



# MOBILE PLATFORMS



iOS



**Android** 



Haltimotoyvos

#### **SAMPLE APPS**



#### **ABOUT THE TUTOR**



Aeric Poon

- Graduated in 2004 with B.Sc. Degree (Computer Science & Mgmt. Maths)
- Start programming in C, Java,
   Visual Basic 6
- More than 17 years of programming experience in Windows and Web App Development using VB.NET, C#, ASP, PHP, Python, etc.
- 6 years experience in developing Android & iOS Mobile Apps

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## PART 1 – UNDERSTANDING MOBILE DEVELOPMENT

- WHY We Want to Build a Mobile App?
- WHAT Types of Mobile App?
- WHAT Category of Mobile App Has Most Download?
- HOW Can I Make Money with Mobile App?
- HOW Much Cost to Build a Mobile App?
- HOW Many Ways to Build Mobile App?
- HOW Can I Build App Without Code?

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#### PART 2 – BUILDING OUR FIRST APP

In today's **2-Hour** class, we will learn step by step on how to:

- 1. Install Software
- 2. Hello World!
- 3. Design Layout
- 4. Write Code
- 5. Debug Code
- 6. Create Release Package (APK file)
- 7. Continue Learning and Getting Help



# WHY BUILD MOBILE APP

- FOR BUSINESS You can help other companies to create App to improve their business
- FOR ORGANIZATION For charity or your school (education)
- FOR PUBLIC Create useful tools or games and publish in App store or Play store
- FOR OWN Learn as a hobby or fun experiment
- OTHER REASON Solve a problem. Unable solve by web app.



# WHAT TYPES OF MOBILE APP

#### PURE NATIVE

- Java/Kotlin (Android)
- Objective-C/Swift (iOS)
- Xamarin C#, Flutter Dart (cross-platform)

#### MOBILE WEB APP

HTML5, CSS, JavaScript (Responsive Website)

#### HYBRID

Web App technology disguised in native wrapper (WebView) Ionic/Cordova

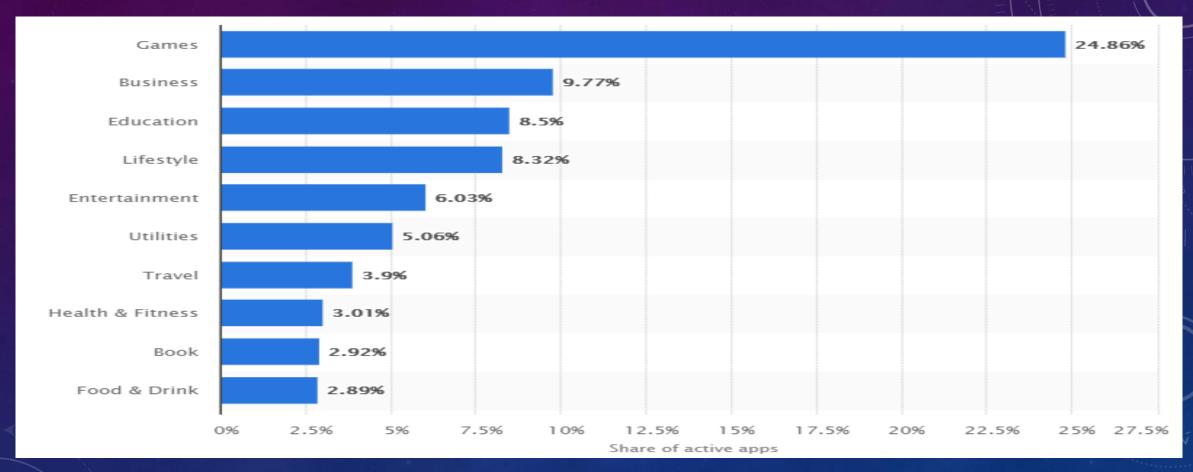
#### REACT NATIVE

JavaScript framework and XML



# CATEGORIES OF MOBILE APP

There are 33 categories of apps in Google Play and 24 categories in Apple's App Store.



