



江西理工大学信息工程学院  
JIANGXI UNIVERSITY OF SCIENCE AND TECHNOLOGY SCHOOL OF INFORMATION ENGINEERING

## Mobile application development 移动应用开发



### Lecture 016: Java Bridge With App Inventor



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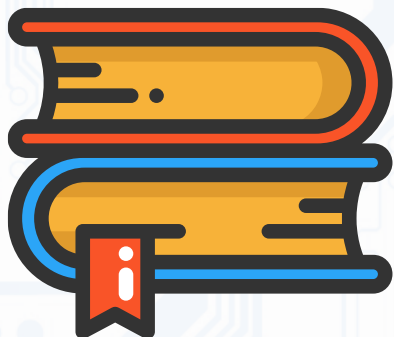
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# MOBILE APPLICATION DEVELOPMENT

## LECTURE 016: Java Bridge With App Inventor





# What is Java Bridge?

- The App Inventor Java Bridge is an exploratory (alpha) version of App Inventor that allows you to generate a Java equivalent of the apps you have built. The tool helps students who have learned coding in AI's visual block-based paradigm to transition to coding in a textual programming language.
- Besides the educational benefits, the tool also allows for hybrid development whereby the visual blocks language is used to create a portion of the app, and Java is used to add functionality that is difficult to develop in AI.

<http://www.appinventor.org/jbridge>





# Java Bridge

## Java Bridge Library

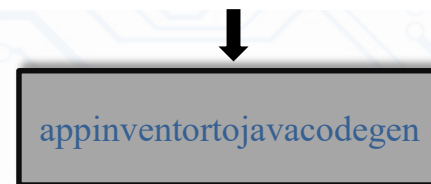
<http://www.appinventor.org/javaBridge/downloads/AppInventor-JavaLibrary.jar>

- It's java code library for building app component
- High level –built on top of Android SDK
- A java class for every component with the same app inventor methods/property names.

## Java Code Generator

It takes your app inventor block structure and converts it into java code

<http://www.appinventortojava.com/?locale=en>



Java Code

App Inventor  
Java Library







## **Basic Transition from App Inventor to Java Using Java Code Generator**

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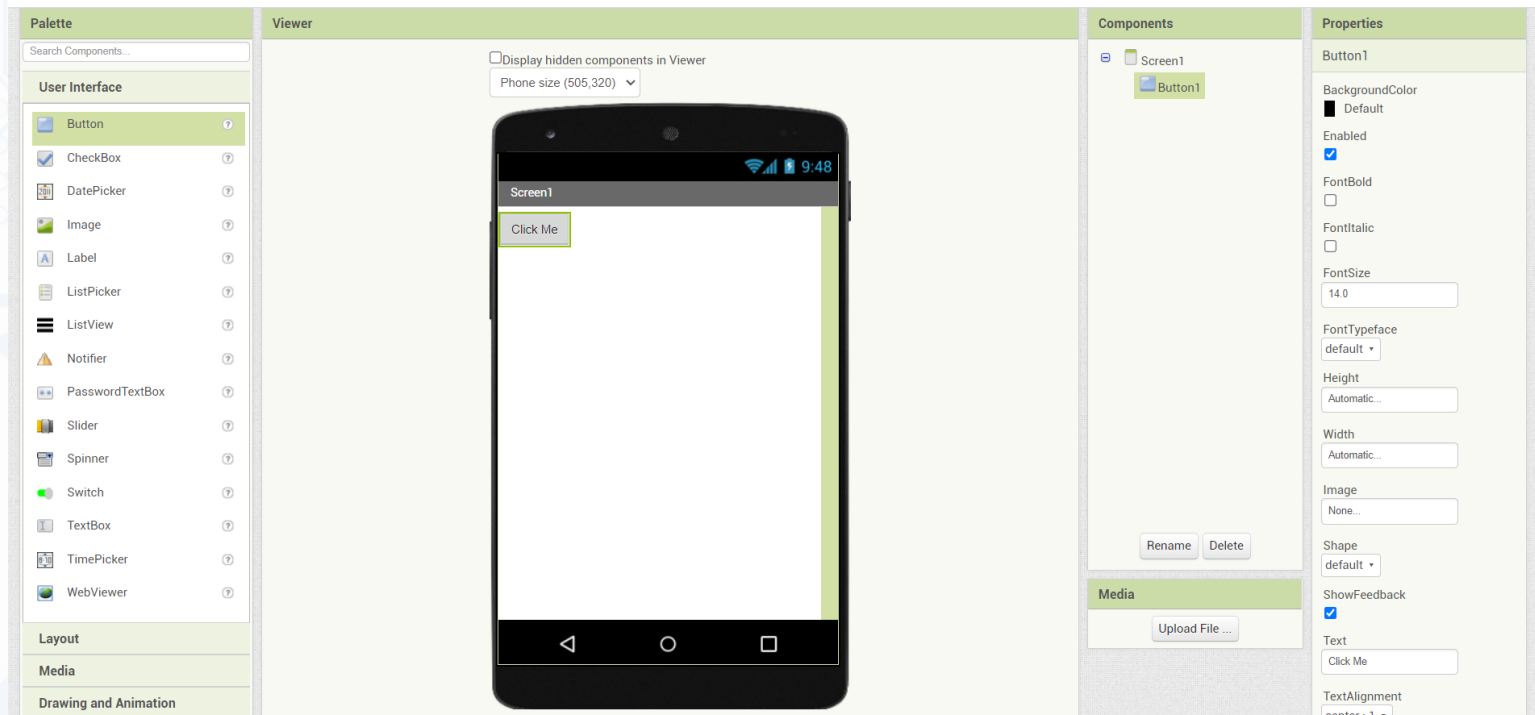
- At first we design the basic overview of the app using app inventor.
- Then we generate the corresponding java code for the app using Java Code generator.
- We open the generated java code in android studio and continue to work on it using java.





