

# CMPS 312 – Mobile Application Development

## Syllabus and Course Admin



**Dr. Abdelkarim Erradi**

Department of Computer Science & Engineering

**Qatar University**

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

# Outline

- Course introduction
- Grading
- Policies

# About the Instructor

- **Dr. Abdelkarim Erradi**
  - **Office:** Office 132 Female Engineering Building
  - **Phone:** 4403 4254

## **Office hours:**

- **Sunday 12:10pm to 1:10pm for Female** on MS Teams
- **Sunday 12:10pm to 1:10pm for Male** on MS Teams
- You can talk to me **after** class if you have quick issues/questions
- Best way to contact me is via **MS Teams chat**

# Course Learning Outcomes

1. Design a mobile application based on established **design patterns** and **best practices**.
2. Design and implement an interactive and effective **user interface** for a mobile application.
3. Practice integrating **on-device sensors, local data stores** and **Cloud services**
4. **Design, implement and test** a mobile application using appropriate features, tools and application programming interfaces (APIs) of the mobile development platform.

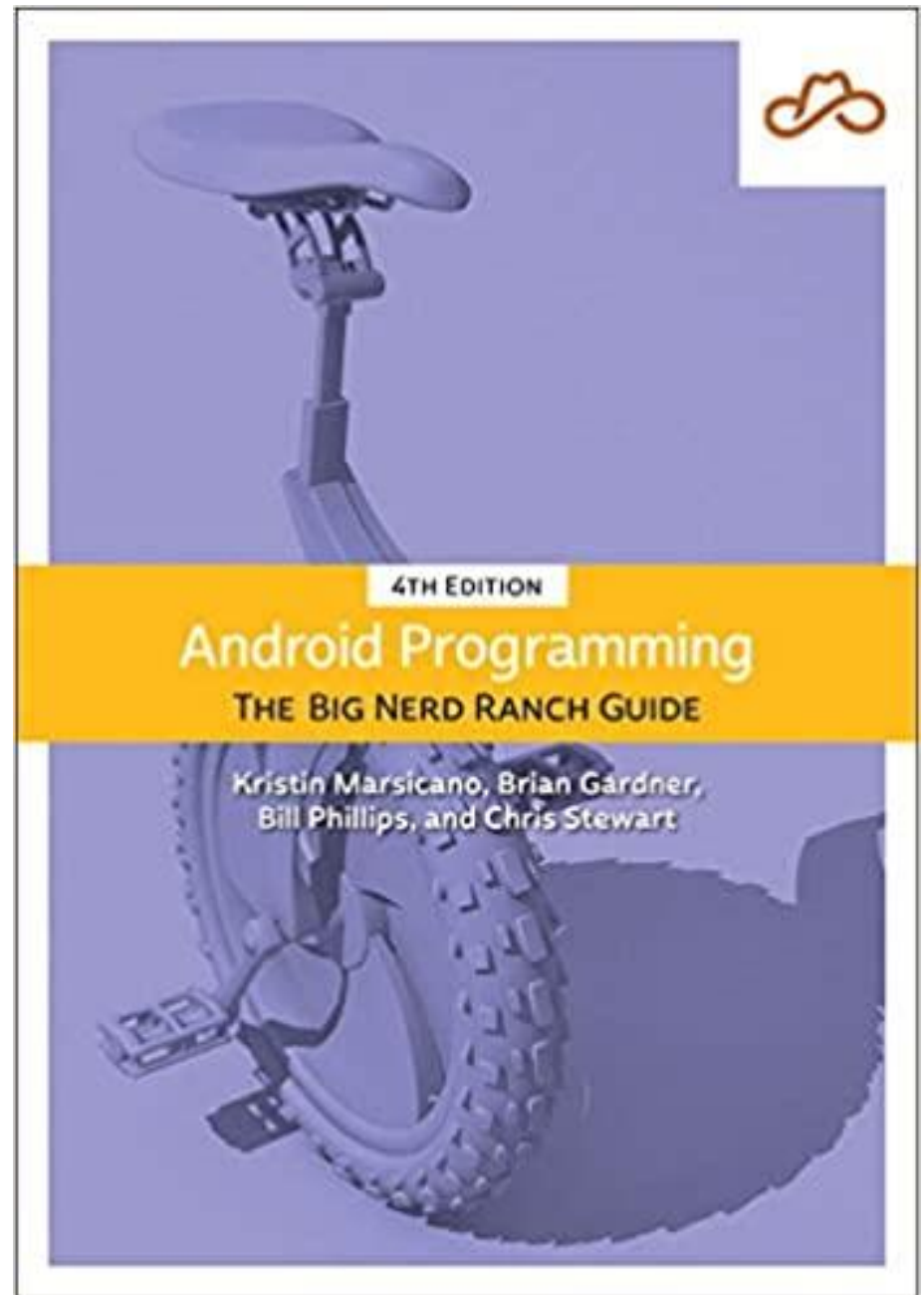
# Schedule

Topics	Weeks	Chapters
Kotlin programming language	2	Online readings
Android Fundamentals	1	1
Views and Layouts	1	3, 5 & 9
RecyclerView	1	8
Navigation	1	12, 13 & 15
Model-View-ViewModel (MVVM) Architecture	1	Online readings
Asynchronous programming	1	Online readings
Data management	1.5	14
Integrating with Cloud services and Web API	1.5	25 & Online readings
Cloud Firestore & Firebase Authentication	1	Online readings
Background processing	1	28
Camera, Location services APIs and Google Maps	1	16, 33 & 34
Review & Exams	1	

