

The background features a collage of colorful arrows pointing upwards and to the right, in shades of blue, orange, yellow, purple, and pink. In the lower-left corner, there are green silhouettes of two people, one appearing to be clapping or cheering. At the bottom of the slide, there is a red silhouette of a Japanese cityscape, including a pagoda, a torii gate, and other traditional buildings.

# Open edX for mobile optimization

---The Japanese MOOC 'gacco'---

Yasumasa Watanabe / Hitoshi Kawasaki

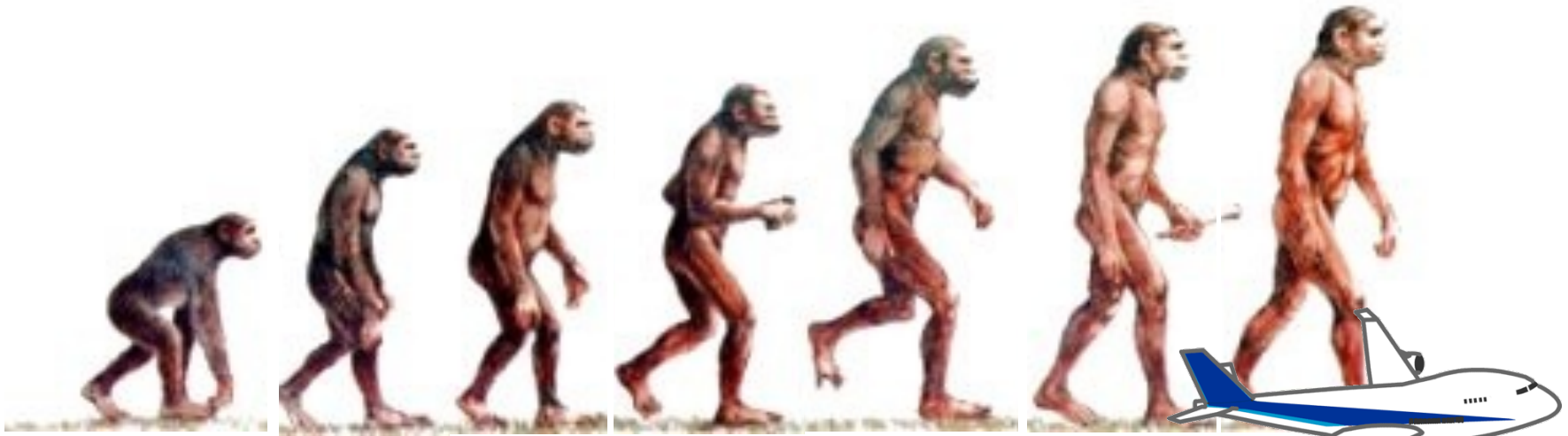
Nov 18, 2014@Open edX Conference

# Outline

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- Why we are here, who we are?
- About 'gacco', the Japanese MOOC.
- Why Responsive? gacco's launch backyard
- Open edX meets responsive web framework.
- Demo
- Insight through usage

# Why we are here, who we are?



July 2013  
Met Open edX

Aug 2013  
Run Open edX

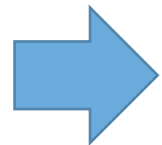
Dec 2013  
Decision with using Open edX  
for our MOOC service

Feb 2014  
Stared registration

Apr 2014  
Launched 1<sup>st</sup> course

June 2014  
ORA2 Integrated

Yesterday  
Flight 13 hours!!  
From Japan



**The way we've developed is very tough.  
We'd like to share our knowledge, experience.**

# Why we are here, who we are?



We are Japanese first and biggest MOOC service provider.

Yasumasa WATANABE

Project Manager of development and operating,  
NTT Knowledge Square Inc.

Past, as System Integrator, managing IT project.  
On weekends, I'm a barista/chef in my home party.

Hitoshi KAWASAKI

Engineer,  
NTT Knowledge Square Inc.

Past, Researcher in the field of IT education  
On weekends, I improve juggling technique.



