

# 1. My HelloWorld App.





# Android & app „fundamentals“ ...

- Android е Multi-user GNU/Linux Operating System;
- Всяко приложение има свой собствен UID, т.е. различен потребител;
- Всяко приложение, има свой собствен процес;
- Всеки процес има своя собствена Java VM;
- Тоест приложенията, по подразбиране са изолирани едно от друго и имат достъп само до своите компоненти (освен ако не заявят друго);
- Приложенията (и техните процеси) са активни докато: потребителят реши или системата реши :) обратното (out-of mem/resource condition);
- С други думи – приложенията на Android обичат Java; или по скоро това е езика с чиято помощ можем да правим Android приложения;



# Android & app „fundamentals“ ...

- Android приложение = code + data + resource(s);
- Android Package (.apk) = „Завършеният“ вид на дадено приложение;
- Code – Java; Data - .images || .raw.files; Resources – tons of .xml markup :);
- Основни черти на едно Android приложение:
  - „core“ компоненти;
  - AndroidManifest.xml – „all-in-one“ app bootstrap && control file;
  - Resource(s) – разделени от кода „entities“, които ни „улесняват“ живота като Android devs;



# Android & app „fundamentals“ ...

- „core“ компоненти на Android приложение - т.е. това са „building blocks“ с чиято помощ можем да правим приложения;
- Някой от тях са видими, други не; Някой осигуряват „application-entry-point“; Някой зависят от други - т.е. не съществуват самостоятелно а се нуждаят от boot (създаващ, инстанциращ) компонент;
- Всеки от тях си е самостоятелна единица – били като код или ако щете роля;
- 4 основни типа компоненти:
  - Activities;
  - Services;
  - Content providers;
  - Broadcast receivers;



# Android & app „fundamentals“ ...

- Activities – на кратко, единичен екран със User Interface компоненти;
- Едно приложение може да има няколко Activities;
- Дадено Activity е независимо от останалите в едно приложение;
- Всяко Activity може да е „entry-point“ за дадено приложение;
- Всяко приложение, може да използва и чужди (не-свои) Activities;
- Базов клас: Activity; Тоест всяко Activity произлиза от този базов клас;



# Enough Theory? Let's b(r)ake something...

- Разчитайки на Android Studio IDE и Genymotion емулятора:
  - Стартиране и управление на Genymotion Android Device;
  - MyHelloWorldApp inside IDE & Device;
- В следващите слайдове разглеждаме последователно стъпките, необходими за да осъществим това.



# Emulate me...

A screenshot of a Mac desktop environment. The desktop background is a scenic image of a rocky cliffside. The dock at the bottom contains icons for FileZilla, Pencil, Terminal, Android Studio, Google Chrome, Balsamiq Mockups 3, Safari, Opera Inter...owser, TextWrangle, VLC, Thunderbird, and Skype. The Genymotion application window is open in the foreground, titled "Genymotion for personal use". The application's interface includes a "Start" button, a red plus icon with the text "Add a new virtual device" and "Ctrl+N", and "About" and "Help" buttons. Below the toolbar is a section titled "Your virtual devices" which is currently empty. The system status bar at the top of the screen shows the time as 16:20, the user as Hristo Hristov, and system metrics like 96% battery and 99% memory usage.



# Emulate me...

A screenshot of a Mac desktop environment. The desktop background is a scenic view of a rocky cliffside. The top of the screen shows the system status bar with the time 'Mon 16:20' and the user name 'Hristo Hristov'. A window titled 'Genymotion for personal use' is open, displaying a 'Virtual device creation wizard'. The wizard's main window has a dark header with the text 'Retrieve and deploy the new virtual device'. Below the header, there are two large, pink, hollow circles. At the bottom of the wizard window, a progress bar shows '20%' completion, with the text 'Downloading files... (32MB / 157MB)' below it. There are 'Cancel' and 'Finish' buttons at the bottom right of the wizard window. The desktop is cluttered with various application icons, including FileZilla, Pencil, Terminal, Android Studio, Google Chrome, Balsamiq Mockups 3, Safari, Opera, TextWrangle, VLC, Thunderbird, and Skype. Several 'Screen Shot' icons are also visible on the right side of the desktop.



# Emulate me...

A screenshot of a Mac desktop environment. The desktop background is a scenic landscape with a rocky cliffside and green trees. The top of the screen shows the macOS menu bar with the Apple logo, menu items (Finder, File, Edit, View, Go, Window, Help), system status icons (MEM 99%, Wi-Fi, 96% battery), and the date/time (Mon 16:20) and user name (Hristo Hristov). The desktop is populated with various application icons, including FileZilla, Pencil, Terminal, Android Studio, Google Chrome, Balsamiq Mockups 3, Safari, Opera, TextWrangler, VLC, Thunderbird, and Skype. Several "Screen Shot" files are scattered on the right side of the desktop. A window titled "Genymotion for personal use" is open, displaying the "Virtual device creation wizard". The wizard's main heading is "Retrieve and deploy the new virtual device". Below this, there is a preview window showing a virtual device screen with a user profile card for "Lauren Ipsum" and a grid icon. To the right of the preview, text reads: "Make your app as beautiful as designed by using Pixel Perfect, where one pixel of your virtual device is displayed on one pixel of your screen." Below the preview, a status bar shows "1.1 Screen ratio Ctrl+R" and "100%". At the bottom of the wizard, a green checkmark icon is followed by the text "The virtual device has been created successfully.", and a pink "Finish" button is located in the bottom right corner. The user name "User: 1z0" is visible at the bottom left of the wizard window.