Source: www.statista.com

# **MAKING MONEY WITH MOBILE APP**

- Google Ads
- In-App Purchase
- Subscription
- E-Commerce Shop
- Business Marketing
- Sell Your Apps to Client
- Freelance Service

#### HOW MUCH TO BUILD A MOBILE APP

Simple App

Cost: RM30,000 (Time: 2 ½ - 3 Months)

Moderate App

Cost: RM37,500 - RM60,000 (Time: 3 - 5 Months)

Complex App

Cost: RM60,000 - RM105,000 (Time: 5 - 9 Months)



Source: www.quora.com

# BEGINNER'S ANDROID APP DEVELOPMENT ONLINE CLASS

TODAY'S CLASS IS ABSOLUTELY

FREE



# INTRODUCING



B4X

Free

B4A

Android

B4i

iOS

Free

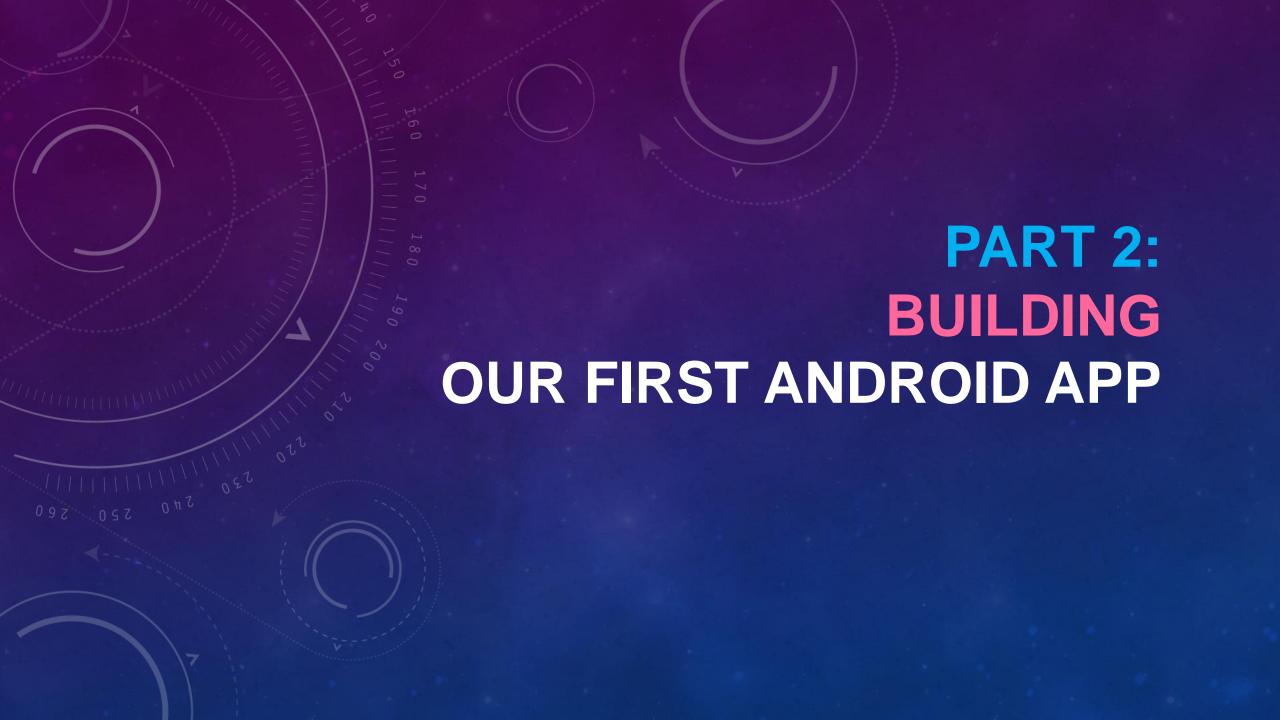
B4J

Desktop, server and Raspberry Pi

Free

B4R

Arduino & ESP8266 boards



#### **POLL APP**



This is a voting app with animated GIF images

User can vote Yes or No

The results are calculated in percentage of Yes and No total up to 100%

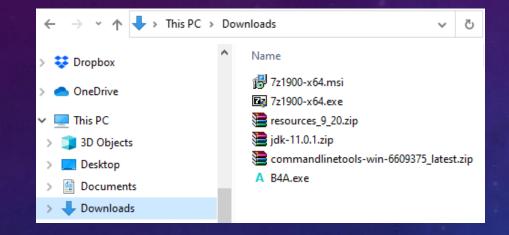
Example: (4 votes)