# About 'gacco', the Japanese MOOC.

**gacco** The Japan MOOC Certified by JMOOC

gaccoとは 講座一覧 about us ログイン 会員登録

## Your Learning, Your Style.

### 無料で学べる大学講座

最高の教授陣による本気の授業  
目標を共にする仲間との白熱した論議  
未来へのパスポート、修了証があなたの手に

**gacco headline news**  
10月30日、開講。学びのアジア旅行。  
「交流文学研究 ～東南アジアへの旅～」  
**Culture & Tourism Studies**

#### 現在開講中・募集中の講座

**開講中** 2014年10月8日 開講

**ビジネススクール (入門)**  
反転学習コースあり  
名古屋商科大学  
長沢 雄次、岩澤 誠一郎、山田 隆、小山 龍介、北原 康富、伊藤祐輔

**開講中** 2014年10月10日 開講

**デジタルアーカイブの作り方 ~ビッグデータ・オープンデータを紡いで社会につなぐ~**  
首都大学東京  
渡邊 英徳

**開講中** 2014年10月22日 開講

**モチベーション・マネジメント**  
東京未来大学  
角山 剛



<http://gacco.org>

Japanese first MOOC service.  
Made with Open edX on AWS.

# About 'gacco', the Japanese MOOC.

English

**School**

Japanese

GAKKOU

学校

ガッコウ

soften



POP

Friendly

***School***



ガッコ

# 'gacco': Courses



Liberty and equality in Japanese history  
(SAMURAI living period)  
Mr. Kazuto Hongo, University of Tokyo



Studies on Manga, Anime, Games  
(OTAKU Culture)  
Mr. Ryusuke Hikawa, Meiji University



Understanding “iPS Cells”  
(Nobel prized biology)  
Mr. Shinya Yamanaka, etc., Kyoto University



Future society living with robots  
(“What is Robot?” and Android Science.)  
Mr. Hiroshi Ishiguro, Osaka University

# 'gacco': Responsive Web Design

The PC view of the website features a top navigation bar with the gacco logo (Certified by IMACC), a menu with 'gaccoとは', '講座一覧', 'about us', 'ログイン', and '会員登録', and a 'gacco headline news' section. The main content area has a large heading 'Your Learning, Your Style' and a sub-heading '無料で学べる大学講座'. Below this is a paragraph of text: '最高の教授陣による本気の授業 目標を共にする仲間との白熱した論議 未来へのパスポート、修了証があなたの手に'.

Smart phone

The tablet view shows a similar layout to the PC version but with a more compact design. The 'gacco headline news' section is more prominent, featuring a 'Disaster Science' image. The main text is reorganized to fit the tablet screen width.

現在開講中・募集中の講座

Business School  
Business Ethics Strategic HRM  
Corporate Strategy  
Critical Thinking  
Logical Writing & Presentation  
Intellectual Property  
Introduction of Business Enterprise  
Corporate Governance  
AACSB Association of MBAs  
開講中 2014年10月8日 開講

ビジネススクール (入門)  
反転学習コースあり  
名古屋商科大学  
長沢 雄次、岩澤 誠一郎、山田 隆、小山 龍介、北原 康富、伊藤 祐輔

Big Data Open Data Archive  
開講中

デジタルアーカイブのつくり方  
～データを紡いで社会につなぐ～  
首都大学東京  
渡邊 英徳

現在開講中・募集中の講座

Business School  
Business Ethics Strategic HRM  
Corporate Strategy  
Critical Thinking  
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Big Data Open Data Archive  
開講中 2014年10月10日

デジタルアーカイブのつくり方  
～データを紡いで社会につなぐ～  
首都大学東京

The smartphone view is highly compact, with a hamburger menu icon on the left. The 'gacco headline news' section is at the top, followed by the main heading and text. The course cards are smaller and more numerous. The bottom navigation bar contains 'ログイン・マイページ' and '会員登録' buttons.

PC

Tablet



# Why Responsive? gacco's launch backyard



NTT Knowledge Square Inc.

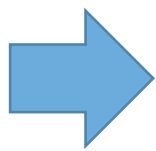
Educational service company  
with movie on web for  
consumer segment.  
Small company.