# Emulate me...

A screenshot of a Mac desktop environment. The desktop background is a scenic image of a rocky cliffside. The top of the screen shows the system status bar with the time 'Mon 16:21', the user name 'Hristo Hristov', and various system icons including battery (96%), Wi-Fi, and network. The desktop is populated with several application icons: FileZilla, Pencil, Terminal, Android Studio, Google Chrome, Balsamiq Mockups 3, Safari, Opera, TextWrangler, VLC, Thunderbird, and Skype. A Genymotion application window is open in the center, titled 'Genymotion for personal use'. The window has a dark header bar with a play button, a plus sign, and a settings gear. Below the header, there are buttons for 'Start', 'Add', and 'Settings'. The main content area is titled 'Your virtual devices' and contains a single entry: 'Google Nexus 4 - 4.2.2 - API 17 - 768x1280'. The entry has icons for settings, refresh, and delete. The bottom of the window shows the user name 'User: 1z0'.

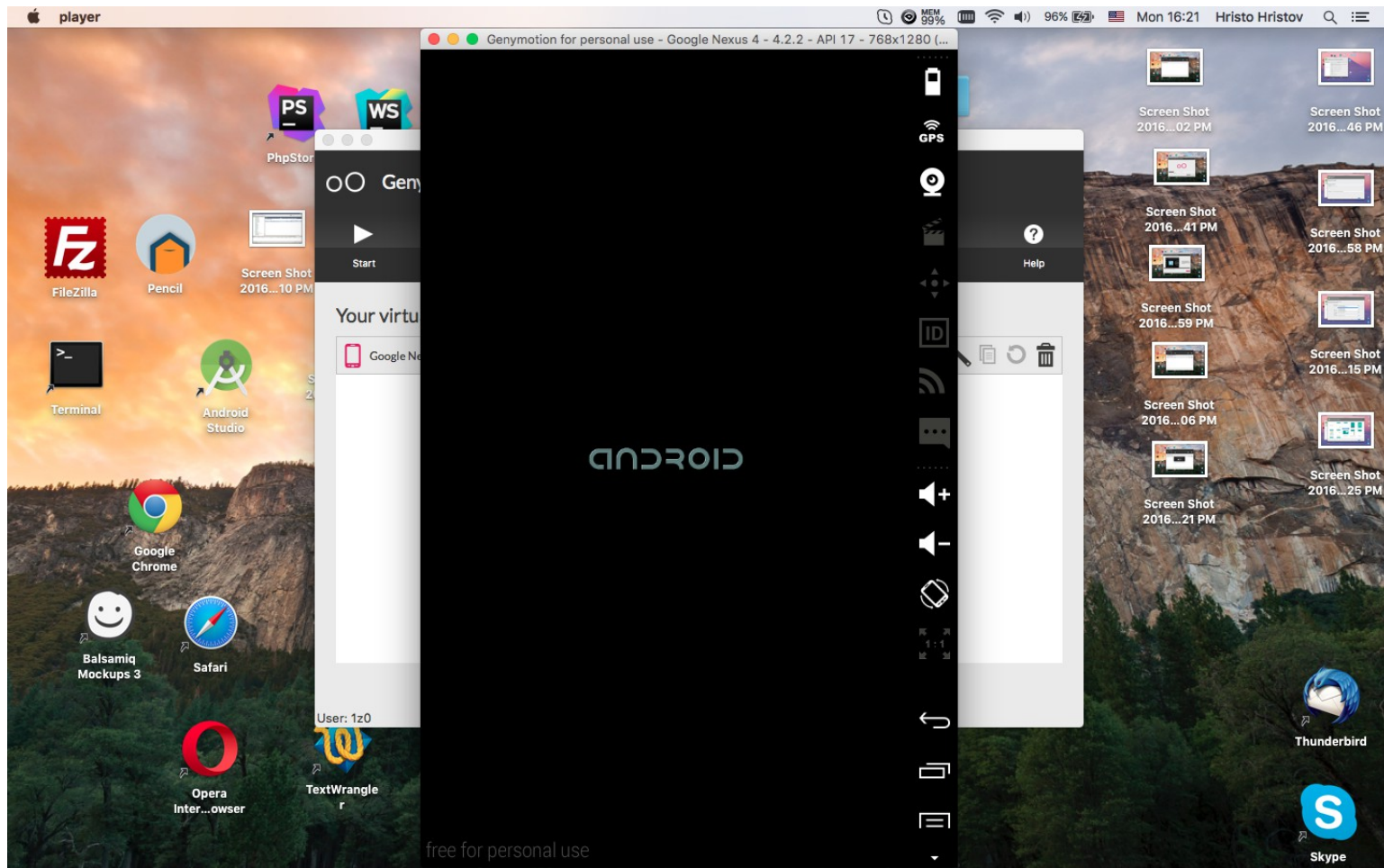


# Emulate me...

A screenshot of a Mac OS desktop environment. The desktop background is a scenic landscape with a rocky cliff and green trees. The top of the screen shows the system status bar with the time 'Mon 16:21', the name 'Hristo Hristov', and various system icons including battery (96%), network, and memory (95%). The desktop is populated with several application icons: FileZilla, Pencil, Terminal, Android Studio, Google Chrome, Balsamiq Mockups 3, Safari, Opera, TextWrangle, VLC, Thunderbird, and Skype. A Genymotion window is open in the center, titled 'Genymotion for personal use'. The window has a dark header with 'Genymotion' and navigation buttons for 'Start', 'Add', 'Settings', 'About', and 'Help'. Below the header, the text 'Your virtual devices' is displayed. A single virtual device is listed: 'Google Nexus 4 - 4.2.2 - API 17'. A modal dialog box is overlaid on the device list, containing the text 'Starting virtual device...' and a progress bar.