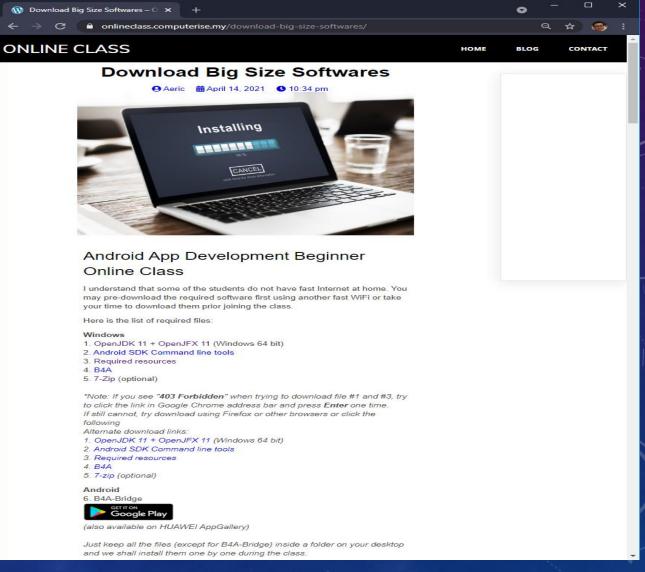
$$1x Yes = (1 / 4) x 100 = 25\%$$

$$3x \text{ No} = (3 / 4) \times 100 = 75\% (100\% - 25\%)$$

#### **PREREQUISITES**

- Laptop, PC or Mac
- Install Software





https://onlineclass.computerise.my/download-big-size-softwares/

#### INSTALLATION

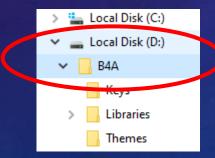
1. OpenJDK 11 + OpenJFX 11 → C:\Java

or

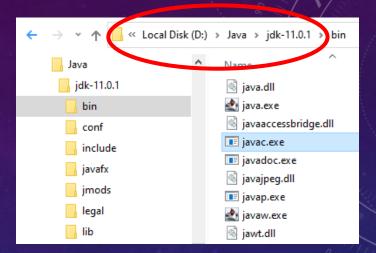
D:\Java

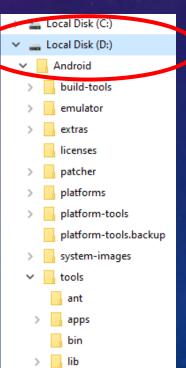
- 2. Android SDK Command line tools > C:\Android
- 3. Required resources > C:\Android

