Mobile Programming

Course overview

Intro

- Tutor

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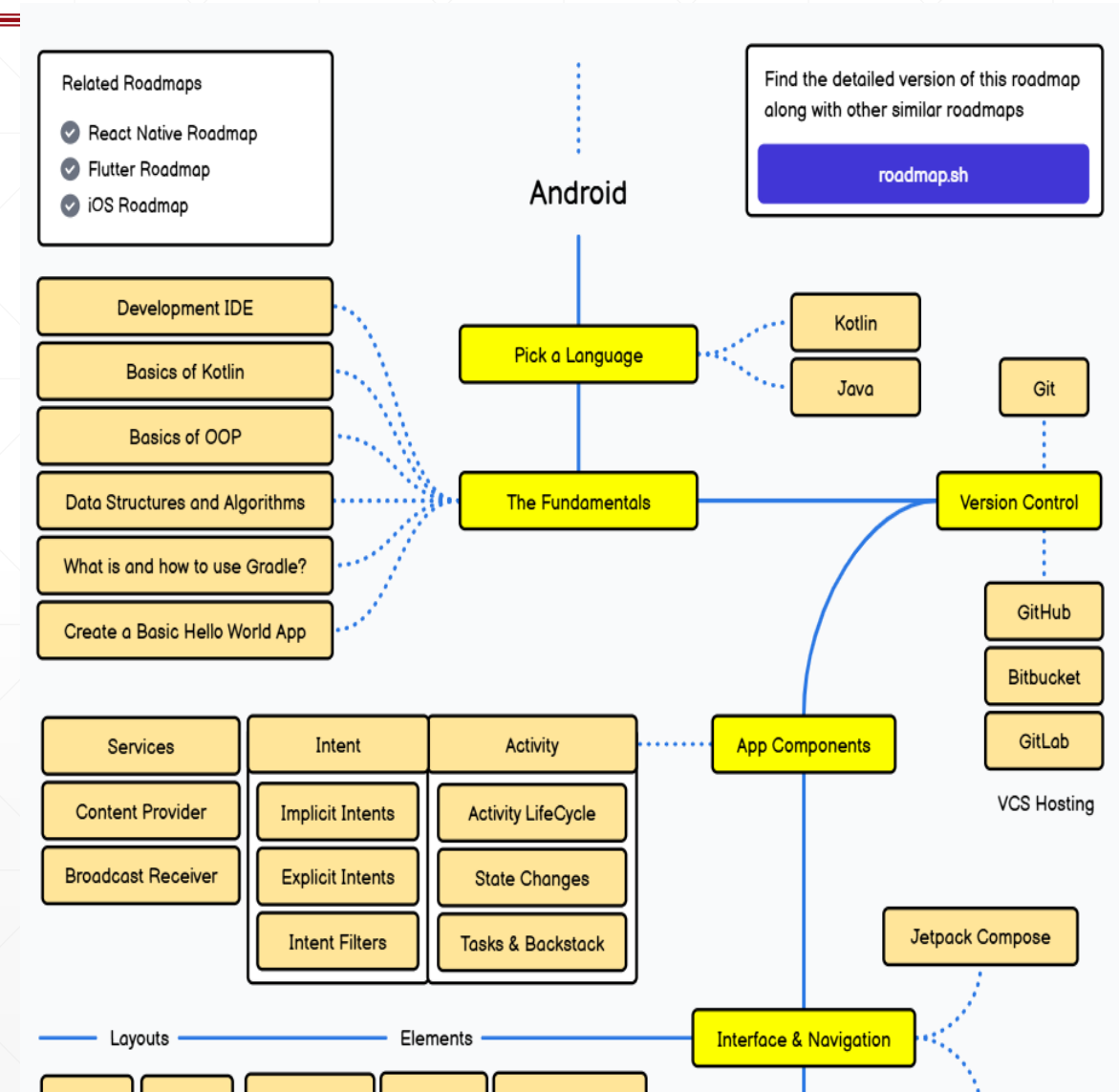
- Class homepage

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

- Prerequisites

  - Java → Kotlin

  - Web/Cloud, Database skills

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	Conference Trip Online (3h)
5	Layout & Navigation	Conference Trip Online (3h)
6	Activity & Fragment	Project Overview Team Formation
7	Midterm exam	
8	Project proposal presentation	

Curriculum

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	

Assignment #5

Assignment #6

(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)