# Emulate me...



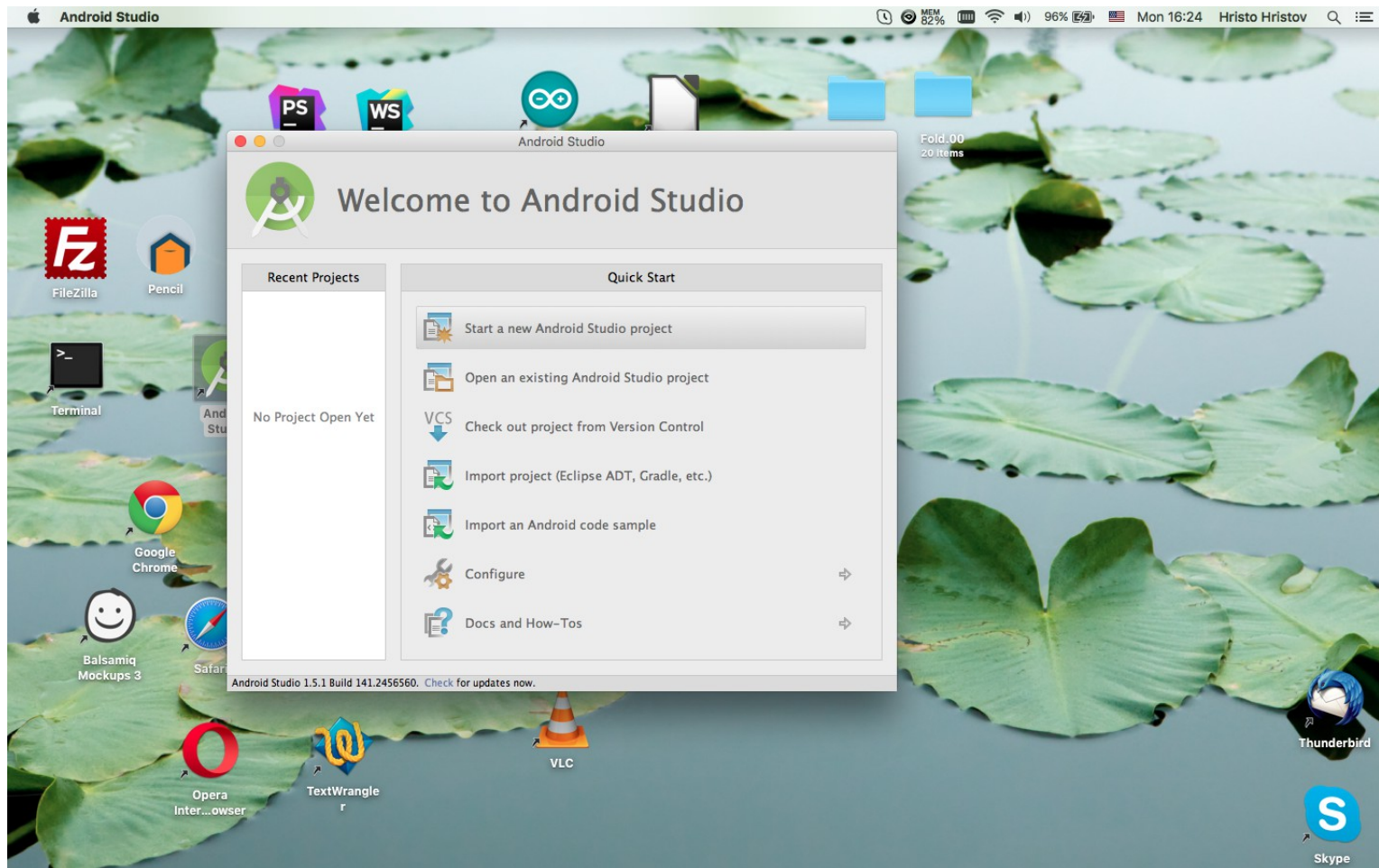


# Emulate me...

A screenshot of a Mac desktop environment. The desktop background is a scenic landscape with a rocky cliff and green trees. Several application icons are visible, including FileZilla, Pencil, Terminal, Android Studio, Google Chrome, Balsamiq Mockups 3, Safari, Opera Inter...owser, and TextWrangle. A window titled "Genymotion for personal use - Google Nexus 4 - 4.2.2 - API 17 - 768x1280 (...)" is open in the center, displaying an Android emulator interface. The emulator screen shows a dark theme with a clock, a camera icon, and the text "Make yourself at home" and "You can put your favorite apps here." Below this, it says "To see all your apps, touch the circle." The emulator's dock at the bottom contains icons for Phone, Browser, App Drawer, Messages, and OK. The Mac's top status bar shows the time as 16:21, the user as Hristo Hristov, and various system icons like battery (96%), Wi-Fi, and network. A vertical sidebar on the right side of the emulator window contains icons for Home, Help, and other functions.



