

# Android Basics Nanodegree by Google Syllabus

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## Contact Info

While going through the program, if you have questions about anything, you can reach us at [support@udacity.com](mailto:support@udacity.com). For help from Udacity Mentors and your peers visit the Udacity Classroom.

## Nanodegree Program Info

**Version:** 6.0.0

**Length of Program:** 76 Days\*

*\* This is a self-paced program and the length is an estimation of total hours the average student may take to complete all required coursework, including lecture and project time. Actual hours may vary.*

## Part 1: Welcome to the Nanodegree

An introduction to your Nanodegree program.

## Part 2: User Interface

Learn how to transform your hand-drawn app designs into layouts using the XML markup language, and use Views and ViewGroups -- the building blocks of an Android app's user interface -- to display images and text.

### **Project: Build a Single Screen App**

Design and implement a simple app that displays information about a small business.

### **Supporting Lessons**

## Lesson

## Summary

### Building Layouts: Part 1

Learn how to place layouts on a page to create images, buttons, and text on a phone screen

### Quick Check In

Got a handle of Views? Feeling the XML Love? Awesome ... but you've just scratched the surface of what is possible. Onwards!

### Building Layouts: Part 2

Learn how grouping layouts together allows for more creative and original designs

### Practice Set: Building Layouts

Download Android Studio and get your first designs onto an actual phone

## Part 3: User Input

Harness the power of Java to build a coffee-ordering app, use variables to add interactivity to your app, and learn the basics of object-oriented programming.

### Project: Score Keeper App

Implement an app to track scores between two teams playing a game.

### Supporting Lessons

## Lesson

## Summary

### Making an App Interactive: Part 1

### Quick Guide to Using Android Studio and the Emulator

Familiarize yourself with this IDE for a smoother and more efficient app development experience.

### Making an App Interactive: Part 2

### Practice Set: Making an App Interactive

Practice building interactivity and build your second project!

### Project: Quiz App

Design and implement a short quiz app about some topic you are familiar with.

### Supporting Lessons

## Lesson

## Summary

### Object-Oriented Programming: Part 1

### Object-Oriented Programming: Part 2

### Practice Set: Object-Oriented Programming

Practice using object-oriented programming to create a simple user profile app.

## Part 4: Career Services

These Career Services will ensure you make meaningful connections with industry professionals to accelerate your career growth - whether looking for a job or opportunities to collaborate with your peers. Unlike your Nanodegree projects, you do not need to meet specifications on these Services to progress in your program. Submit these Career Services once, and get honest, personalized feedback and next steps from Udacity Career Coaches!

### Project: Improve Your LinkedIn Profile

Find your next job or connect with industry peers on LinkedIn. Ensure your profile attracts relevant leads that will grow your professional network.

#### Supporting Lessons

| Lesson            | Summary   |
|-------------------|---|
| Industry Research | You're building your online presence. Now learn how to share your story, understand the tech landscape better, and meet industry professionals. |

### Project: Optimize Your GitHub Profile

Other professionals are collaborating on GitHub and growing their network. Submit your profile to ensure your profile is on par with leaders in your field.

## Part 5: Multi-Screen Apps

Learn how to show multiple screens in a Miwok language app, and add audio and images to your app. You'll also learn how Android handles touch events, and make visual changes to add polish to your fully functional app.

### Project: Musical Structure App

Create the structure of an app to play music for a user.

#### Supporting Lessons

## Lesson

## Summary

### Intents and Activities

Build the structure of the Miwok language app!

### Java Break: Interfaces

Learn how to take advantage of Interfaces - a core OOP concept in Java that makes your code more flexible.

### Arrays, Lists, Loops, & Custom Classes

Use Arrays, Lists, and Loops to populate the Miwok app with words.

### Java Break: Loops

Use for and while loops to iterate over a block of code. Learn how to write nested loops. Use 2D arrays to store and retrieve information.

### Quick Guide to Gradle

## Project: Tour Guide App

Create an app to guide a user around a city or location of your choice!

### Supporting Lessons

## Lesson

## Summary

### Images and Visual Polish

### Activity Lifecycle and Audio Playback

Use an external library to add audio to your app.

### Practice Set: Activity Lifecycle and Audio Playback

Solidify your understanding of the Activity Lifecycle and Audio Playback.

### Fragments

Modify the structure of the Miwok app and make a smoother user experience

## Part 6: Networking

Discover the power of Web APIs and how to use them in your apps, and learn the basics of networking in Android, including HTTP networking, JSON parsing, and threads.

## Project: News App

For this project, create an app to display recent news stories on a topic of your choice using an API.

### Supporting Lessons

## Lesson

## Summary

|   |  |
|---|--|
| <b>JSON Parsing</b>                                   | Learn how to parse JSON, one of the most useful data formats.  |
| <b>HTTP Networking</b>                                | Learn how to connect to the internet in your Android code.   |
| <b>Practice Set: JSON Parsing and HTTP Networking</b> | Practice applying what we learned about JSON Parsing and HTTP Networking.  |
| <b>Threads &amp; Parallelism</b>                      | Learn how to use threads to make your device do multiple things at once!   |
| <b>Java Break: Control Flow and Conditionals</b>      | Use if-else statements and switch-case statements to write Java programs to tackle any decision making scenario. |
| <b>Preferences</b>                                    |  |



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