# Basic Transition from App Inventor to Java Using Java Code Generator

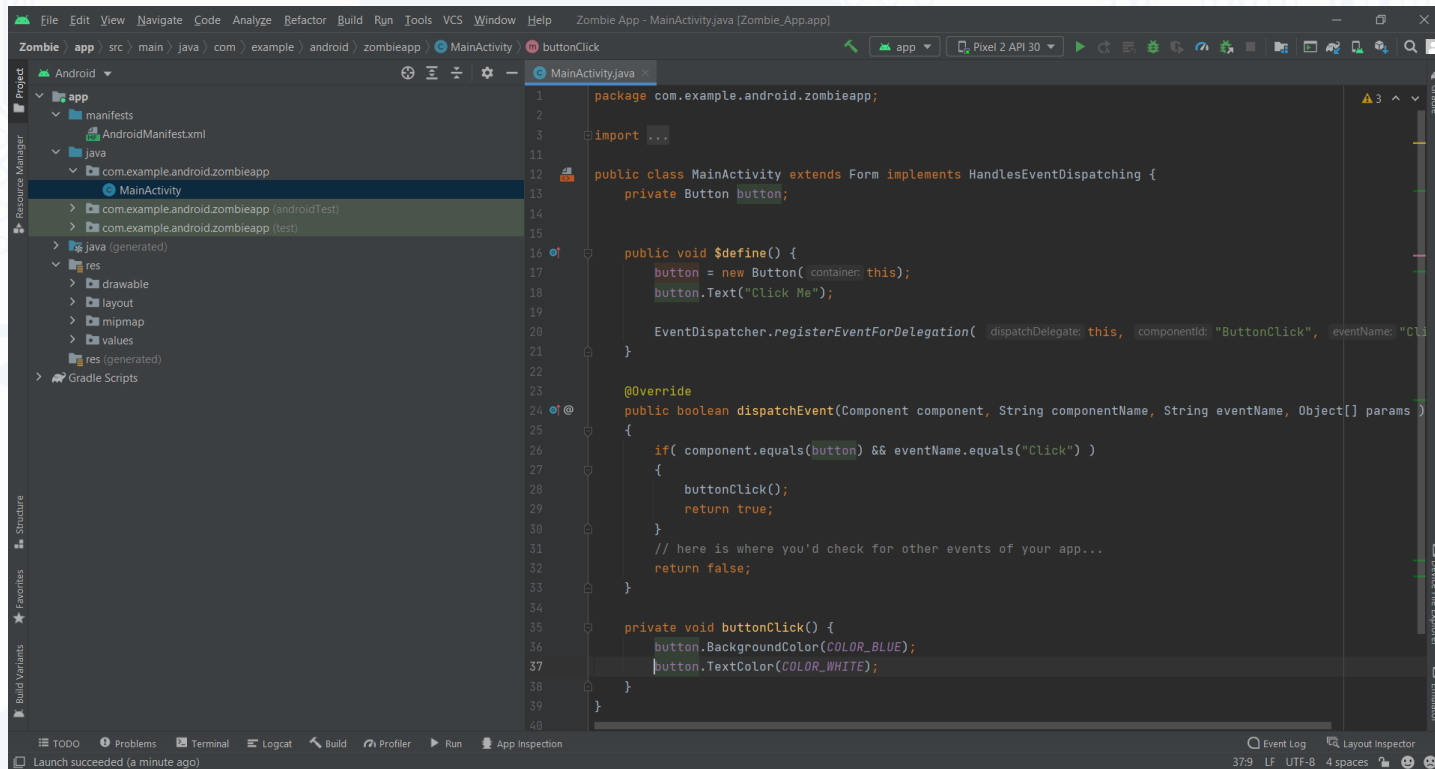
## Basic Overlay Using App Inventor





# Basic Transition from App Inventor to Java Using Java Code Generator

## Open the Project in Android Studio



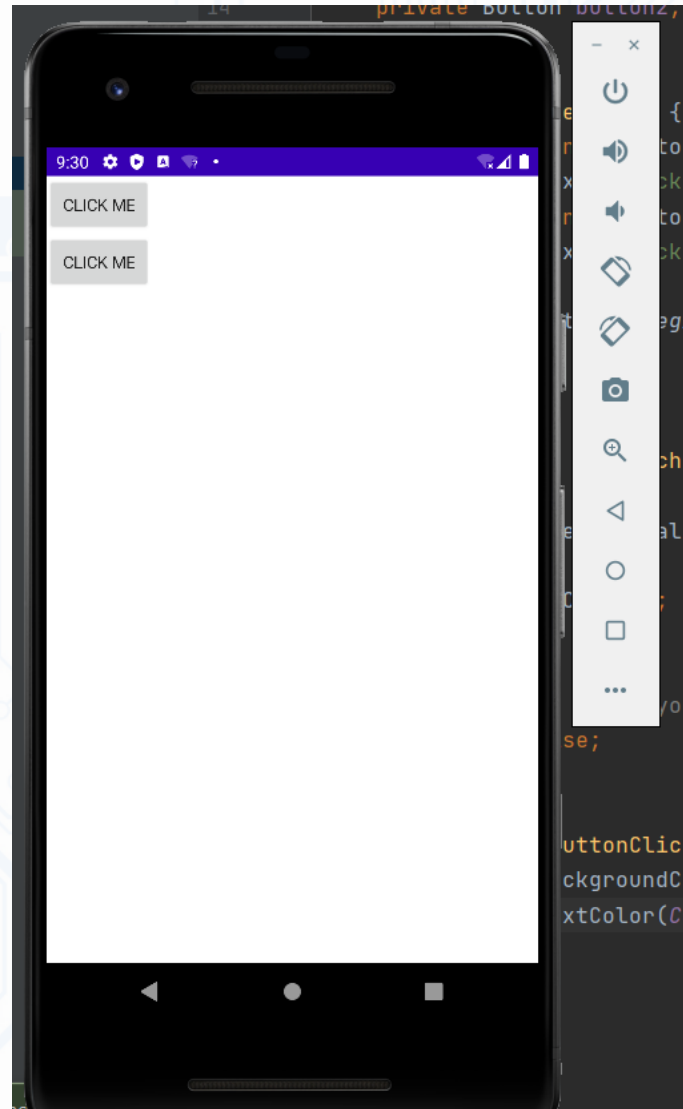
```
1 package com.example.android.zombieapp;
2
3 import ...
4
5 public class MainActivity extends AppCompatActivity implements HandlesEventDispatching {
6     private Button button;
7
8     public void $define() {
9         button = new Button( container: this);
10        button.Text("Click Me");
11
12        EventDispatcher.registerEventForDelegation( dispatchDelegate: this, componentId: "ButtonClick", eventName: "Click" )
13    }
14
15    @Override
16    public boolean dispatchEvent(Component component, String componentName, String eventName, Object[] params )
17    {
18        if( component.equals(button) && eventName.equals("Click") )
19        {
20            buttonClick();
21            return true;
22        }
23        // here is where you'd check for other events of your app...
24        return false;
25    }
26
27    private void buttonClick() {
28        button.BackgroundColor(COLOR_BLUE);
29        button.TextColor(COLOR_WHITE);
30    }
31
32 }
```