# Time to mess up with the IDE...





# Time to mess up with the IDE...

The screenshot shows the 'New Project' dialog box in the Android Studio IDE. The dialog is titled 'New Project' and 'Android Studio'. It contains the following fields and options:

- Application name:** MyHelloWorldApp
- Company Domain:** yaht.net
- Package name:** net.yaht.myhelloworldapp (with an [Edit](#) link)
- Project location:** /Users/lisp/AndroidStudioProjects/MyHelloWorldApp

At the bottom of the dialog, there are four buttons: 'Cancel', 'Previous', 'Next', and 'Finish'. The 'Next' button is highlighted in blue.

The background of the desktop shows a green lily pad pattern. In the bottom right corner, there are icons for Thunderbird and Skype. The top of the screen shows the system tray with various icons and the date/time: 'Mon 16:24 Hristo Hristov'.



# Time to mess up with the IDE...

The screenshot shows the 'Create New Project' dialog in Android Studio, specifically the 'Target Android Devices' screen. The dialog is titled 'Create New Project' and 'Target Android Devices'. It prompts the user to 'Select the form factors your app will run on' and notes that 'Different platforms may require separate SDKs'. The 'Phone and Tablet' option is selected with a checked checkbox. Below this, there are four sections for different form factors, each with a 'Minimum SDK' dropdown menu:

- Phone and Tablet** (checked): Minimum SDK dropdown is open, showing a list of API levels from 15 to 23. 'API 17: Android 4.2 (Jelly Bean)' is selected with a checkmark.
- Wear** (unchecked): Minimum SDK dropdown is set to 'API 21: Android 5.0 (Lollipop)'.
- TV** (unchecked): Minimum SDK dropdown is set to 'API 21: Android 5.0 (Lollipop)'.
- Android Auto** (unchecked): Minimum SDK dropdown is set to 'API 21: Android 5.0 (Lollipop)'.
- Glass** (unchecked): Minimum SDK dropdown is set to 'Glass Development Kit Preview'.

At the bottom of the dialog, there are four buttons: 'Cancel', 'Previous', 'Next', and 'Finish'. The background of the desktop shows a green lily pad wallpaper, a taskbar with icons for Opera, TextWrangle, VLC, Thunderbird, and Skype, and system tray icons for memory usage (82%), Wi-Fi, and battery (96%). The system clock shows 'Mon 16:25' and the user name is 'Hristo Hristov'.



# Time to mess up with the IDE...

A screenshot of the Android Studio IDE showing the 'Add an activity to Mobile' dialog box. The dialog is titled 'Create New Project' and 'Add an activity to Mobile'. It displays a grid of activity templates. The 'Empty Activity' template is selected and highlighted with a blue border. Other templates include 'Blank Activity', 'Fullscreen Activity', 'Google AdMob Ads Activity', 'Google Maps Activity', 'Login Activity', 'Master/Detail Flow', 'Navigation Drawer Activity', and 'Scrolling Activity'. At the bottom of the dialog, there are buttons for 'Cancel', 'Previous', 'Next', and 'Finish'. The background shows the desktop environment with a green lily pad wallpaper, taskbar icons for Thunderbird and Skype, and system tray information including 'Mon 16:25 Hristo Hristov'.



# Time to mess up with the IDE...

The screenshot shows the 'Customize the Activity' dialog box in Android Studio. The dialog is titled 'Customize the Activity' and has a subtitle 'Creates a new empty activity'. On the left, there is a preview of an 'Empty Activity' with a white background and a teal header bar containing a white back arrow. The main area contains the following fields and options:

- Activity Name: MainActivity
- Generate Layout File
- Layout Name: activity\_main

At the bottom, there are four buttons: 'Cancel', 'Previous', 'Next', and 'Finish'. The 'Finish' button is highlighted in blue. The background of the desktop shows a green leaf pattern with several 'Screen Shot' icons and application icons like Thunderbird and Skype.