NTT docomo

Major mobile carrier in Japan

\*Japanese carriers  
traditionally produce non-  
carrier, application service .



Alliance for MOOC,  
of-course available in mobile devices.

# What's?

There were no mobile MOOC available, all over the world.

NTT docomo said

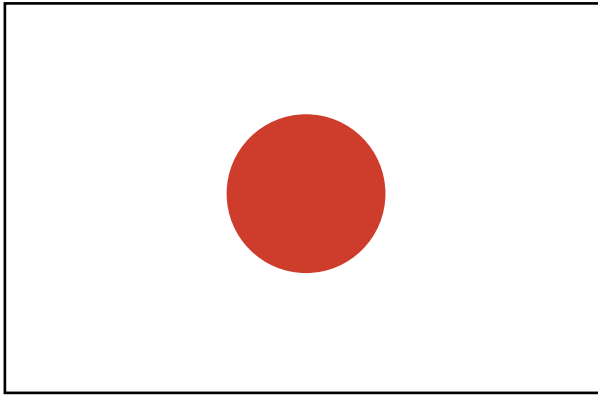
“we are mobile carrier.”

October 2013

To think optimistic



## Why Responsive? gacco's launch backyard



Japanese likes cell-phones extremely.  
This was a great reason for mobile optimization.

Japanese deeply **loves cellphone**

However,  
no human resources, no time.

