

# Advance Database

With Android



# Prerequisite of the Course

- Basic knowledge of Database Management System
- Knowledge of SQL

# What you will learn

- Fundamentals of Android Development
- SQLite
- Handling of JSON
- Cloud Computing

# Android Operating System

- Android is a mobile operating system based on a modified version of the Linux owned by Google.
- Launched in 2008, android undergo on 14 version since September 2019, Android 10 being the latest iteration.

# Android Versions

Code Name	Version	API Level
Cupcake	1.5	3
Donut	1.6	4
Eclair	2.0	5 - 7
Froyo	2.2	8
Gingerbread	2.3	9 - 10

# Android Versions

Code Name	Version	API Level
Honeycomb	3.0	11 - 13
Ice Cream Sandwich	4.0	14 - 15
Jelly Bean	4.1	16 - 18
KitKat	4.4	19
Lollipop	5.0	21 - 22

# Android Versions

Code Name	Version	API Level
Marshmallow	6.0	23
Nougat	7.0	24 - 25
Oreo	8.0	26 - 27
Pie	9	28
Android 10	10	29

# Android Open Source Project

- Android is an open source operating system for mobile devices and a corresponding open source project led by Google.
- This project offers the information and source code needed to create custom variants of the Android OS, port devices and accessories to the Android platform, and ensure devices meet the compatibility requirements that keep the Android ecosystem a healthy and stable environment for millions of users.



# Why Develop on Android Platform

- 74% market share world wide (iOS 25%)
- 1,250,495 questions on Stackoverflow
- Open Source

# Development on Android

- Programming Languages
  - Java
  - Kotlin
- IDE
  - Android Studio

# Kotlin

- Kotlin is a **modern** general purpose, open source, statically typed “pragmatic” programming language for the JVM and Android that combines object-oriented and functional programming features developed by JetBrains.
- It has been open source since 2012.



# Kotlin Features

- Concise / Short
  - Smart cast
  - Type inference
  - Named Arguments
- Safety
  - Mutable / Immutable Properties
  - Null type (Optionals)



## POJO



```
public class Person {  
    private String name;  
  
    public Person(String name){  
        this.name = name;  
    }  
  
    public String getName() {  
        return name;  
    }  
  
    public void setName(String name) {  
        this.name = name;  
    }  
  
    // toString...  
    // hashCode...  
    // equals...  
    // copy...  
}
```

```
data class Person(val name: String)
```



## Code



```
public void createAndPrintPerson() {  
    String name = "Pieter";  
    Person person = new  
    Person(name);  
  
    printName(person.getName());  
    // Prints: Pieter  
}
```

```
fun createAndPrintPerson() {  
    val name = "Pieter"  
    val person = Person(name)  
  
    printName(person.name)  
    // Prints: Pieter  
}
```

# Hands-on

# What you will learn

- How to start an android project
- Basic UI Layout using
  - Frame Layout
  - Linear Layout
  - Relative Layout
- Views: TextView, Button, EditText
- Intents() and launching new Activity (from activity)

# Simple Login Form

- Check user credentials
- Display user name on a different activity



# Intent()

- Intents() are like baskets. They will contain information from one activity to another.
- Used to start an Activity.

**Have a good  
day!**



<https://github.com/JcDelaCueva/nu-calamba-lessons>