4. B4A → C:\B4A

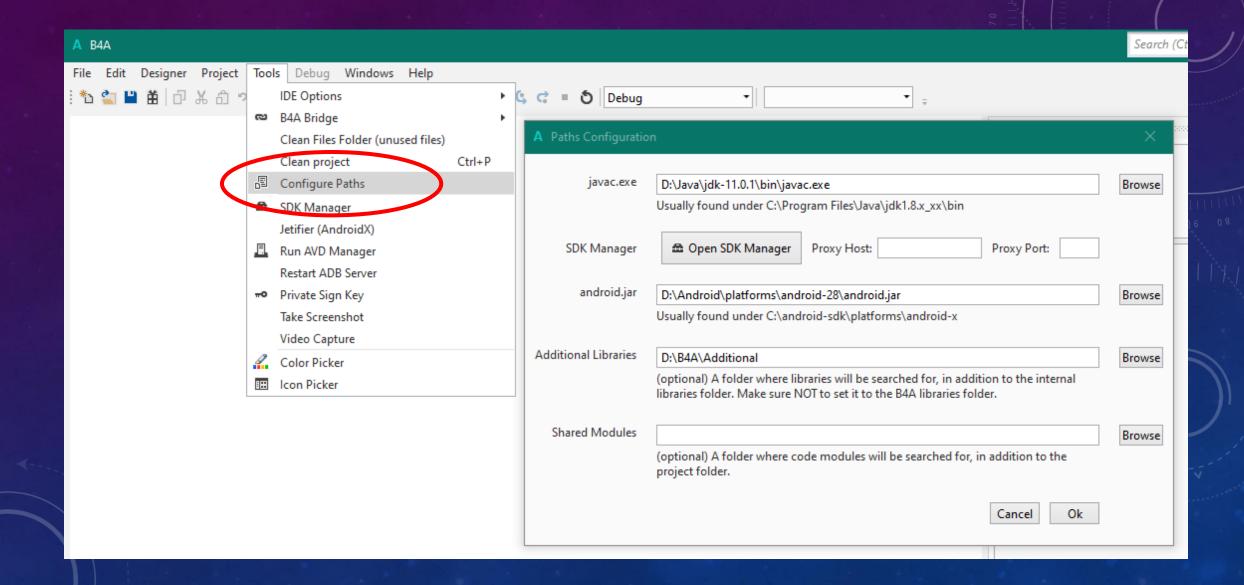


Optional: 7-zip/WinRAR (use to unzip the files)





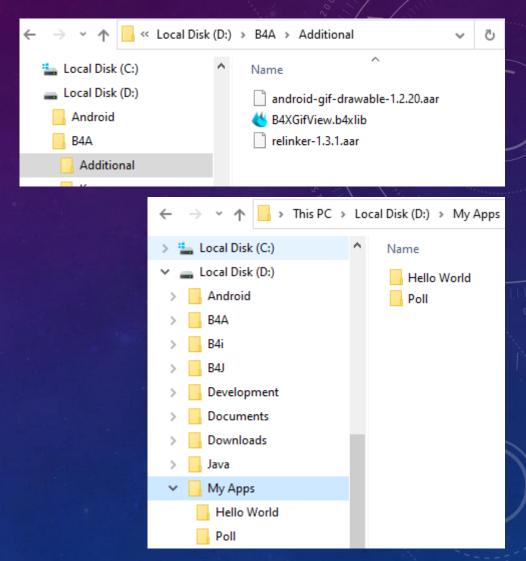
#### **CONFIGURE PATHS**



#### **ADDITIONAL LIBRARIES**

#### [B4X] B4XGifView

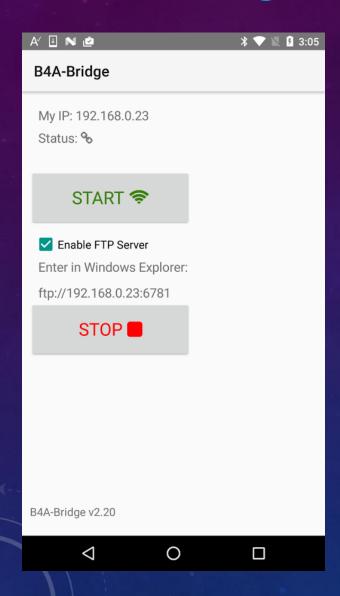
- B4XGifView.b4xlib
- android-gif-drawable-1.2.20.aar
- relinker-1.3.1.aar