# Basic Transition from App Inventor to Java Using Java Code Generator

**Added Some Design Using Java Code**



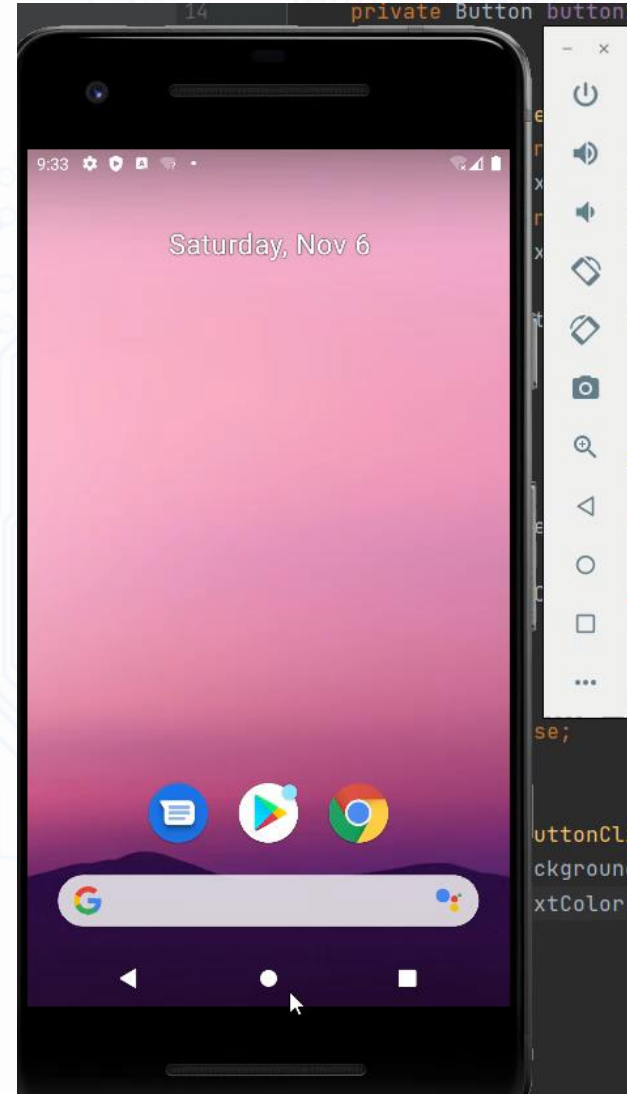
App Inventor





# Basic Transition from App Inventor to Java Using Java Code Generator

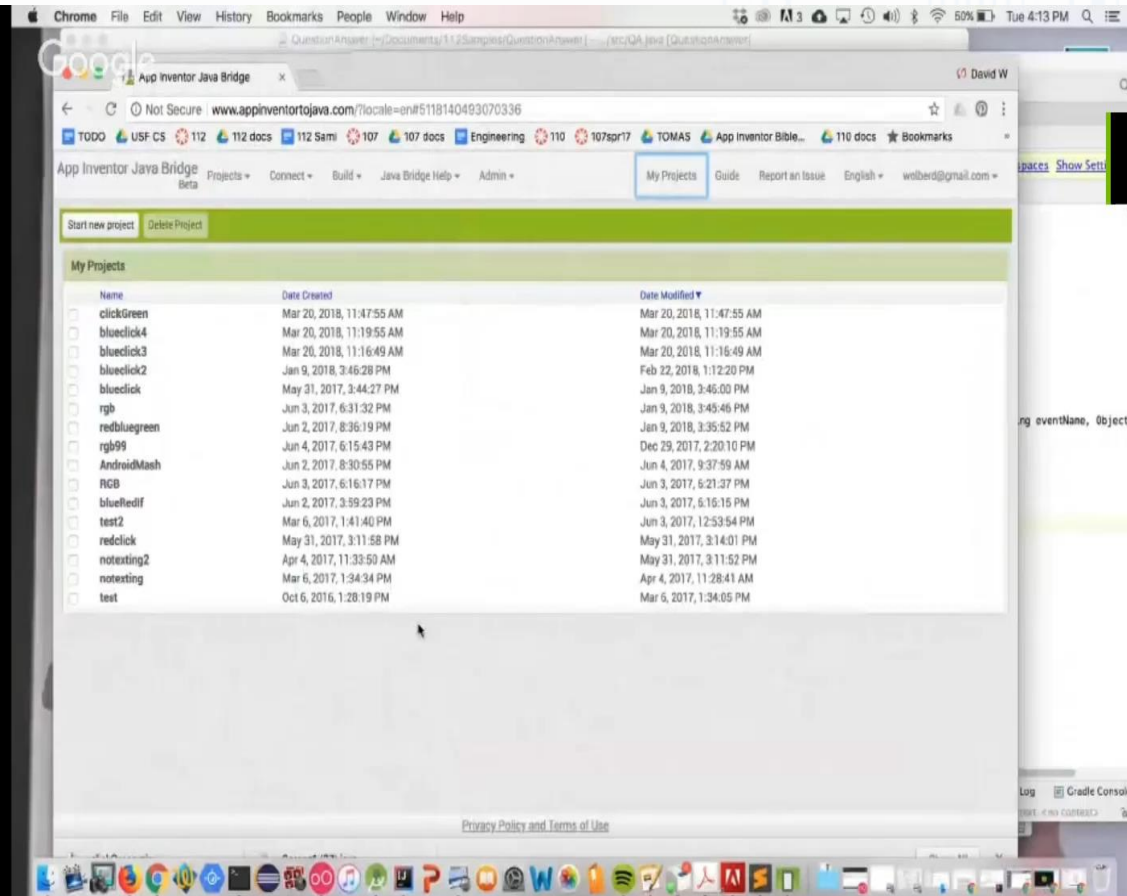
## App Demo



App Inventor



# Basic Transition from App Inventor to Java Using Java Code Generator



David