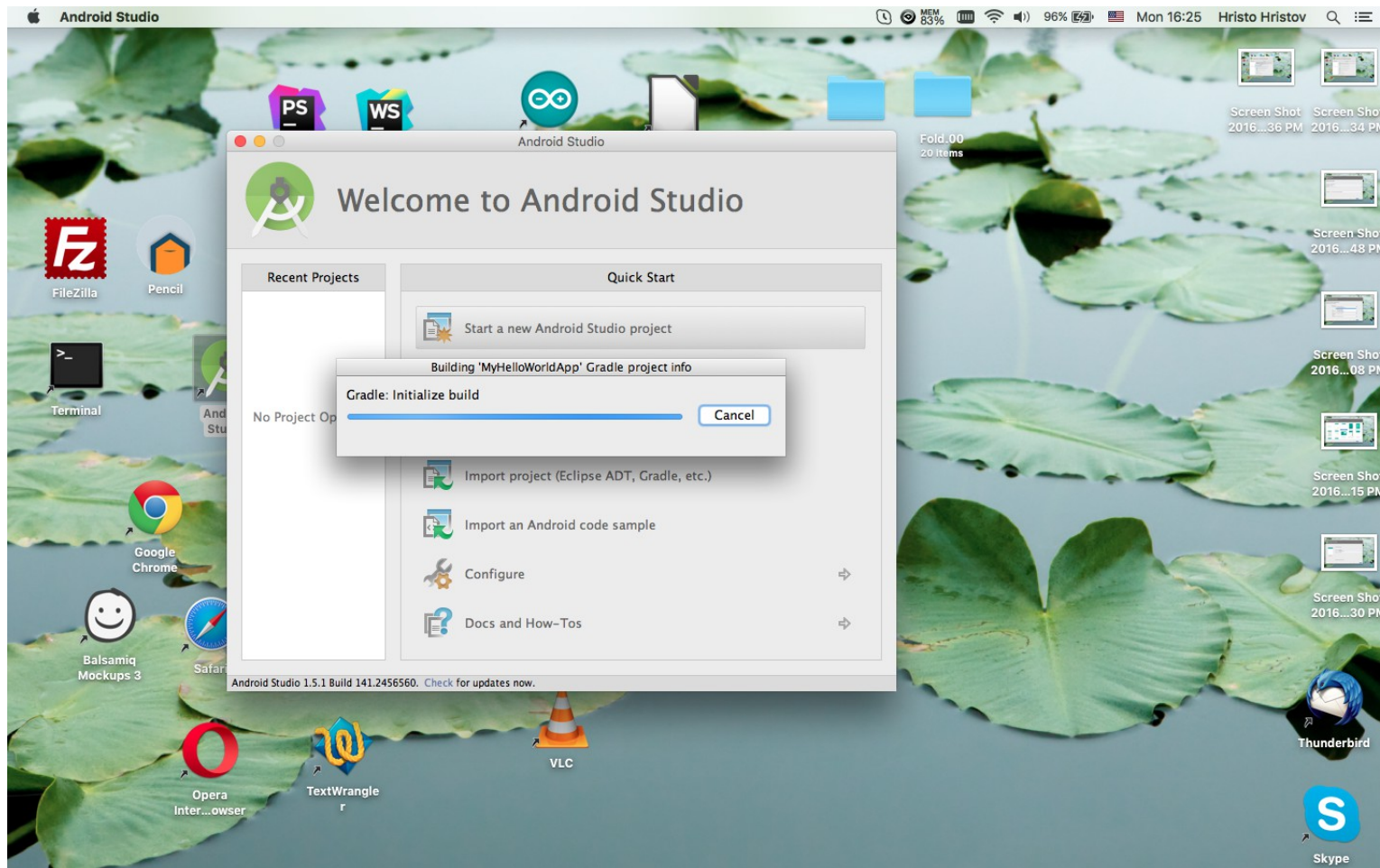


# Time to mess up with the IDE...

A screenshot of a Mac OS desktop environment. The desktop background is a green lily pad pattern. In the center, the Android Studio application window is open, displaying the 'Welcome to Android Studio' screen. The window title bar reads 'Android Studio'. The main content area is divided into 'Recent Projects' (empty) and 'Quick Start' (containing options like 'Start a new Android Studio project', 'Import project (Eclipse ADT, Gradle, etc.)', 'Import an Android code sample', 'Configure', and 'Docs and How-Tos'). A smaller dialog box titled 'Creating project...' is overlaid on the 'Quick Start' section, showing a progress bar and the text 'Initializing Phone and Tablet'. The desktop has various icons including FileZilla, Pencil, Terminal, Google Chrome, Balsamiq Mockups 3, Safari, Opera, TextWrangler, VLC, Thunderbird, and Skype. The top of the screen shows the system status bar with the date 'Mon 16:25', the name 'Hristo Hristov', and system icons for battery (96%), network, and memory (83%).



# Time to mess up with the IDE...





# Time to mess up with the IDE...

A screenshot of the Android Studio IDE. The main window displays the code for MainActivity.java. The code is as follows:

```
package net.yaht.myhelloworldapp;

import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;

public class MainActivity extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
    }
}
```

The left sidebar shows the project structure with folders for manifests, java, res (drawable, layout, mipmap), and values. The bottom status bar indicates "Gradle build finished in 5s 989ms (11 minutes ago)".



# Time to mess up with the IDE...

The screenshot shows the Android Studio IDE interface. The main window displays the 'MyHelloWorldApp' project structure on the left, including folders for 'manifests', 'java', 'res', and 'values'. The 'Preferences' dialog box is open, showing the 'Appearance & Behavior' section. The 'Appearance' sub-section is selected, and the 'Theme' is set to 'Darcula'. The 'UI Options' section includes checkboxes for 'Cyclic scrolling in list', 'Show icons in quick navigation', 'Show Flags for Languages', 'Automatically position mouse cursor on default button', and 'Hide navigation popups on focus loss'. The 'Window Options' section includes checkboxes for 'Animate windows', 'Show tool window bars', 'Show memory indicator', 'Show tool window numbers', 'Disable mnemonics in menu', 'Allow merging buttons on dialogs', 'Disable mnemonics in controls', 'Small labels in editor tabs', 'Display icons in menu items', 'Widescreen tool window layout', 'Side-by-side layout on the left', and 'Side-by-side layout on the right'. The 'Tooltip initial delay (ms)' is set to 1200. The 'OK' button is highlighted in blue. The status bar at the bottom shows 'Gradle build finished in 5s 989ms (11 minutes ago)' and '13:11 LF: UTF-8: Context: <no context>'.



