Kickoff and Theme Reveal

IAP 2018
WELCOME
what is 6.148?
We take you end-to-end
We take you end-to-end
We take you end-to-end
Course Staff!

Monde Duinkharjav  
Class of 2018

Danny Tang  
Class of 2018

Slava Kim  
Class of 2019

Joanne Lee  
Class of 2019

Rupayan Neogy  
Class of 2019

Aaron Sipser  
Class of 2019

Robert Vunabandhi  
Class of 2020

Nickolai Zeldovich  
Faculty Sponsor
SPONSORS
Platinum
Theme...
Actually...
What is a Website?

IAP 2018
What is a Web Application

Strictly speaking...

Websites are defined by content and information

Web applications are defined by interactions with the user; typically action driven
DID YOU HAVE ANY NEW YEAR'S RESOLUTIONS?

GONNA FINALLY FINISH DEALING WITH THOSE EMAILS FROM 2008.

AS MY EMAIL BACKLOG APPROACHES 10 YEARS, I'M
NEW XKCD SHIRTS

There are four new shirts in the XKCD store, along with posters and lots of other stuff!

EMAILS

DID YOU HAVE ANY NEW YEAR'S RESOLUTIONS?
GONNA FINALLY FINISH DEALING WITH THOSE EMAILS FROM 2008.

AS MY EMAIL BACKLOG APPROACHES 10 YEARS, I'M
Website

Web App
Connect with friends and the world around you on Facebook.

See photos and updates from friends in News Feed.

Share what's new in your life on your Timeline.

Find more of what you're looking for with Facebook Search.

Sign Up
It's free and always will be.

First name

Last name

Mobile number or email

Re-enter mobile number or email

New password

Birthday

Month

Day

Year

Why do I need to provide my birthday?

Female

Male

By clicking Create Account, you agree to our Terms and that you have read our Data Policy, including our Cookie Use. You may receive SMS Notifications from Facebook and can opt-out at any time.

Create Account
What is a Web Application

Strictly speaking...

Websites are defined by content and information.

Web applications are defined by interactions with the user; typically action driven.

Honestly, the naming is not really important -- the last example already blurs the line.
Point is...

We want to design interactivity in the applications we make
But how do we make such apps?
view

But how do we make such apps?
Accessing a Website
Accessing a Website

Client (you)
Accessing a Website

Client (you)

Server (xkcd)
Accessing a Website

Client (you) → Request: GET xkcd.com → Server (xkcd)
Accessing a Website

Client (you)

Request: GET xkcd.com

Response: Webpage files

Server (xkcd)

Program used to view a website

Stores and serves a website
Accessing a Website

Client (you)

request: GET xkcd.com

Response: Webpage files

Server (xkcd)

Chrome
Program used to view a website

Stores and serves a website
<div class="text-box">
<p>So text. Much HTML. Wow.</p>
</div>
Webpage files

HTML

```html
<div class="text-box">
<p>So text. Much HTML. Wow.</p>
</div>
```

CSS

```
.text-box {
    font-family: "Comic Sans";
    color: pink;
    transform: rotate(20deg);
}
```
**Webpage files**

**HTML**

```html
<div class="text-box">
<p>So text. Much HTML. Wow.</p>
</div>
```

**CSS**

```css
.text-box {
  font-family: "Comic Sans";
  color: pink;
  transform: rotate(20deg);
}
```

**JS**

```javascript
var doge = "moar text";
console.log(doge);
```
**Webpage files**

**HTML**

```html
<div class="text-box">
<p>So text. Much HTML. Wow.</p>
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**CSS**

