CMPS 356 – Software Development of Enterprise Applications

Syllabus and Course Admin

Dr. Abdelkarim Erradi

Department of Computer Science & Engineering

Qatar University


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Outline for Today

- Course introduction
- Grading
- Policies

About the Instructor

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

  Office hours:
    - **Thursday 4pm to 5pm** at CSE meeting room
    - Other times are available **by appointment only** on Sunday before 2pm
    - You can talk to me **after** class if you have issues/questions
  - **Best way to contact me is by Email**

erradi@qu.edu.qa

Course Goals (1 of 2)

1. Introduce the principles and the technologies to design and develop Web applications
2. Provide students with the opportunity to design, build, test, and deploy enterprise applications using various client-side and server-side Web technologies
3. Employ state-of-the art application frameworks, middleware and development tools to build Web applications

Course Goals (2 of 2)

- Gain practical hands on experience with web-based technologies
  - Often, the best way to understand something is to build it yourself
  - Assignments and Project: Substantial implementation project to design and implement a Web Application

  => Put what you learned into use!

=> This is the closest you can get to experience how real world Web applications are designed and built

Why should I care?

- Understand what's underneath the Web
  - How does it work? What are its strengths? Its shortcomings?
  - Technologies: HTTP, HTML, CSS, JavaScript, XML, ...
- Understand the underlying principles
  - How do you build something that scales well, is reliable, etc.?
  - Architectures, protocols and techniques used
- Be able to use the right approach when designing Web-based applications
  - Need to scale, be efficient, avoid failures, ...

Prerequisites

- Object Oriented Programming (in C++ or Java)
  - Ability to code (substantial implementation project!)
- Basic Computer Networking
- Database design and development
- Data structures

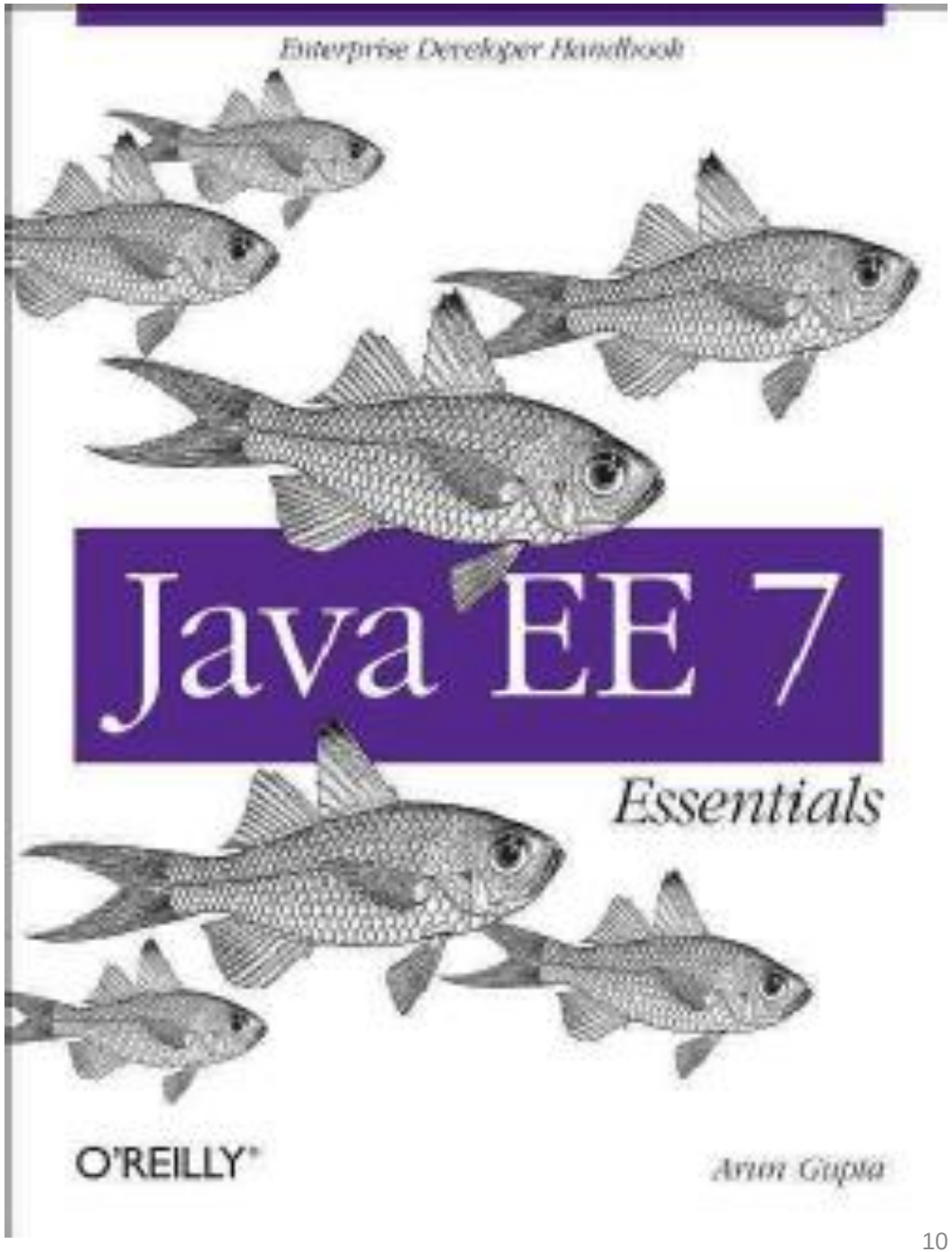
Topics	Chapter	Weeks
Web architectures, protocols and and enabling technologies	Online readings	1
Client-side Web Interface Technologies: HTML, CSS, JavaScript		2
Front-End JavaScript Frameworks: jQuery & AngularJS		2
Server-side Development with Node.js		2
REST Web Services Using JavaEE	4 & 6	2
Single Page Applications (SPAs) using AngularJS	Online readings	2
Data Access of relational databases	13	2
Securing Web applications	Online readings	1
Review & Exams	-	1
Total		15

