Modern Web & App Programming

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Goals

- What it is like to develop ***real*** applications
- Coding
  - Paradigms: OOP vs. functional programming
  - Teaming and version control
  - Tools and libraries
- Systems & architecture
- Entrepreneurship (marketing & UX)
- Data management & derived intelligence

How?

- Track 1: technologies (video lectures)
  - Web frontend
  - Backend
  - Mobile apps
- Track 2: entrepreneurship (4 in-class lectures)
  - Business plans, product design, growth, revenue
- Track 3: pitches & panels (at 3 checkpoints)
  - ***by you***

Technologies

- Part 1: web frontend
  - Old school: HTML, CSS, ***Javascript***, etc.
  - Modern approaches: React, Redux, ES6, etc.
- Part 2: backend
  - Databases
  - Web/app security
- Part3: mobile apps
  - React Native
- ***2~4 people a team***, each focus on one topic

Checkpoints

- 25%
  - Business plan
  - ***You fail, you drop***
- 50%
  - Problem & value validation
- 100%
  - Minimal viable product (MVP) & demo
- ***Win $100,000 and tickets to DataLab***

FAQ (1/3)

- Is this a programming language course?
  - No. This course teach you how to make ***real*** software
- Is this a software engineering course?
  - No. We don't focus on SE theories. You will learn some “best practices”
- Is this a entrepreneur course?
  - ***Yes.*** But we only focus on the product for the very early phases

FAQ (2/3)

- Do I need to write programs in this course?
  - A lot
  - ***Under time pressure***
- Are we going to interact with the open source software?
  - Yes.
- Why Javascript?
  - OOP
  - Functional programming
  - Has potential to unify web/app development

FAQ (3/3)

- Why do I need to write code with others?
  - You cannot do it all
- Do we need to come to the class?
  - No, as long as you can pass
- Is this a light-loading class or heavy-loading class?
  - ***Very heavy***

Evaluation

- Labs & homework: 30%
- Business plan: 20%
- Problem & value validation: 20%
- MVP: 30%

More Info

- www.cs.nthu.edu.tw/~shwu