

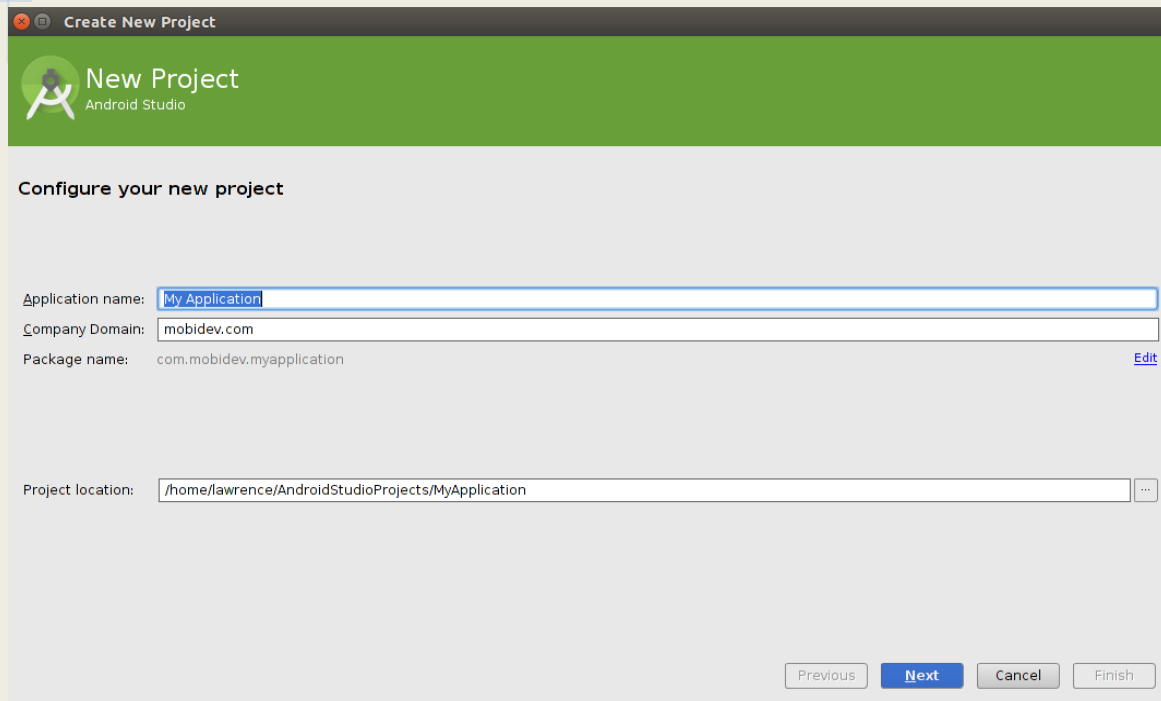


# Android Concepts

Getting started with Android Studio



# Create project



Create New Project

New Project  
Android Studio

Configure your new project

Application name:

Company Domain:

Package name:  [Edit](#)

Project location:  ...

[Previous](#) **Next** [Cancel](#) [Finish](#)

You can ignore and leave the default details or:

- Give your project a name
- configure a custom domain name
- change location of project


Then click next

# Target Android Devices

Pick the devices that you are targeting

Version	Codename	API	Distribut
2.2	Froyo	8	0.4%
2.3.3 - 2.3.7	Gingerbread	10	6.4%
4.0.3 - 4.0.4	Ice Cream Sandwich	15	5.7%
4.1.x	Jelly Bean	16	16.5%
4.2.x		17	18.6%
4.3		18	5.6%
4.4	KitKat	19	41.4%
5.0	Lollipop	21	5.0%

Create New Project

 Target Android Devices

Select the form factors your app will run on

Different platforms require separate SDKs

☒ Phone and Tablet  
Minimum SDK: API 8: Android 2.2 (Froyo)  
Lower API levels target more devices, but have fewer features available. By targeting API 8 and later, your app will run on approximately 100.0% of the devices that are active on the Google Play Store. [Help me choose.](#)