App Inventor



## Getting Started With Java Bridge (Android Studio)

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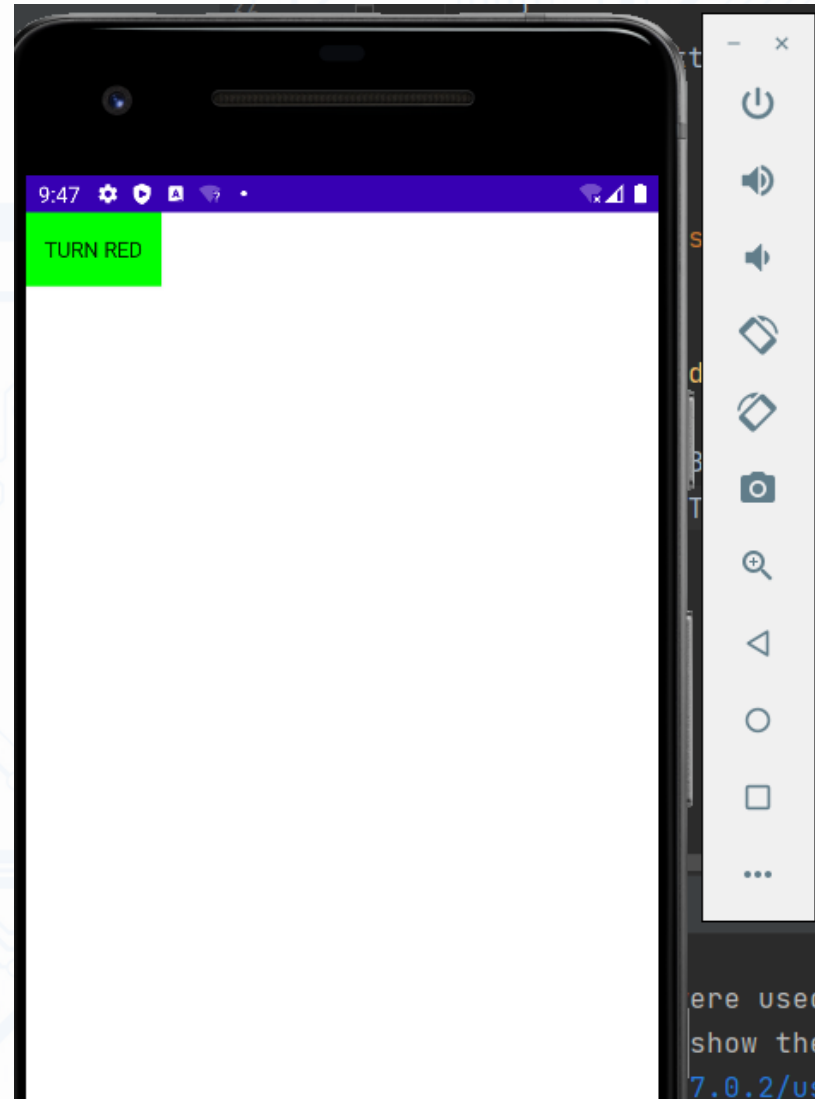
- Create a New Android Application Project.
- Then Import the Java bridge library into the project.
- Write the Java Code for the app.
- Modify the manifest file.
- Run the project.