# Recommended Textbook

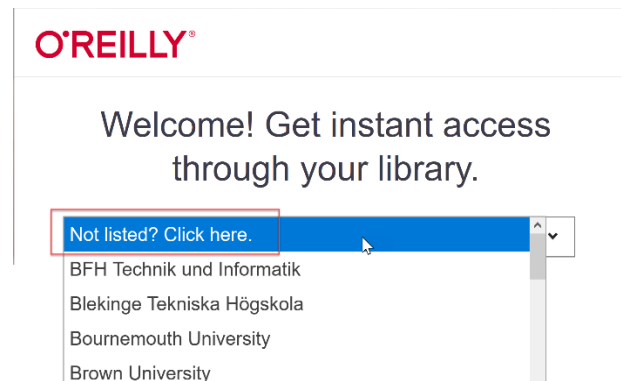
Bill Phillips, Chris  
Stewart and  
Kristin  
Marsicano;  
**Android  
Programming:  
The Big Nerd  
Ranch Guide**, 4<sup>th</sup>  
Edition, 2019

**Plenty of online  
resources will  
be providing**



# How to get the textbook online

- Visit <https://www.oreilly.com/library/view/temporary-access>
- Select 'Not listed, click here'



- Enter your QU email address to gain access
- Search for the textbook '**Android Programming: The Big Nerd Ranch Guide**'
- You will also get an email to set a password for your account




# Your Grade is Based on:

<b>Lab assignments</b>	30%	Individual Lab assignments (5 out of 6)
<b>Project</b>	30%	2 Phases (group of 3 students)
<b>Midterm exam</b>	20%	Theory (10%) & Lab Practical (10%)*
<b>Final exam</b>	20%	Theory (10%) - Consult University exam timetable Lab Practical (10%)* - during the last Lab

\* Students **who get less than 50 marks** out of 100 in the Practical Midterm/Final we get their project's grade reduced to half of the group grade

# How to succeed in this course....

- ❑ Do your weekly assigned readings
- ❑ **Read the slides before you come to the class**
- ❑ **Exercise a lot – study as many examples as possible**
  -  – Understand and enhance the examples I provide as well as the ones in the textbook and the ones in the provided resources
- ❑ **Attend and participate in class**
  - ❑ Many of the exam questions are from the class explanation
- ❑ Do all the assignments and project yourself. Actively contribute to your project.
- ❑ Seek help when needed and ask questions (and do it EARLY): During Lectures/Labs & Come to office hours

**Learn to Swim!**



"Gentlemen, I suggest we learn to swim."

We learn swimming by swimming and we learn design and programming by practicing it!

# Software we will use

- Android Studio  
<https://developer.android.com/studio>
- GitHub Desktop
- For modeling we will use **Visual Paradigm**  
<https://ap.visual-paradigm.com/qatar-university/license.jsp>
- Other tools will be communicated to you as we go



**GitHub will be used to deliver content,  
assignments and projects**

***Check <https://github.com/cmeps312f20/cmeps312-content>  
regularly!***

**Lecture slides, Demos and Assignments  
are there!**

**Communications will be via **MS Teams****

# Important Notes

- **Attendance...** QU attendance policies will be enforced
  - Do not miss classes/labs
- **Start your assignments and project early!!!**
- Students are expected to learn independently as much as needed in order to complete the course requirements
  - Do not expect me to find/fix your code bugs
  - Do not expect me to find and fix your technical issues
  - I can only give you high level suggestions and guidance

# No 'Free Riding' allowed

- 'free riders' (who do not contribute much) => not acceptable and not fair for hardworking students
  - You must actively contribute to your project and do your ultimate best to deliver the best possible results
  - Otherwise you will be asked to do the project alone



# Plagiarism / Cheating

- “Getting an unfair academic advantage”
  - Using other people's work as your own
  - Not doing your assignments yourself
- All the code you submit has to be your own
  - Only exception: Code I have provided or explicitly authorized
    - **NO** code you have found on the web. **NO** sharing with others.
- **Do your homework and project yourself**
  - Do NOT copy from each other or from the Internet - **I will know it!**
  - You can be picked-up randomly to explain your implementation
  - Cheating will be treated very seriously
- Penalties START with a zero on the assignment, failing the course! and other disciplinary actions as per QU policy



# Communication

- Post your technical questions to Piazza
- When emailing me you must add – **CMPS 312** to the beginning of the email title  
e.g., CMPS 312 – Request for a meeting
- For **guidance** on technical issues come to office hours NOT by email

# To do by the end the 1<sup>st</sup> week

- Create GitHub account and join the course GitHub classroom (see instructions on MS Teams)
- Form a team and setup your team's GitHub repo (see instructions on MS Teams)
- Install the required software: Android Studio & GitHub desktop
- Sign to Piazza, we'll be conducting all class-related discussion @ <http://piazza.com/qu.edu.qa/fall2020/cms312>



**I wish you a fruitful and enjoyable journey!**