☐ TV  
Minimum SDK: API 21: Android 5.0 (Lollipop)

☐ Wear  
Minimum SDK: API 21: Android 5.0 (Lollipop)

☐ Glass (Not Installed)  
Minimum SDK:

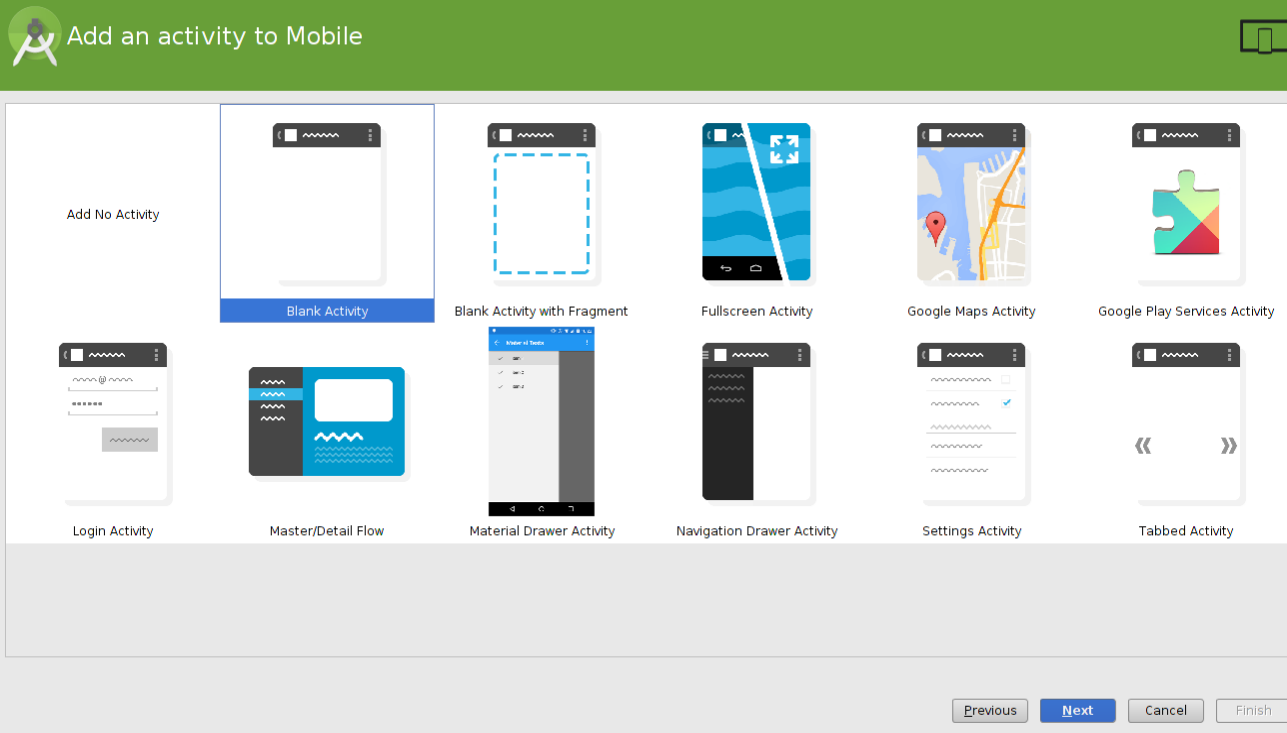
Previous

Next

Cancel

Finish



# Select a template




Choose a template according to your need. You can customize it later

You can also have custom templates

# Customize the Activity

 Customize the Activity 



Blank Activity

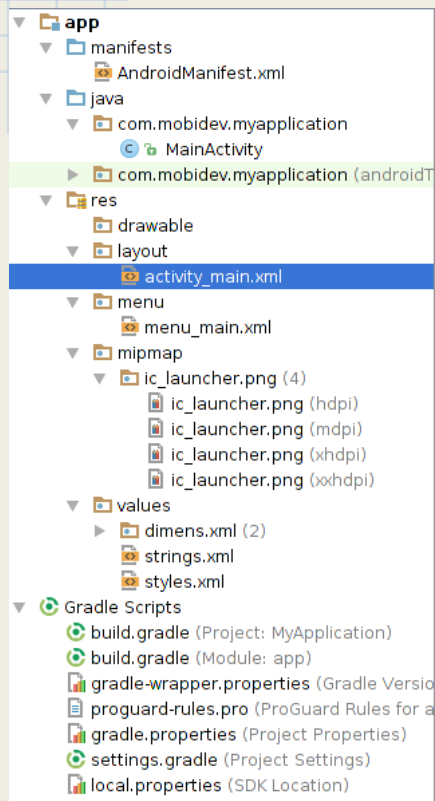
Creates a new blank activity with an action bar.

Activity Name:	<input type="text" value="MainActivity"/>
Layout Name:	<input type="text" value="activity_main"/>
Title:	<input type="text" value="MainActivity"/>
Menu Resource Name:	<input type="text" value="menu_main"/>

The name of the activity class to create

Assign your custom names for different components

# Basic Project Structure



Your java classes will reside in the java directory and the res directory is where you keep all the resources: layouts, images etc

App permissions will go in the AndroidManifest.xml file

NB: The mipmap folders are for placing your app icons in only. Any other drawable assets you use should be placed in the relevant drawable folders as before.

Project level gradle script is used to define repositories and dependencies.

# AndroidManifest.xml

Describes the fundamental characteristics of the app and defines each of its components.

# app/build.gradle

Android Studio uses Gradle to compile and build app.

Two gradle files: project level and module level

**NB: We will focus more on module level gradle file. This is also where you set build dependencies, including defaultConfig settings.**



# defaultConfig

- ❖ `compileSdkVersion`  
The platform version against which you will compile your app.  
By default set to the latest version of Android available in your SDK.
- ❖ `applicationId`  