Recommended Textbook

Arun Gupta

Java EE 7 Essentials

1st Edition, Oreilly 2013



Plenty of online resources I will be providing

Your Grade is Based on:

Lab assignments	20%	Individual programming assignment
Project	30%	3 Phases (group of 3 students): - Design and implement MVC-based Web application (12%) - Enhance it to a Single Page Application (SPA) using REST services and AJAX (12%) - Design and build the Data access Component (6%)
Midterm exam	25%	Theory (10%) Practical programming (15%) Week 7 – Before mid-spring break
Final exam	25%	Theory (10%) - Consult University exam timetable Practical programming during last Lab (15%)

How to succeed in this course….

- Do your weekly textbook 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 projects **yourself.** Actively contribute to your project.
- Seek help when needed and ask questions (and do it EARLY): During lectures & Come to office hours

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

Software we will use

- WebStorm - request your free student license at

https://www.jetbrains.com/student/
(Webstorm is one of the leading JavaScript, HTML and Web IDE)

- GitHub
- Node.js

- 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 an projects

Check https://github.com/cmps356s16 regularly!

Lecture slides, Demos and Assignments are there!

Communications will be by email

Important Notes (1 of 2)

- Attendance… QU attendance policies will be enforced
  - If you miss a class you are responsible for bringing yourself up-to-date on class material and assignments
  - Not attending a scheduled exam means you get 0 unless there is a valid medical document
- Read slides and book chapter… before coming to the class
  - You are responsible for material in assigned textbook chapters that are listed in the schedule
- Exercise… you have to do a LOT of practice

- Be punctual and pay attention during class
  - Students are not allowed to be late for the lectures; you have to be on time and well prepared
  - Chatting, and phone rings, are not allowed during the lecture

Important Notes (2 of 2)

- **Please start your assignments early!!!**
- This is a senior-level course and 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

Email Rules

- When emailing me you must add – **CMPS 356** to the beginning of the email title

e.g., CMPT 356 – Request for a meeting

- I reply to **CMPS 356** emails on Sundays, Tuesdays and Thursdays

- For **guidance** on technical issues come to office hours NOT by email

To do before next class

- Email me your team members (StudentID and Student Name)

- Read the content I will be providing
- Install required software
- Register GitHub and Piazza
- Prepare any questions you might have

I wish you a fruitful and enjoyable journey!