# Time to mess up with the IDE...

The screenshot shows the Android Studio IDE interface. The top menu bar includes File, Edit, View, Navigate, Code, Analyze, Refactor, Build, Run, Tools, VCS, Window, and Help. The title bar indicates the current file is MainActivity.java in a project named MyHelloWorldApp. The left sidebar shows the Project structure with folders for manifests, java, and res. The main editor displays the following Java code:

```
package net.yaht.myhelloworldapp;

import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;

public class MainActivity extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
    }

}
```

The bottom status bar shows the time as 13:11, the encoding as UTF-8, and the context as <no context>. The system tray on the right includes icons for Maven Projects, Gradle, and Android Model.



# Time to mess up with the IDE...

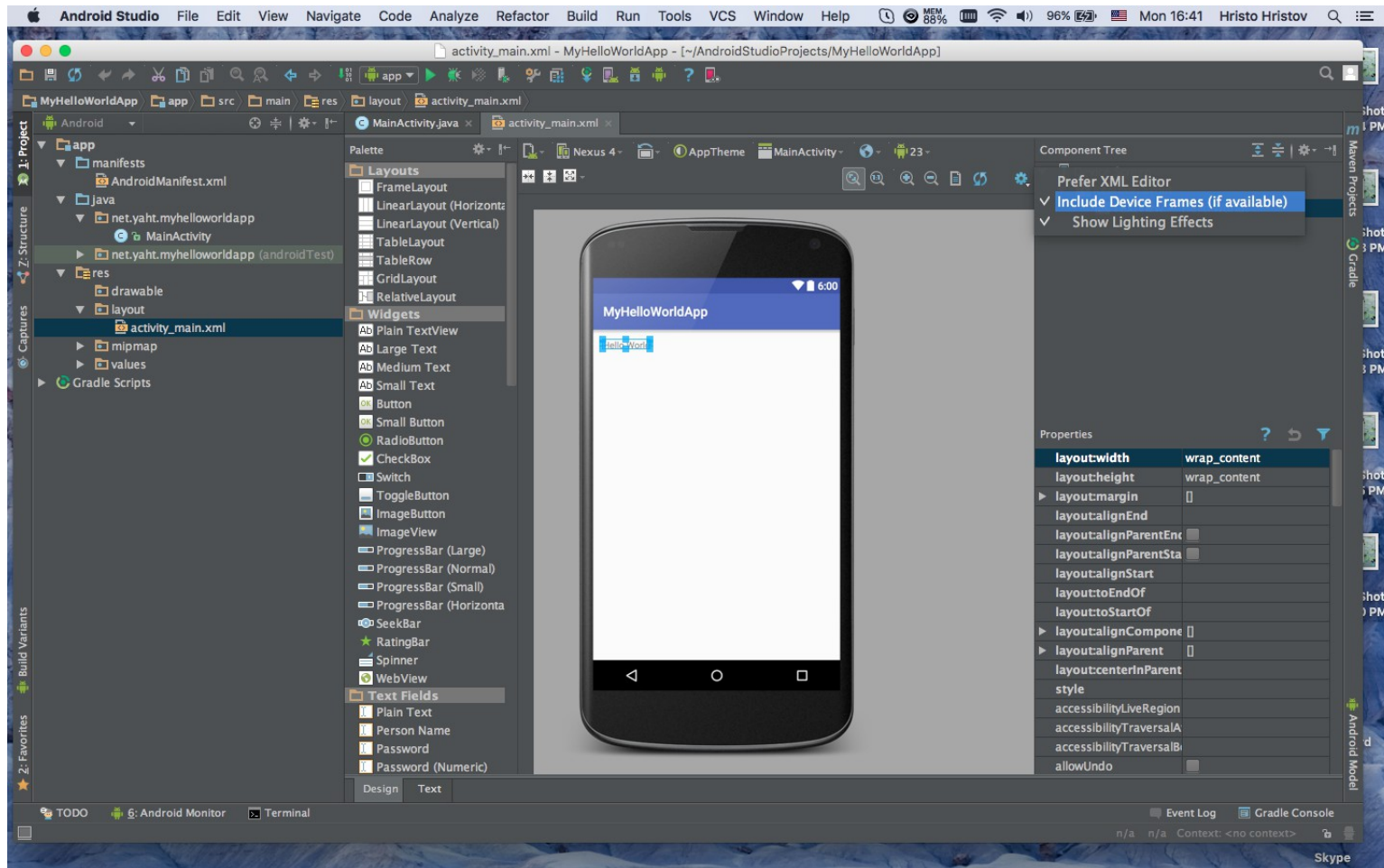
The screenshot displays the Android Studio IDE interface. At the top, the menu bar includes options like File, Edit, View, Navigate, Code, Analyze, Refactor, Build, Run, Tools, VCS, Window, and Help. The main workspace is divided into several panels:

- Project Structure:** Shows the project hierarchy for 'MyHelloWorldApp', including 'manifests', 'java', 'res', and 'layout' folders.
- Palette:** A central panel containing various UI widgets such as TextView, Button, EditText, and ProgressBar.
- Design View:** A central preview window showing a virtual smartphone with the text 'MyHelloWorldApp' and 'Hello World' displayed on its screen.
- Component Tree:** Shows the hierarchy of the current view, including 'Device Screen' and 'RelativeLayout'.
- Properties:** A panel on the right showing the properties of the selected widget, such as 'layout:width', 'layout:height', and 'wrap\_content'.