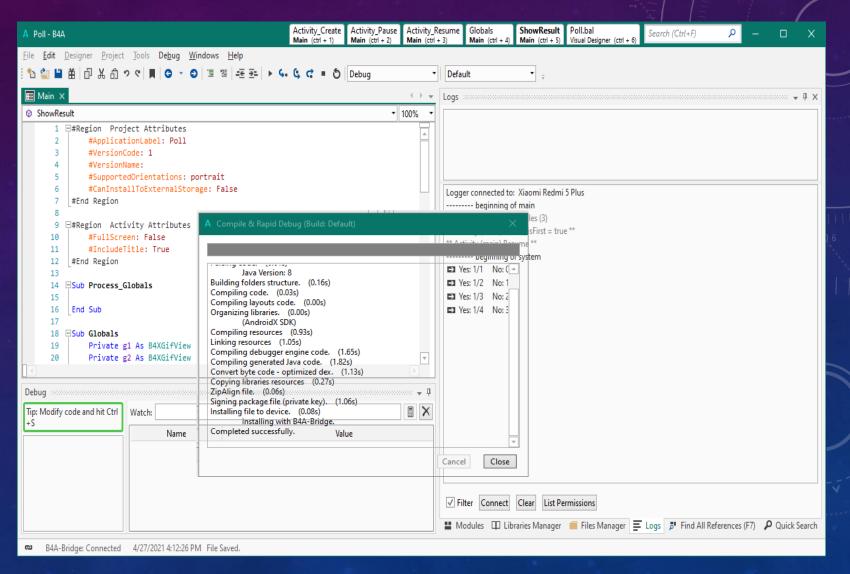


#### https://onlineclass.computerise.my/files/additional/

Instruction: Download and unzip the files to Additional library folder.

#### **B4A-BRIDGE**





# POLL APP (1)

```
#Region Project Attributes

#ApplicationLabel: Poll

#VersionCode: 1

#VersionName:

#SupportedOrientations: portrait

#CanInstallToExternalStorage: False

#End Region
```

#### **Sub Globals**

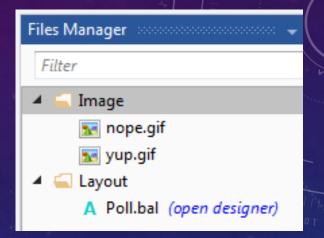
**End Sub** 

Private g1 As B4XGifViewer Private g2 As B4XGifViewer Private lbl1 As Label Private lbl2 As Label Dim total As Int Dim yes As Int Dim no As Int Libraries Manager

