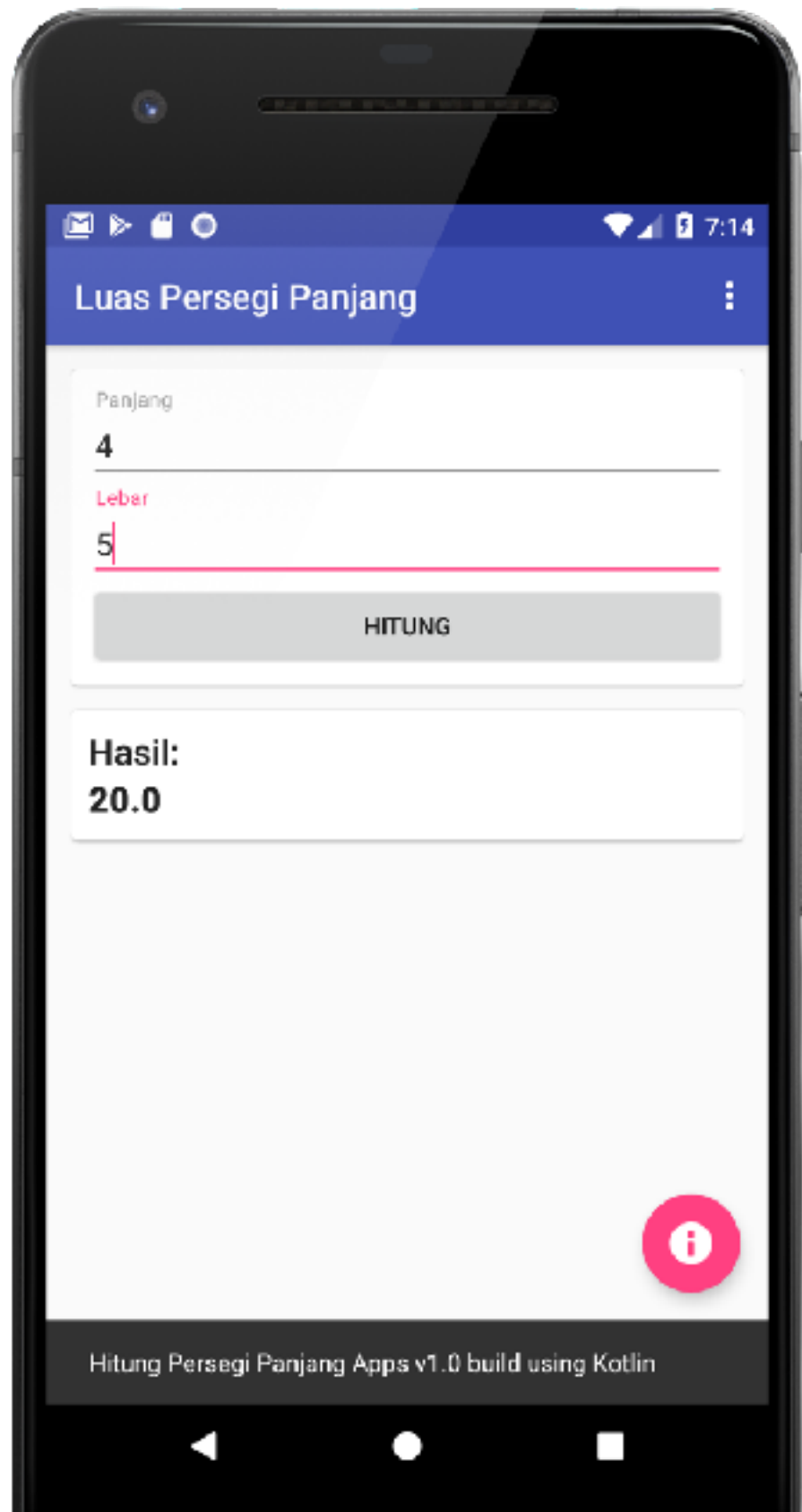Kangaroo Valley Safari

Located two hours south of Sydney in the
Southern Highlands of New South Wales, ...

SHARE   EXPLORE

Experiments

Simple Apps (Area of Rectangle)

Language:
Kotlin

Layout:
XML

Material Design Used:
Cardview
Floating Action Button
Snackbar

Thank you

Email: **arrivaldwisentosa@gmail.com**
Wechat: **arrivaldwis**
Github: **https://github.com/BIT-Indonesia**