The bottom status bar shows 'TODO', 'Android Monitor', and 'Terminal' tabs. The system tray at the bottom right includes 'Event Log', 'Gradle Console', and 'Skype'.



# Time to mess up with the IDE...





# Time to mess up with the IDE...

The screenshot displays the Android Studio IDE interface. The main window shows a virtual device named 'Nexus 4' running the 'MyHelloWorldApp'. The app's UI consists of a blue header bar with the text 'MyHelloWorldApp' and a white content area with a blue border containing the text 'Hello World'. The interface is divided into several panels:

- Project Structure:** Shows the project hierarchy, including 'app', 'manifests', 'java', 'res', and 'layout'.
- Palette:** A collection of UI components like 'LinearLayout', 'TextView', 'Button', etc., categorized into 'Layouts', 'Widgets', and 'Text Fields'.
- Component Tree:** Displays the hierarchy of the current view, showing 'Device Screen' containing a 'RelativeLayout' with a 'TextView - "Hello World!"'.
- Properties:** A table of properties for the selected 'TextView' component.

Property	Value
layout:width	wrap_content
layout:height	wrap_content
layout:margin	[]
layout:alignEnd	
layout:alignParentEnd	<input type="checkbox"/>
layout:alignParentStart	<input type="checkbox"/>
layout:alignStart	
layout:toEndOf	
layout:toStartOf	
layout:alignComponent	[]
layout:alignParent	[]
layout:centerInParent	
style	
accessibilityLiveRegion	
accessibilityTraversalAfter	
accessibilityTraversalBefore	
allowUndo	<input type="checkbox"/>

The bottom status bar shows 'Run selected configuration' and 'Event Log'.



# Time to mess up with the IDE...

The screenshot displays the Android Studio IDE interface. The main window shows the 'activity\_main.xml' file in the Design view. A 'Device Chooser' dialog box is open in the center, allowing the user to select a device for running the application. The dialog has two tabs: 'Choose a running device' and 'Launch emulator'. Under 'Choose a running device', there is a table with the following data:

Device	State	Compatible	Serial Number
Genymotion Google Nexus 4 - 4.2.2 - API 17	Online	Yes	192.168...

Below the table, there are options to 'Launch emulator' and 'Use same device for future launches'. The 'Launch emulator' option is selected, and the 'Android virtual device' dropdown is set to 'Nexus 5 API 17'. The 'OK' button is highlighted.

The IDE interface includes a Project view on the left showing the project structure, a Palette of UI widgets, a Component Tree on the right showing the current view hierarchy, and a Properties panel at the bottom right. The status bar at the bottom shows 'Run selected configuration' and 'Event Log'.



# Time to mess up with the IDE...

A screenshot of a Mac desktop environment. The desktop background is a blue sky with clouds. Various application icons are visible, including FileZilla, Pencil, Terminal, Android Studio, Google Chrome, Balsamiq Mockups 3, Safari, Opera Inter...wser, and TextWrangle. A window titled "Genymotion for personal use - Google Nexus 4 - 4.2.2 - API 17 - 768x1280 (...)" is open, displaying a virtual Android phone. The phone screen shows an app titled "MyHelloWorldApp" with the text "Hello World!". The phone's status bar at the top shows the time as 2:42 and various icons for Wi-Fi, signal strength, and battery. The Mac's menu bar at the top shows the system clock as "Mon 16:42" and the user name "Hristo Hristov". On the right side of the desktop, there are several "Screen Shot" icons with timestamps ranging from 2016...06 PM to 2016...34 PM. At the bottom right, there are icons for Thunderbird and Skype. The text "free for personal use" is visible at the bottom of the virtual phone screen.



# Time to mess up with the IDE...

A screenshot of a Mac desktop environment. The desktop background is a blue sky with clouds. On the left side, there are several application icons: FileZilla, Pencil, Terminal, Android Studio, Google Chrome, Balsamiq Mockups 3, Safari, Opera Inter...wser, and TextWrangle. In the center, a window titled "Genymotion for personal use - Google Nexus 4 - 4.2.2 - API 17 - 768x1280 (...)" is open. This window displays a virtual Android phone screen. The phone screen shows a dark background with two lit candles. At the bottom of the phone screen, there is a window titled "MyHelloWorld" with a text input field containing "MyHelloWorldApp" and a green Android robot icon. The phone screen also shows a status bar at the top with the time "2:42" and various icons. On the right side of the Mac desktop, there are several "Screen Shot" icons with timestamps ranging from 2016...06 PM to 2016...48 PM. At the bottom right, there are icons for Thunderbird and Skype. The top of the Mac desktop shows the system menu bar with the time "Mon 16:42", the user name "Hristo Hristov", and various system icons including battery, Wi-Fi, and volume.



# Time to mess up with the IDE...

The screenshot displays the Android Studio IDE. The main editor shows the 'activity\_main.xml' file in Design mode, with a context menu open over the design view. The menu lists API levels from 17 to 23, with 'API 23: Android 6.0' selected. The left sidebar shows the project structure for 'MyHelloWorldApp'. The bottom panel shows the Android Monitor with a logcat view displaying system logs.

