

# How to Create and Run a New App in Android Studio Using Bluestacks

This document is a guide, in addition to the module manual, to creating a new Android app in Android Studio and running it on Bluestacks, an Android emulator.

## Step 1: Install Necessary Tools

### 1.1. Install Android Studio

1. Download Android Studio.
2. Run the installer and follow the setup instructions.

Ensure the AVD is selected during installation.

3. Open Android Studio and configure any necessary updates.

### 1.2. Install Bluestacks

1. Download Bluestacks.
2. Install Bluestacks on your system and sign in with a Google account to enable app testing.

## Step 2: Create a New Android Project

### 2.1. Launch Android Studio

1. Open Android Studio and click "New Project" on the welcome screen.

### 2.2. Configure Project Details

1. Select Project Template:

Choose Empty Activity and click Next.

2. Enter Project Details:

Name: Enter a name for your app.

Package Name: Use a unique identifier.

Save Location: Choose a directory to save your project.

Language: Select Kotlin.

Minimum SDK: Choose API Level 21: Android 5.0 (Lollipop) to support most devices.

3. Click Finish to create your project.

## Step 3: Build the App

### 3.1. Explore the Project Structure

1. Open the res/layout/activity\_main.xml file.
2. Use the Layout Editor to design the app's interface.

Open MainActivity.kt to define the app's behaviour.

```
package com.example.helloworld
```

```
import androidx.appcompat.app.AppCompatActivity
import android.os.Bundle
```

```
class MainActivity : AppCompatActivity() {
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_main)
    }
}
```

3. }

### 3.2. Sync Gradle

- Android Studio will automatically sync your project with Gradle. If not, click File > Sync Project with Gradle Files.

## Step 4: Set Up Bluestacks as an Emulator

### 4.1. Enable Developer Mode in Bluestacks

1. Open Bluestacks and go to Settings > Preferences > Enable Android Debug Bridge (ADB).
  - Note the port displayed.

## 4.2. Connect Bluestacks to Android Studio

1. Open a command prompt or terminal on your computer.
2. Enter the following command to connect Bluestacks:  
`adb connect 127.0.0.1:5555`  
Replace 5555 with the port number displayed in Bluestacks.
3. Verify the connection by running:  
`adb devices`  
You should see Bluestacks listed as a connected device.

## Step 5: Run Your App

### 5.1. Configure Run Settings in Android Studio

1. Click the Run button (green triangle) in the toolbar.
2. Select Bluestacks as the target device.
3. Android Studio will build and install the app on Bluestacks.

### 5.2. Test the App

1. Switch to Bluestacks, where your app will automatically launch.
2. Interact with the app and verify its functionality.

## Tips and Troubleshooting

1. Gradle Issues:
  - If Gradle fails to sync, ensure you have a stable internet connection and try Invalidate Caches/Restart under File.
2. ADB Connection Issues:
  - Ensure that ADB is enabled in Bluestacks.
  - Restart Bluestacks and try reconnecting via `adb connect`.
3. Performance:
  - Allocate sufficient RAM and CPU to Bluestacks in its settings for smoother performance.

## Additional Links:

- Android Studio: <https://developer.android.com/studio>
- Bluestacks: <https://www.bluestacks.com/download.html>
- Creating a new project in Android Studio:  
<https://www.geeksforgeeks.org/how-to-create-start-a-new-project-in-android-studio/>