## Getting Started With Java Bridge (Android Studio)

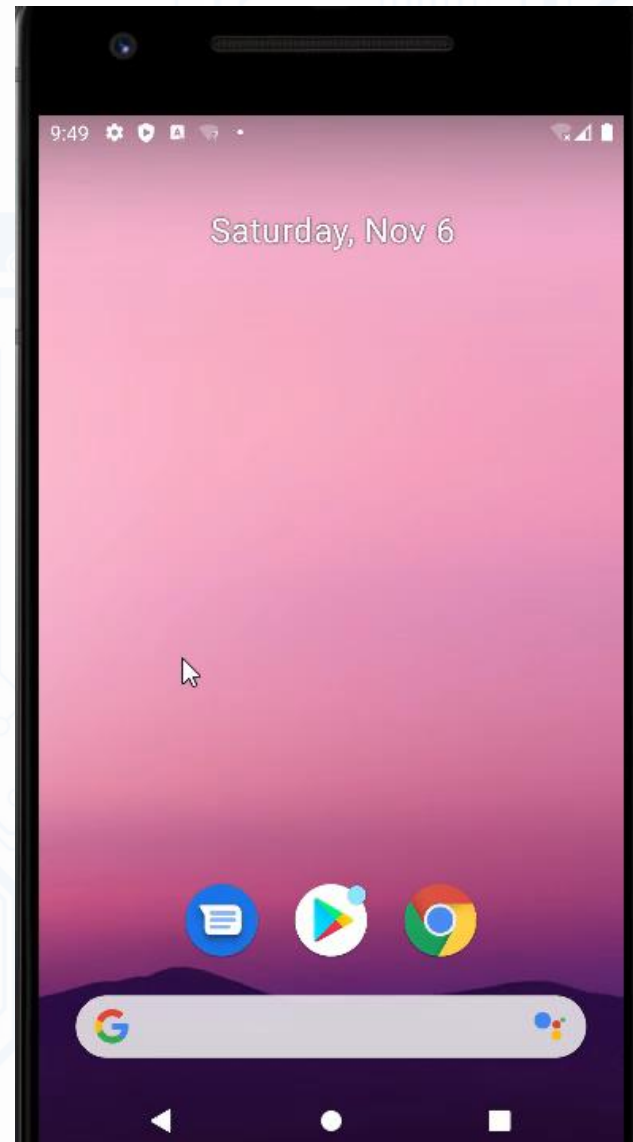
### Design Layout





## Getting Started With Java Bridge (Android Studio)

**App Demo**

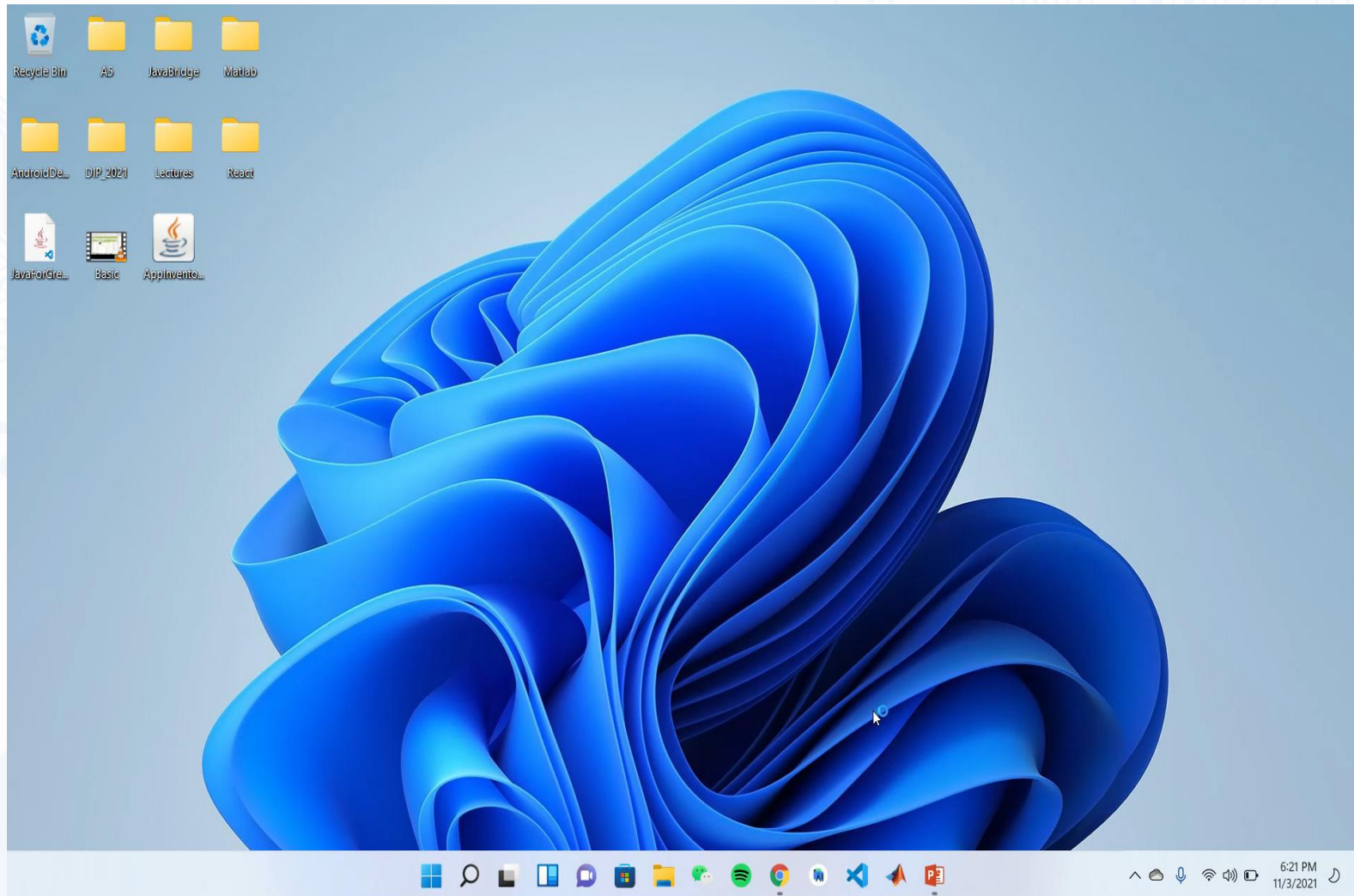


App Inventor





## Getting Started With Java Bridge (Android Studio)





## **Simple Greet App Example**

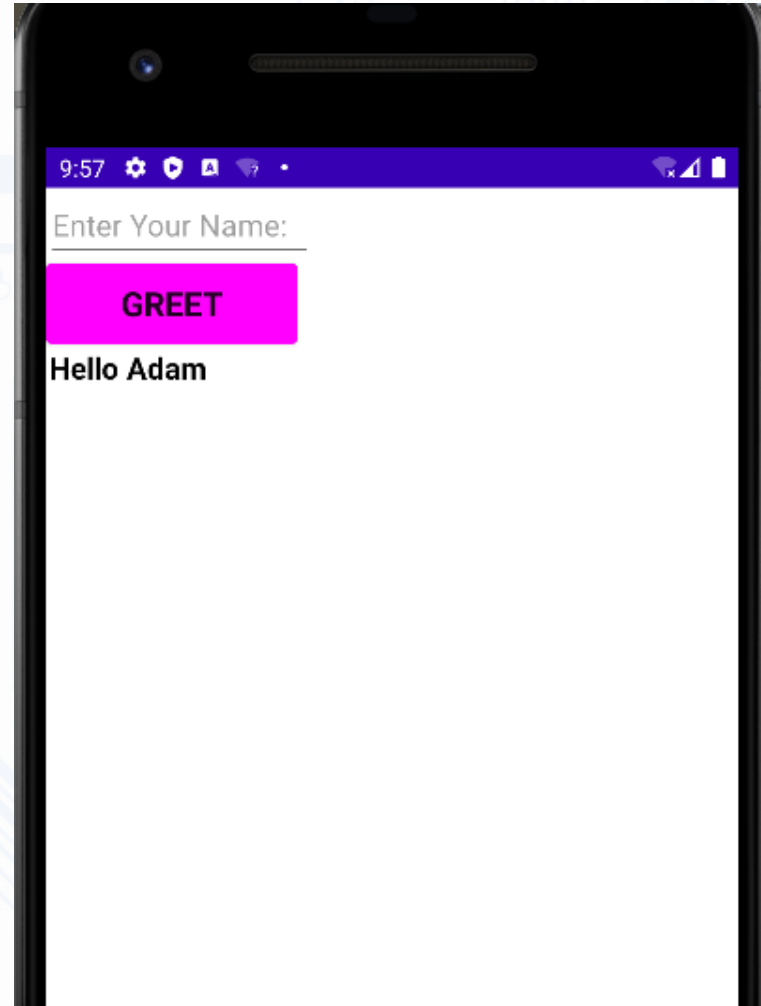
- Create a New Android Application Project.
- Then Import the Java bridge library into the project.
- Design the project
  - Create three component: TextBox, Label, and button.
  - Design them using appropriate style
  - Add the event click event handler in button.
  - On clickButton callback method, get the name from the TextBox and Show it in the Label.
- Run the project.