Android Monitor Logcat:

```
02-29 14:43:41.277 4587-4587/? D/libEGL: loaded /system/lib/egl/libEGL_genymotion.so
02-29 14:45:41.289 4587-4587/? D/libEGL: loaded /system/lib/egl/libGLESv1_CM_genymotion.so
02-29 14:45:41.289 4587-4587/? D/libEGL: loaded /system/lib/egl/libGLESv2_genymotion.so
02-29 14:45:41.301 4587-4587/? W/EGL_genymotion: eglSurfaceAttrib not implemented
02-29 14:45:41.305 4587-4587/? D/OpenGLESRenderer: Enabling debug mode 0
02-29 14:45:41.313 4587-4590/? D/dalvikvm: GC_CONCURRENT freed 191K, 11% free 2552K/2860K, paused 1ms+0ms, total 4ms
02-29 14:45:47.897 4587-4587/net.yaht.myhelloriddapp W/EGL_genymotion: eglSurfaceAttrib not implemented
02-29 14:46:09.633 4587-4587/net.yaht.myhelloriddapp W/EGL_genymotion: eglSurfaceAttrib not implemented
```



# Time to mess up with the IDE...

The screenshot displays the Android Studio IDE interface. The main window shows the 'activity\_main.xml' file in Design mode. A context menu is open over the 'TextView' widget, listing API levels from 17 to 23. The 'Properties' panel on the right shows layout attributes for the selected widget. The bottom panel shows the Android Monitor with a logcat view displaying system logs.

API Levels in Context Menu:

- Automatically Pick Best
- API 23: Android 6.0
- API 22: Android 5.1.1
- API 21: Android 5.0.1
- API 20: Android 4.4W.2
- API 19: Android 4.4.2
- API 18: Android 4.3.1
- API 17: Android 4.2.2
- Preview Android Versions

Properties Panel:

Property	Value
layout:width	wrap_content
layout:height	wrap_content
layout:margin	[]
layout:alignEnd	
layout:alignParent	<input type="checkbox"/>
layout:alignParent	<input type="checkbox"/>
layout:alignStar	
layout:toEndOf	
layout:toStartOf	
layout:alignCon	[]

Android Monitor Logcat:

```
02-29 14:45:41.277 4587-4587/? D/LibEGL: loaded /system/lib/egl/libEGL_genymotion.so
02-29 14:45:41.280 4587-4587/? D/LibEGL: loaded /system/lib/egl/libGLESv1_CM_genymotion.so
02-29 14:45:41.289 4587-4587/? D/LibEGL: loaded /system/lib/egl/libGLESv2_genymotion.so
02-29 14:45:41.301 4587-4587/? W/EGL_genymotion: eglSurfaceAttrib not implemented
02-29 14:45:41.305 4587-4587/? D/OpenGLRenderer: Enabling debug mode 0
02-29 14:45:41.313 4587-4590/? D/dalvikvm: GC_CONCURRENT freed 191K, 11% free 2552K/2860K, paused 1ms+0ms, total 4ms
02-29 14:45:47.897 4587-4587/net.yaht.myhelloworldapp W/EGL_genymotion: eglSurfaceAttrib not implemented
02-29 14:46:09.633 4587-4587/net.yaht.myhelloworldapp W/EGL_genymotion: eglSurfaceAttrib not implemented
```



# Time to mess up with the IDE...

The screenshot displays the Android Studio IDE interface. The main window shows the 'activity\_main.xml' file in design mode, displaying a simple Android app layout with a 'Hello World!' text view. A context menu is open over the design view, listing API levels from 17 to 23, with 'API 23: Android 6.0' selected. The interface includes a Project view on the left, a Palette of widgets, a Component Tree on the right, and an Android Monitor at the bottom showing system logs for the running application.

Android Monitor Log:

```
02-29 14:43:41.277 4587-4587/I D/LOGCAT: loaded /system/lib/egl/libEGL_genymotion.so
02-29 14:45:41.289 4587-4587/I D/libEGL: loaded /system/lib/egl/libGLESv1_CM_genymotion.so
02-29 14:45:41.289 4587-4587/I D/libEGL: loaded /system/lib/egl/libGLESv2_genymotion.so
02-29 14:45:41.301 4587-4587/I W/EGL_genymotion: eglSurfaceAttrib not implemented
02-29 14:45:41.305 4587-4587/I D/OpenGLESRenderer: Enabling debug mode 0
02-29 14:45:41.313 4587-4590/I D/dalvikvm: GC_CONCURRENT freed 191K, 11% free 2552K/2860K, paused 1ms+0ms, total 4ms
02-29 14:45:47.897 4587-4587/net.yaht.myhelloridapp W/EGL_genymotion: eglSurfaceAttrib not implemented
02-29 14:46:09.633 4587-4587/net.yaht.myhelloridapp W/EGL_genymotion: eglSurfaceAttrib not implemented
```



# we'll continue with...

- Още App „fundamentals“ -  
<http://developer.android.com/guide/components/fundamentals.html>
- Activities, Activities, Activities -  
<http://developer.android.com/guide/components/activities.html>
- Please Have A Read /or Look :)/