**5 engineers** with no mobile app specialist

Launch Day is set at **early Feb 2014**

Open edX for mobile optimization

Not mobile app, but web-based adoption

# Why Responsive? gacco's launch backyard

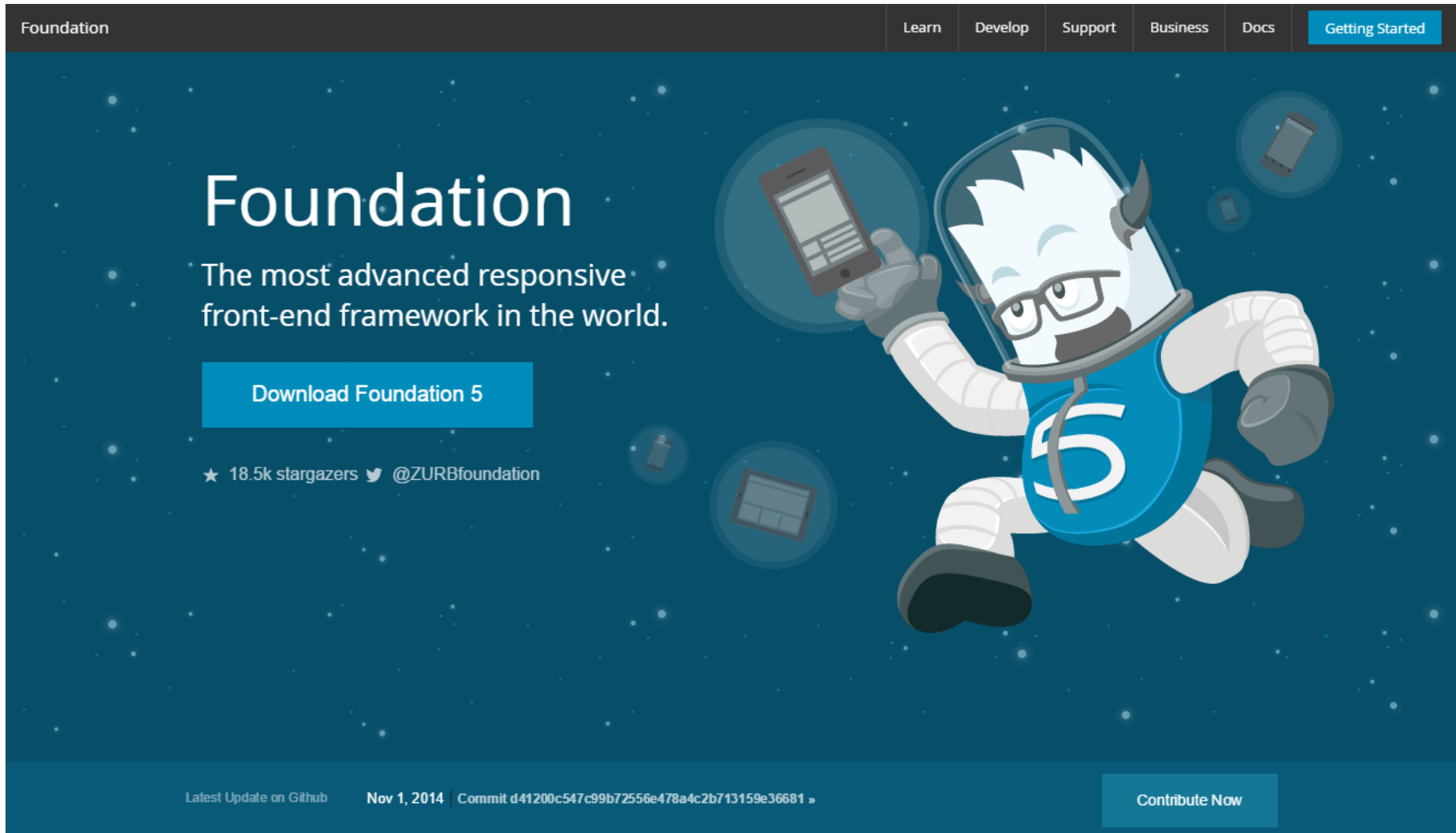


Ideal framework would bring...  
“views & functions for mobile”  
“another look & feel”

A screenshot of the edX Demo Course interface. The page title is "edX: DemoX.1 Demo Course" and the user is logged in as "watcafe". The navigation menu includes "Courseware", "Course Info", "Discussion", "Wiki", and "Progress". The "Courseware" section is expanded, showing a list of weeks: "Introduction", "Week 1: Experiencing Course Content", "Week 2: Being Social", "Week 3: Completing a Course", "Example", and "Optional: edX Mobile Beta App". The main content area displays "OPTIONAL: EDX MOBILE BETA APP" and a message: "You were most recently in Mobile Beta App (Android Smartphones). If you're done with that, choose another section on the left." The footer contains the edX logo, "About &amp; Company Info" (with links for About, News, Contact, FAQ, and edX Blog), and "Follow Us" (with links for Twitter, Facebook, Meetup, LinkedIn, and Google+). A copyright notice at the bottom left reads "© 2014 edX, some rights reserved."



A famous web-framework, focused on Responsive Web Design.



The image shows a screenshot of the Foundation website homepage. The background is a dark blue space with white stars. On the right side, there is a cartoon character of a white, furry creature wearing a blue astronaut suit with a white '5' on the chest, a clear helmet, and glasses. The character is holding a smartphone in its right hand. Several other smartphones are floating in the space around the character, each with a circular glow behind it.

Foundation

Learn Develop Support Business Docs **Getting Started**

# Foundation

The most advanced responsive front-end framework in the world.

[Download Foundation 5](#)

★ 18.5k stargazers [@ZURBfoundation](#)

Latest Update on GitHub Nov 1, 2014 | Commit [d41200c547c99b72556e478a4c2b713159e36681](#) »

[Contribute Now](#)

# Useful, nestable grid-system.

## What Comes With Foundation?

Foundation has a ton of components and structures to help you build a responsive front-end. You don't have to worry about all of your baseline, foundational (see what we did there?) code.