## Simple Greet App Example

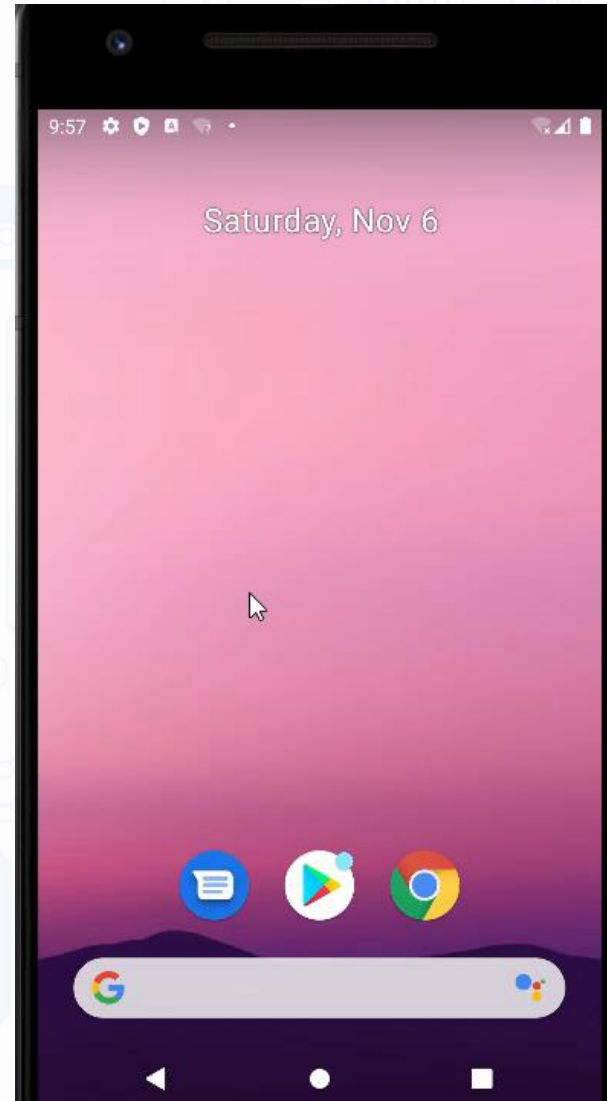
### Design Layout





## Simple Greet App Example

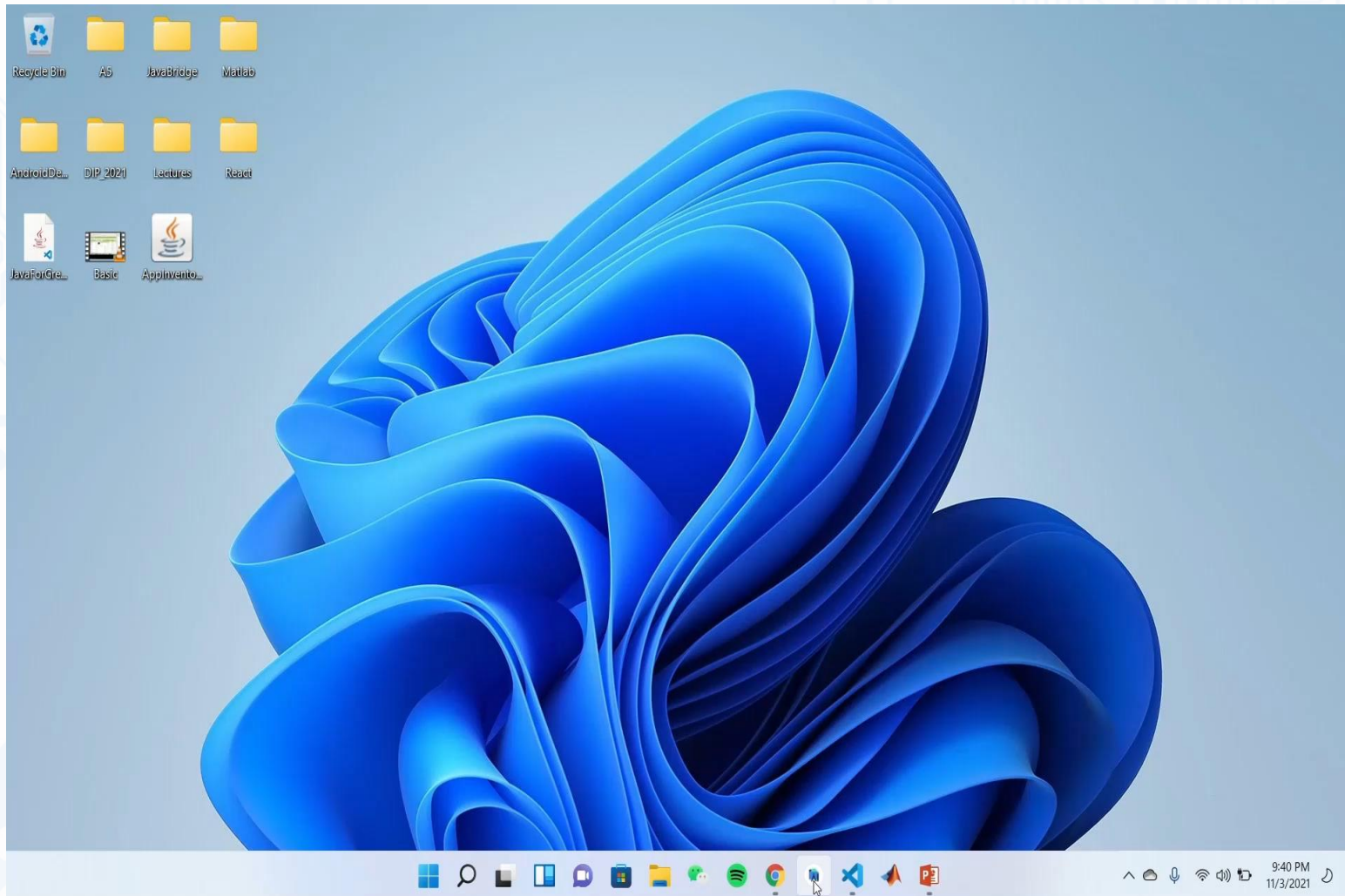
# App Demo







## Simple Greet App Example







**“BE HUMBLE. BE HUNGRY.  
AND ALWAYS BE THE  
HARDEST WORKER  
IN THE ROOM.”**



江西理工大学

