



AppDev Android Education Program

Welcome the the Grinnell AppDev Android Development Course!

To access the courses listed in the modules:

<http://teamtreehouse.com/>:



username: appdev@grinnell.edu

password: AppD4v4v

Additional Resources can be found at:

<https://www.google.com/> - Seriously, Google search is the best resource out there for figuring out how to do something new or trying to decipher that wierd error that's making your app crash.

<http://www.lynda.com/> - Long and thorough tutorial videos, access anywhere with Grinnell Wifi

<http://vogella.com/> A solid array of tutorial walkthroughs for the different elements

of Java and Android programming.

<http://developer.android.com/guide/index.html> - The official Android documentation.

<http://stackoverflow.com/> - An active community of developers answering questions.

Module 1: Java Beginning and Intro to Android Studio

Objectives: Familiarize with Android Studio and Java, learn the basics of object oriented programming and write some code for a simple Android Application

Resources:

Essential

<http://teamtreehouse.com/library/java-basics>

This is very essential for any beginner Android programmer as native Android applications are written in Java with heavy dependence on the Android Software Development Kit. For complete beginners to object-oriented programming and Java, this brief walkthrough gives you a formidable foundation to grasp concepts in Object-Oriented programming in Java and some of its basic components

<http://teamtreehouse.com/library/getting-started-with-android>

A very basic introduction to Android and Android Applications Development.

Supplemental

<http://teamtreehouse.com/library/android-tools>

This is a thorough introduction to some essential tools used in Android Development. From the sleek Android Studio IDE to the powerful and fast Genymotion emulator, you'd get the chance to explore a lot of tools and how to use them to maximize your developer experience.

<http://www.vogella.com/tutorials/JavaIntroduction/article.html>

Introduction to the Java language, which is the primary language used in Android development.

<http://www.learnjavaonline.org/>

Interactive online Java tutorial

Assignment 1:

Bringing out the Android in you: Create a very simple Android application with all the necessary resources and tutorials provided in the video! I promise, it's really simple!

<http://teamtreehouse.com/library/build-a-simple-android-app>

This tutorial will give you a great introduction to Android Development and get you started on the fun! As you build a simple android application in this tutorial, you'd have a wonderful introduction to the latest Integrated Development Environment (IDE) for Android Development, Android Studio, learn the most important basics of Android development as well as how to improve, test and debug your code.

Module 2:

Objectives: Get more comfortable with Android Studio, improve your Android Development skills.

Resources:

Essential:

<http://teamtreehouse.com/library/build-an-interactive-story-app>

Useful video tutorials on building an Android app, you should complete the entire application outlined in this series. You'd explore dealing with user inputs, interacting with multiple user interfaces, Model-View-Controller pattern and improving user interfaces!

<http://developer.android.com/sdk/index.html>

This is the official download page for the latest Android Development environment, Android Studio. We recommend Android Studio as it is well tailored to suit the

needs and demands of Android Developers. You will need this to develop Android apps.

Supplemental:

<http://www.vogella.com/tutorials/android.html>

A text-based introduction and tutorial for Android app development.

<http://developer.android.com/training/index.html>

The official Android tutorial from Google.

Assignment 2:

Show us your skillz! : Create an awesome Android app to tell us about yourself.

Build a very basic "About Me" app that should contain at least:

- your picture
- your name
- One sentence description.
- Feel free to add additional features and get fancy with it

Module 3: Version control with Git



Objectives: Learn about version control, create a github account, create your first repository, learn how to push/pull/commit.

Resources:

Essential

<http://teamtreehouse.com/library/git-basics>

Teamtreehouse tutorial for Git

<https://help.github.com/articles/set-up-git> &
<https://help.github.com/articles/create-a-repo>

Tutorials on how to link Git to your Github.

Supplemental:

<http://www.git-scm.com/book>

In-depth Git reference

<http://www.vogella.com/tutorials/versioncontrol.html>

Vogella tutorial for Git.

<http://www.wei-wang.com/ExplainGitWithD3/#>

Interactive visual explanations of how git concepts work.

<http://teamtreehouse.com/library/get-together-with-git>

Another Treehouse tutorial for Git on collaborative coding!

Assignment 3: Create a Github account.

1. Create a new repository to push your very first "Simple Android Application" app to.
2. Create a new repository to push your "About Me" app to.
3. Clone a friend's "About Me" app, change their profile picture and push to it.

To successfully push to a friend's repository, they'll need to give you permission.

Module 4: Exploring applications with backend component using Parse®!

Parse

Objectives: Explore the dynamics of a powerful third-party backend as a service,

Parse.

Resources:

Essential:

<http://teamtreehouse.com/library/using-parsecom-as-the-backend-for-an-android-app>

A detailed introduction to using Parse as a backend for Android applications.

NB: This tutorial uses Eclipse as the IDE instead of Android Studio, however, if you follow the directions, they are relatively the same. Make extensive use of Google and StackOverflow to find answers to your questions. Also, feel free to contact any of the Android Developers at AppDev with questions or concerns!

Supplementary:

<http://developer.android.com/reference/packages.html>

The official Android reference docs, useful for finding info on specific Android classes/methods you may be using.

https://parse.com/docs/android_guide

The official Parse documentation for the Android API.

Assignment 4:

Grinchat! (Grinnell SnapChat): Build a self-destructing messaging application

Through the TeamTreehouse link below, you'd learn a lot about using Parse extensively. Complete this project and push your work to your GitHub account.

<http://teamtreehouse.com/library/build-a-selfdestructing-message-android-app>

A Team Treehouse tutorial, this time building a parse integrated messaging app.

GENERAL NOTE:

We highly recommend that you get a deeper understanding of Java as a

language and its quirks. The concepts of object-oriented program are insanely deep; your Android development can be immensely improved by having a stronger understanding of the Java language.