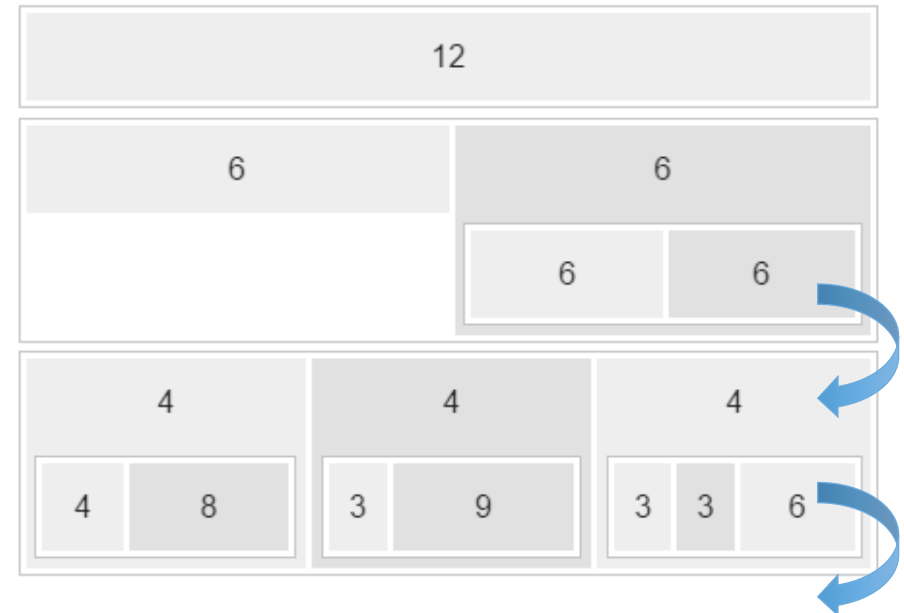
You can see all of Foundation's components on one page called the [Kitchen Sink](#) or check out a small snapshot of what the [Foundation](#) includes:

### The Grid

Our grid works on almost any device and has support for nesting, source ordering, offsets and device presentation. Frankly, it's a little too easy. In no time, you'll be creating complex layouts like this.

Need a head start on some of your designs or some extra inspiration to see the full potential of a responsive front-end framework? [Check out a list of our Foundation resources!](#)

“views & functions for mobile”

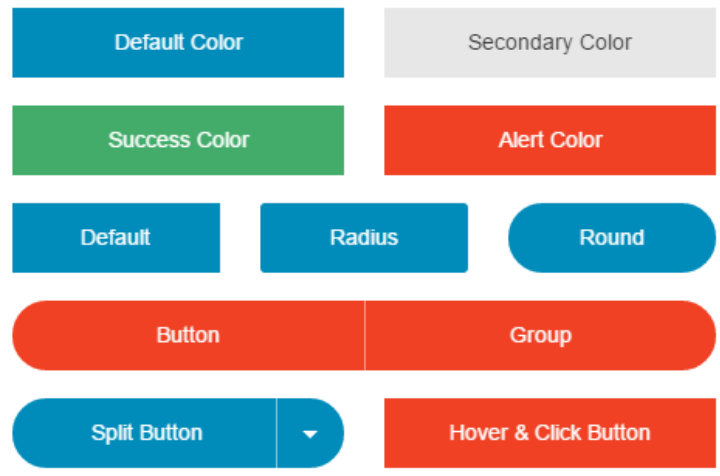


Auto offset & visibility control by display size

# Smooth preset parts

## Buttons

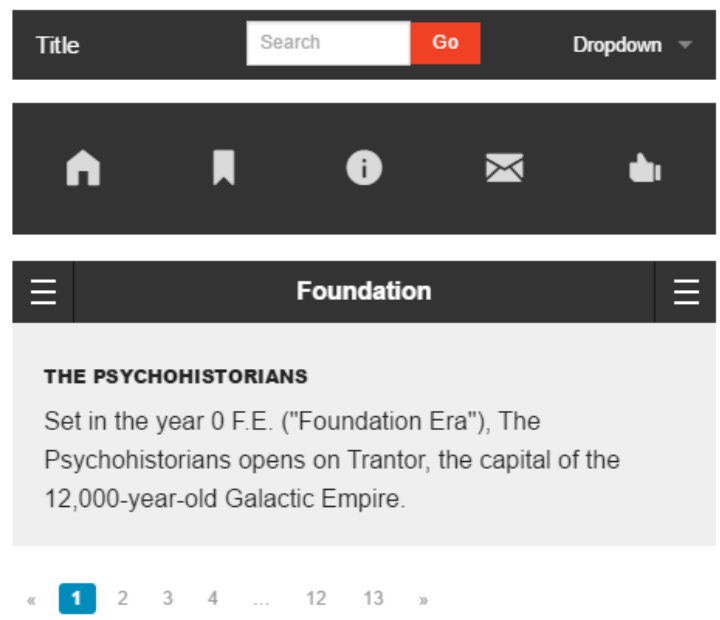
Clicking on stuff is awesome, so hook up your users with buttons to do stuff. There are some lightweight button styles for size, presentation, and color to make customizing your own button as easy as adding a class.