Jiangxi University of Science and Technology

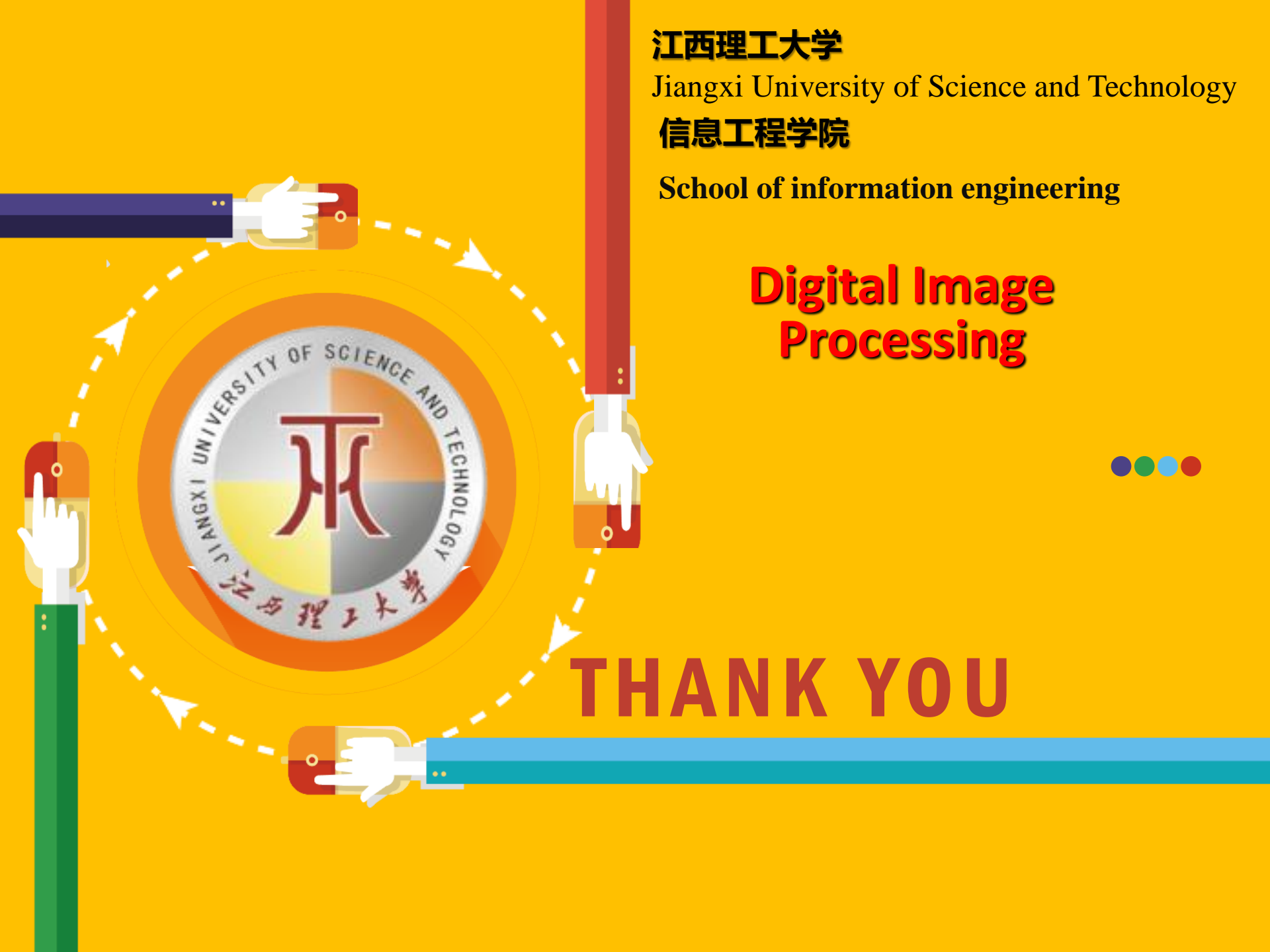
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# Digital Image Processing



# THANK YOU





“The beauty of research is that you never know where it’s going to lead.”

RICHARD ROBERTS  
Nobel Prize in Physiology or  
Medicine 1993