Fully qualified package name for your application that you specified during new project workflow.
- ❖ `minSdkVersion`  
The earliest version of the Android SDK that your app supports.
- ❖ `targetSdkVersion`  
Indicates the highest version of Android with which you have tested your application

# Project-Level Gradle

```
// Top-level build file where you can add configuration options common to all sub-projects/modules.

buildscript {
    repositories {
        jcenter()
    }
    dependencies {
        classpath 'com.android.tools.build:gradle:1.1.0'

        // NOTE: Do not place your application dependencies here; they belong
        // in the individual module build.gradle files
    }
}

allprojects {
    repositories {
        jcenter()
    }
}
```

# Module-Level Gradle

```
apply plugin: 'com.android.application'

android {
    compileSdkVersion 21
    buildToolsVersion "21.1.2"

    defaultConfig {
        applicationId "com.mobidev.myapplication"
        minSdkVersion 8
        targetSdkVersion 21
        versionCode 1
        versionName "1.0"
    }
    buildTypes {
        release {
            minifyEnabled false
            proguardFiles getDefaultProguardFile('proguard-android.txt'), 'proguard-rules.pro'
        }
    }
}

dependencies {
    compile fileTree(dir: 'libs', include: ['*.jar'])
    compile 'com.android.support:appcompat-v7:21.0.3'
}
```

# Resourceful links

[https://developer.android.com/about/dashboards/index.html?utm\\_source=suzunone#Platform](https://developer.android.com/about/dashboards/index.html?utm_source=suzunone#Platform)

<http://stackoverflow.com/questions/28065267/mipmap-vs-drawable-folders>

Creating an Android Project: <https://developer.android.com/training/basics/firstapp/creating-project.html>

Android Tutorial for Beginners: <http://www.raywenderlich.com/78574/android-tutorial-for-beginners-part-1>