

IT2018: Web Programming/網頁程式設計

CJ Wu/吳齊人



Spring 2023 Syllabus

This course will introduce concepts in web application development. Web application development requires to involve the integration of numerous technologies. However, web application offers numerous advantages, such as instant access, automatic upgrades, and opportunities for collaboration on a massive scale. This class will introduce you to the web technologies and give you experience in creating web applications. You will learn about markup languages, JavaScript, network protocols, event-driven programming, and databases, and see how they all work together to deliver exciting web applications. At the end, you should understand the fundamental concepts of web application design and learn to create web applications based on the modern approaches and tools, including RESTful API design, Backend and Frontend frameworks, such as Google Firebase, Django/Python, React and CSS/HTML5.

Topics

The course covers many topics related to the programming of web applications, including:

- The history and concepts of World Wide Web (WWW),
- Web data protocols (HTTP, ~~WebSocket~~, ~~WebRTC~~),
- Web JavaScript programming (HTML, CSS, DOM, jQuery, Ajax),
- Cookies and ~~sessions~~,
- Web Frontend frameworks (~~Flutter~~/React),
- Web Backend frameworks and architecture (Django 3.0/Python),
- ~~Design patterns (Model-View-Controller)~~,
- RESTful API design,
- Databases (Google Firebase), ~~transaction management~~, ~~Object-Relational Mapping (ORM)~~,
- Version control (Git and GitHub),
- User Tracking (Google Analytics)

Textbook

This course has no required textbooks. You might find the useful references in the Internet.

Take care of yourself.

Grading

Your course grade will be determined approximately as follows:

- 30% Homework
- 20% Midterm or Final exam
- 40% Final project
- 10% Participation

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教學進度 Course Progress Outline

週次 No.	上課日期/星期 Date / Weekday	時數 Hours	授課教師 Instructor	教學進度 Outline	訊息 Note
1	2/15 三 (Wed)	3	資工系 吳齊人	Introduction	
2	2/22 三 (Wed)	3	資工系 吳齊人	The history and concepts of World Wide Web (WWW)	
3	3/1 三 (Wed)	3	資工系 吳齊人	Web data protocols	
4	3/8 三 (Wed)	3	資工系 吳齊人	Web JavaScript programming (HTML, CSS, DOM, jQuery, Ajax)	HW#1
5	3/15 三 (Wed)	3	資工系 吳齊人	Web JavaScript programming (HTML, CSS, DOM, jQuery, Ajax)	
6	3/22 三 (Wed)	3	資工系 吳齊人	Web JavaScript programming (HTML, CSS, DOM, jQuery, Ajax)	HW#2
7	3/29 三 (Wed)	3	資工系 吳齊人	Web Frontend frameworks (React)	
8	4/5 三 (Wed)	3		Public Holiday	
9	4/12 三 (Wed)	3	資工系 吳齊人	Web Frontend frameworks (React)	HW#3
10	4/19 三 (Wed)	3	資工系 吳齊人	Web Frontend frameworks (React)	

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11	4/26 三 (Wed)	3	資工系 吳齊人	Web Frontend frameworks (React)	
12	5/3 三 (Wed)	3	資工系 吳齊人	Web Frontend frameworks (React)	HW#4
13	5/10 三 (Wed)	3	資工系 吳齊人	Web Frontend frameworks (React)	
14	5/17 三 (Wed)	3	資工系 吳齊人	Web Backend frameworks and architecture (Django 3.0/Python)	HW#5
15	5/24 三 (Wed)	3	資工系 吳齊人	Web Backend frameworks and architecture (Django 3.0/Python)	
16	5/31 三 (Wed)	3	資工系 吳齊人	RESTful API design	
17	6/7 三 (Wed)	3	資工系 吳齊人	Final project demo	
18	6/14 三 (Wed)	3	資工系 吳齊人	Final project demo	

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