

Mobile Programming



Course overview



Intro

■ Tutor

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■ Class homepage

- E-class (<http://eclass.seoultech.ac.kr>)

■ Prerequisites

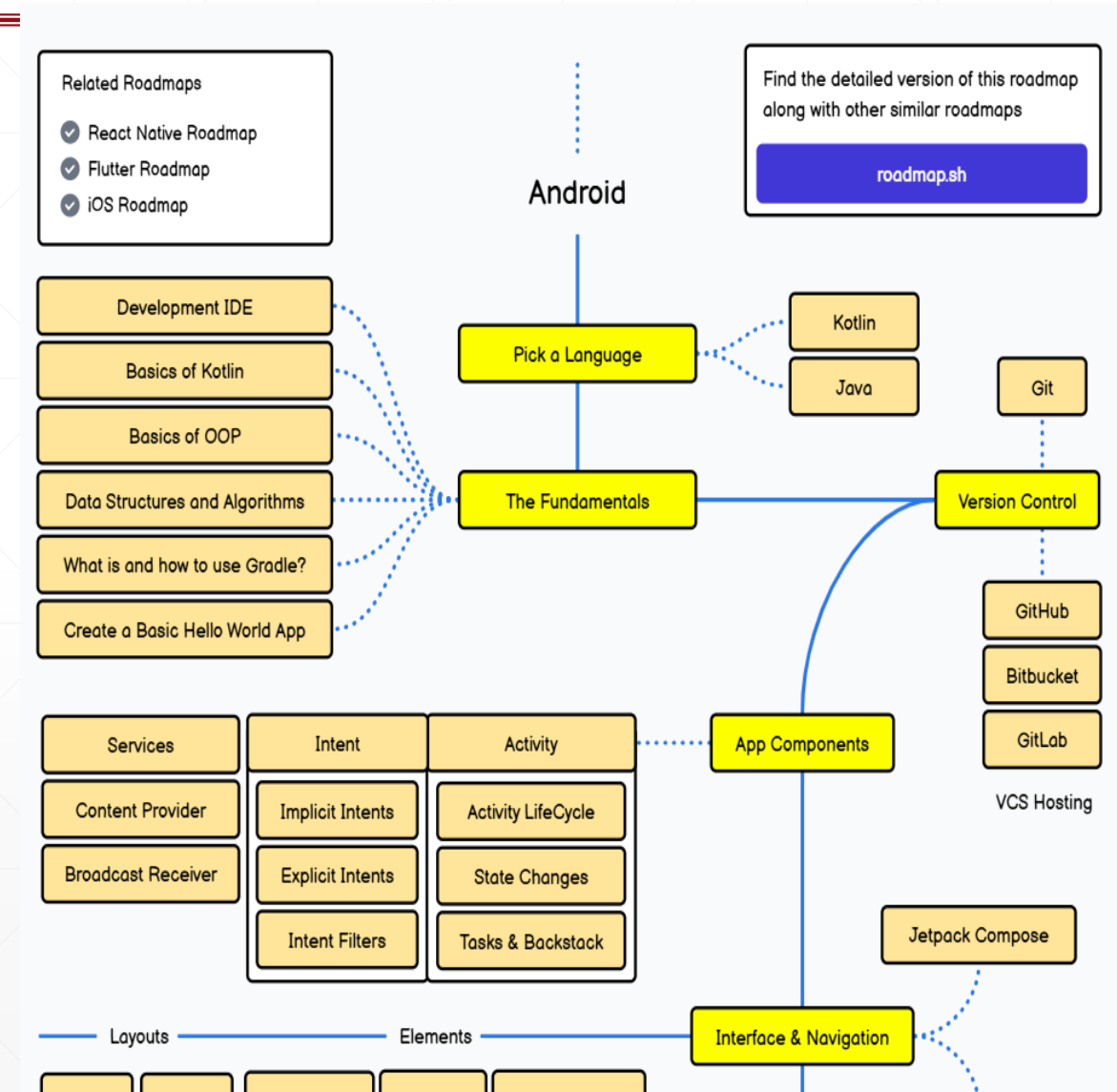
- Java → Kotlin
- Web/Cloud, Database skills

Mobile?

- Mobile 0 (1997)
- Mobile 0+ (1999)
- Mobile 1 (2000)
- Mobile 2 (2003)
- Mobile 3 (2005)
- Mobile 4 (2009)
- Mobile 5 (2011)
- Mobile 6 (2015)
- Mobile 7 (2022)
- Mobile 8 (2024)

Android Developer Roadmap

■ <https://roadmap.sh/android>



Goal

■ Kotlin Basics

- Understand Kotlin basics
- Understand Kotlin's flow control, collections, etc.
- Understand Kotlin OOP concepts

■ Mobile App programming with Android

- Understand Android OS
- Utilize Android programming environment
- Develop mobile applications using Android APIs

Curriculum

Assignment #1

Assignment #2

Assignment #3

Assignment #4

(subject to change)

Week	Contents	Lecture Methods, Assignments, Contents of Evaluation
1	Course Introduction, IDE setup Kotlin Basics	Online (2h) + Offline (1h)
2	Kotlin Basics	ITM workshop Online (3h)
3	Kotlin Basics	Quiz Review of Assignments/Quiz
4	Android App Basics	Project Overview Team Formation
5	Layout & Navigation	Conference Trip Online (3h)
6	Activity & Fragment	Conference Trip Online (3h)
7	Midterm exam	
8	Project proposal presentation	

Curriculum

Assignment #5

Assignment #6

9	UI (Part I)	
10	UI (Part II)	
11	Data & Permissions	
12	Interaction with Web	
13	Interaction with Device (Part I)	
14	Interaction with Device (Part II)	
15	Project final presentation	

(subject to change)

Curriculum (cont'd)

■ Lecture + Lab

- Win11, Kotlin, Android 13+ (AVD can be used)

■ Assignment

- Programming practices
- Submission: e-class + github (optional)

■ Grading

- Assignment 25%
- Project 50%
- Midterm exam (written+lab) 25%

Project (50%)

■ Develop a mobile application based on your own

- Scenario
- Design
- Implementation
- Report/Presentation

■ Team-based project

- Github project management (optional, but recommended)
 - or any other project management solutions should be used
- Random team assignment

Note

■ No cheating, please!

- All assignments scores throughout the semester will be considered 0 (zero)
- This also applies to the original source owner

■ Reference

- <https://developer.android.com/docs>
- Online lectures/guides/tutorials

More Important Note

■ Focus on Core

- Tooo.....many components there!
- Impossible to cover all the things about Android

■ Then, a **self-motivated study for project development!**

- More widgets?
- More layouts?
- More device features?
- More 3rd party libraries?
- More platform?
- ...

Q&A

■ This week (+eClass video)

- IDE Setup
- Introduction to Android
- Assignment #1

■ Next week

- Kotlin Basics Part I (eClass video)
- Kotlin Basics Part II (eClass video)