```css
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}
```

**JS**

```javascript
var doge = "moar text";
console.log(doge);
```
Chrome + \LaTeX
But how do we make such apps?
But how do we make such apps?
Upcoming Lectures

Tuesday: Building a webpage -- HTML, CSS, JS

Wednesday: Sending a webpage -- Client server architecture, Node.js,

Thursday: Scaling the server -- Databases, User Authentication
Theme...
What about class logistics tho...
Course Policies
Competition, Credit, both?

Credit

Competition
Competition, Credit, both?

Credit
6 units of credit

Competition
Chance for Cash and Glory
Competition, Credit, both?

Credit
6 units of credit
Complete Milestones

Competition
Chance for Cash and Glory
Complete Milestones
Competition, Credit, both?

Credit
6 units of credit
Complete Milestones
Submit Site by End of IAP

Competition
Chance for Cash and Glory
Complete Milestones
Submit Site that fits the theme by MILESTONE 3
Competition Eligibility

go.6148.io/rules -- post a private Piazza post for any questions!

Do it before Milestone 0 this Wednesday
<table>
<thead>
<tr>
<th>Main</th>
<th>Casual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main</td>
<td>Casual</td>
</tr>
</tbody>
</table>
Main vs Casual Divisions

Main
Larger prize pool

Casual
Smaller prize pool
<table>
<thead>
<tr>
<th>Main vs Casual Divisions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Main</strong></td>
</tr>
<tr>
<td>Larger prize pool</td>
</tr>
<tr>
<td>Harder Competition</td>
</tr>
<tr>
<td><strong>Casual</strong></td>
</tr>
<tr>
<td>Smaller prize pool</td>
</tr>
<tr>
<td>More casual experience</td>
</tr>
</tbody>
</table>
Main vs Casual Divisions

Main
Larger prize pool
Harder Competition
High expectations

Casual
Smaller prize pool
More casual experience
Lower expectations
Main vs Casual Divisions

**Main**
- Larger prize pool
- Harder Competition
- High expectations
- Have prior experience OR
- Work your butt off

**Casual**
- Smaller prize pool
- More casual experience
- Lower expectations
- Little prior experience AND
- Want a chill IAP
Main vs Casual Divisions

Main

Work your butt off

Casual

Want a chill IAP
Note regarding Division

No teams with > 1 Course 6-2 or 6-3 juniors, seniors, grad students allowed in Casual Division

Indication of Division will be required by Milestone 1 (form will be sent out)

go.6148.io/rules -- post a private Piazza post for any questions!
Course Overview
Schedule

Week 1: intro, setup, lectures, M0: Ideation and M1: Pitches

Week 2: advanced topics, guest lectures, hackathon!
Schedule

Week 1  intro, setup, lectures, M0: Ideation and M1: Pitches
Week 2  advanced topics, guest lectures, hackathon!
Week 3  code, code, code, M2: MVP
Schedule

Week 1   intro, setup, lectures, M0: Ideation and M1: Pitches
Week 2   advanced topics, guest lectures, hackathon!
Week 3   code, code, code, M2: MVP
Week 4   CODE, CODE, CODE
         M3: final submission, judging, awards!
Schedule

Week 1  intro, setup, lectures, M0: Ideation and M1: Pitches

Week 2  advanced topics, guest lectures, hackathon!

Week 3  code, code, code, M2: MVP

Week 4  CODE, CODE, CODE
        M3: final submission, judging, awards!
        sleep!
Schedule

Week 1  intro, setup, lectures, M0: Ideation and M1: Pitches
Week 2  advanced topics, guest lectures, hackathon!
Week 3  code, code, code, M2: MVP
Week 4  CODE, CODE, CODE
        M3: final submission, judging, awards!
        sleep!

go.6148.io/schedule
Milestones!

Ideation

MILESTONE 0
Milestones!

Ideation: MILESTONE 0
Project Pitches: MILESTONE 1
<table>
<thead>
<tr>
<th>Milestone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ideation</td>
</tr>
<tr>
<td>MILESTONE 0</td>
</tr>
<tr>
<td>Project Pitches</td>
</tr>
<tr>
<td>MILESTONE 1</td>
</tr>
<tr>
<td>Minimum Viable Product</td>
</tr>
<tr>
<td>MILESTONE 2</td>
</tr>
</tbody>
</table>
You must do...

Dynamic website supported by a back-end
You must do...

Dynamic website supported by a back-end

Personalized experience based on user accounts
You must do...

Dynamic website supported by a back-end

Personalized experience based on user accounts

Minimum security requirements fulfilled
You must do...

Dynamic website supported by a back-end

Personalized experience based on user accounts

Minimum security requirements fulfilled

Original design and implementation
You must do...

Dynamic website supported by a back-end

Personalized experience based on user accounts

Minimum security requirements fulfilled

Original design and implementation

Use Git on a 6.148 Github repo
You CANNOT do...

Use anything like Drupal, Wordpress or Squarespace
You CANNOT do...

Use anything like Drupal, Wordpress or Squarespace

Use a previous project (or a significant portion of a previous project)
You CANNOT do...

Use anything like Drupal, Wordpress or Squarespace

Use a previous project (or a significant portion of a previous project)

Outsource your development. Have minions.
You CANNOT do...

Use anything like Drupal, Wordpress or Squarespace

Use a previous project (or a significant portion of a previous project)

Outsource your development. Have minions.

Evil
You CANNOT do...

Use anything like Drupal, Wordpress or Squarespace

Use a previous project (or a significant portion of a previous project)

Outsource your development. Have minions.

Evil

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Judging

Functionality  technical components of your core features
Usability  ease-of-use of the website
Aesthetics  look-and-feel of the website
Concept Execution  applicability of the solution to the problem

go.6148.io/judging
Where do we get help from?
Learning Resources

PIAZZA

The Course Website: webdevelopment.mit.edu
Resources Compilation: go.6148.io/resources
Office Hours
“Hackathon” during Week 2
Hackathon

Extended Office Hours

Try to get as much shit done as possible

We’ll have snacks and staff
Theme...

2015 Theme: Around the World
2016 Theme: Remember the Future
2017 Theme: Beyond the Horizon
2018 Theme...
Think about the Theme!
After Lunch

Ideation and Wireframing Lecture