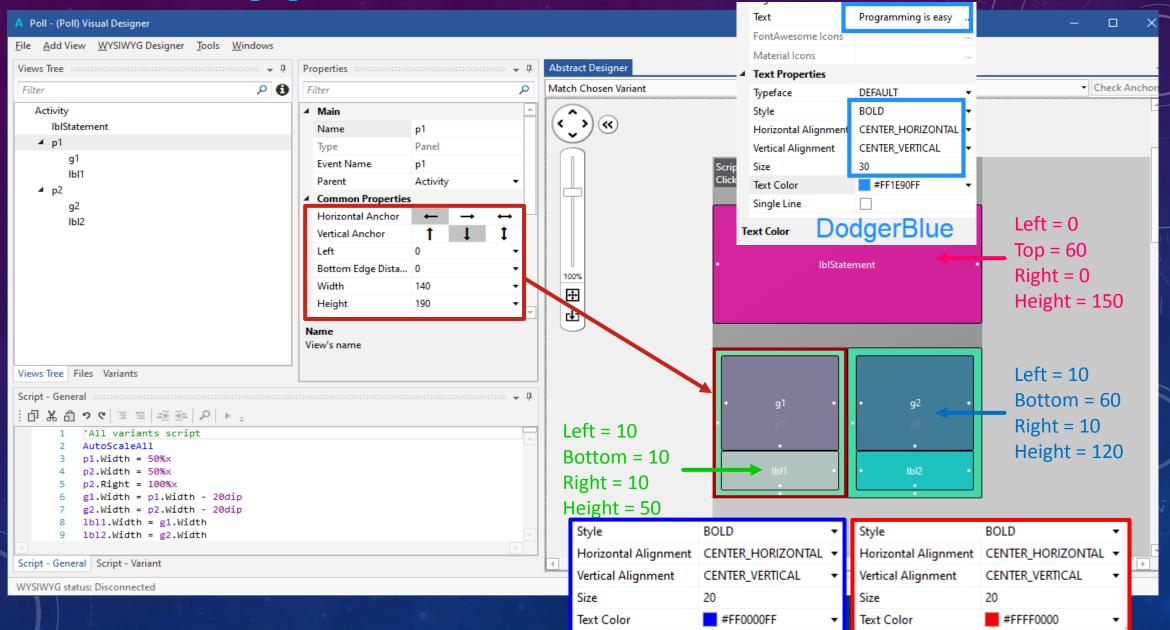
Filter
Name
Version

✓
B4XGifView
1.11

✓
Core
10.70



# POLL APP (2)



# POLL APP (3)

```
Sub Activity_Create(FirstTime As Boolean)
    Activity.LoadLayout("Poll")
    g1.SetGif(File.DirAssets, "yup.gif")
    g2.SetGif(File.DirAssets, "nope.gif")

End Sub

Sub ShowResult

Dim x As Int = yes / total * 100
    lbl1.Text = x & "%"
    lbl2.Text = (100 - x) & "%"
    Log("Yes: " & yes & "/" & total & " " & "No: " & no & "/" & total)

End Sub
```

```
Sub p1_Click

yes = yes + 1

total = total + 1

ShowResult

End Sub

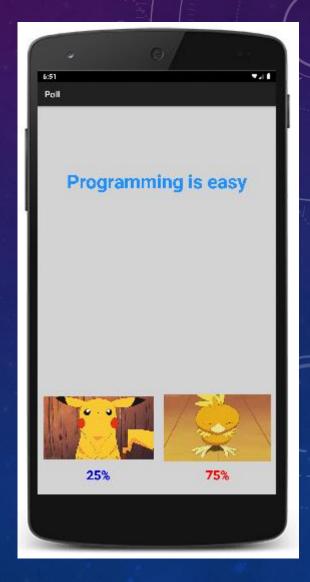
Sub p2_Click

no = no + 1

total = total + 1

ShowResult

End Sub
```

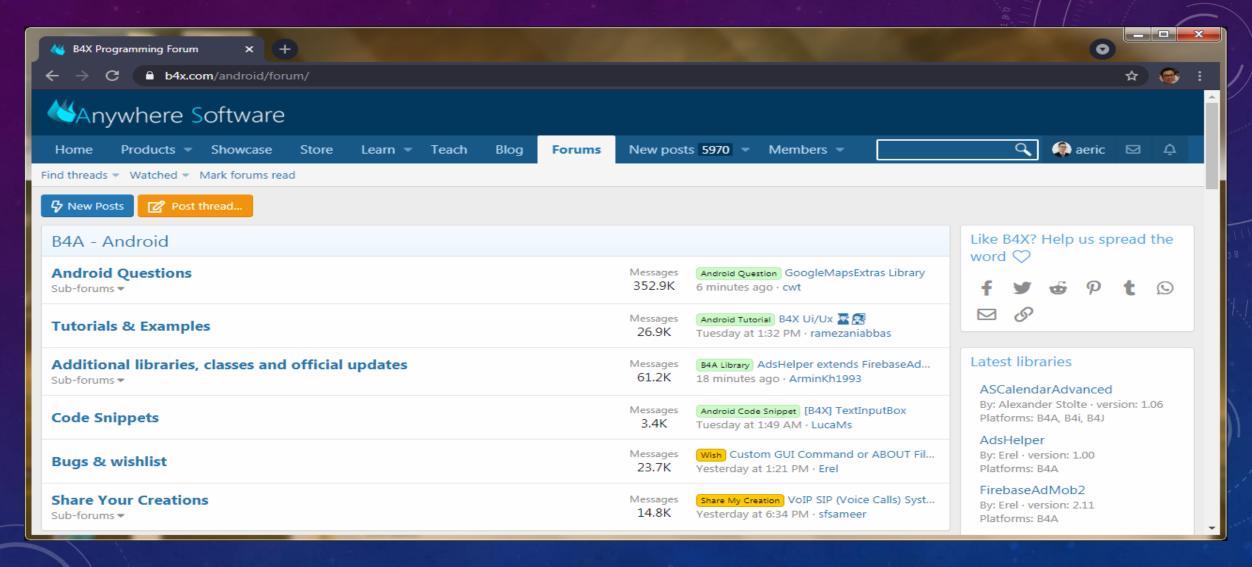


Source code: <a href="https://github.com/pyhoon/poll-b4a">https://github.com/pyhoon/poll-b4a</a>

### **CAN YOU FOLLOW SO FAR?**

Yes!
It's Easy!

#### **CONTINUE LEARNING AND GETTING HELP**



Link: <a href="https://www.b4x.com/android/forum/">https://www.b4x.com/android/forum/</a>

#### **WHAT'S NEXT?**

- I give up, programming is not for me!
- It seem easy, I think I can learn by myself!
- I want to build my own app, please teach me!

Q&A

# THANK YOU



http://tnw.to/i4t6l