## Navigation

People have to get around. Navigation styles in Foundation include: a robust top bar with dropdown menus; button; search bars; a cool icon bar; a bitchin' off-canvas navigation; and a bunch of other navigational

“another look & feel”

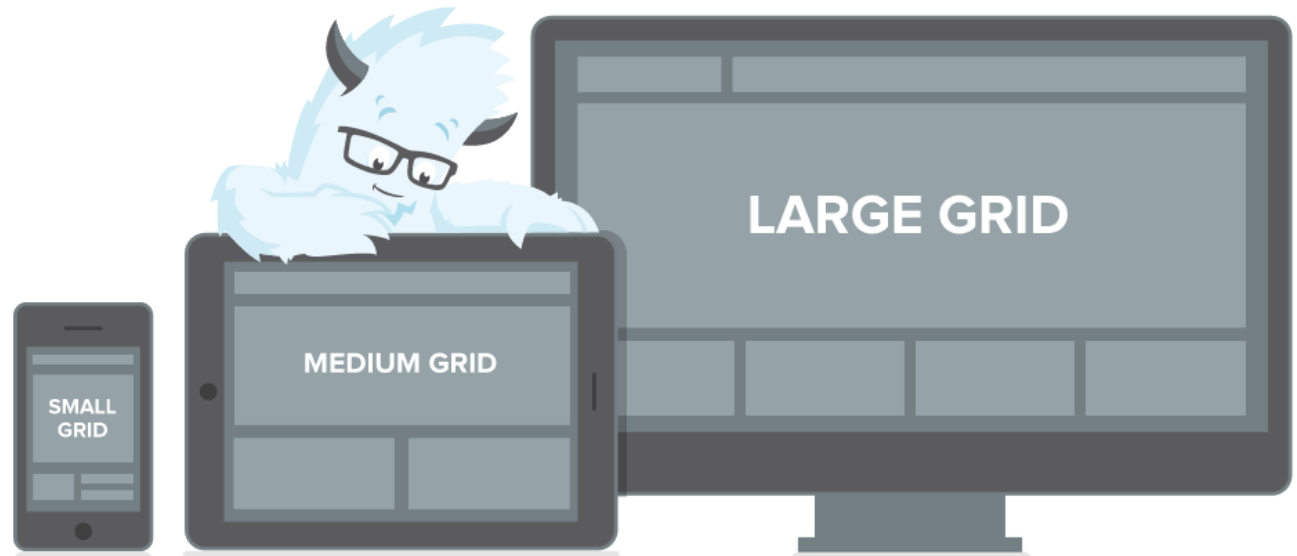


## Merge



&

Foundation



Remained critical issue:

Dose



have liquid layout?

Fixed layout is not good for RWD.

# Box model

The image shows a screenshot of an edX course page with a box model overlay. The page is divided into several sections, each labeled with a blue box:

- header**: Located at the top center, containing the edX logo, the course title "edX: DemoX.1 Demo Course", and a "watcafe" button.
- course-tabs**: Located below the header, containing navigation tabs: "Courseware" (highlighted), "Course Info", "Discussion", "Wiki", and "Progress".
- course-index**: Located on the left side, containing a list of course sections: "Introduction", "Week 1: Experiencing Course Content", "Week 2: Being Social", "Week 3: Completing a Course", "Optional: Example Problem Types", and "Optional: edX Mobile Beta App". Below the list is a link for "Mobile Beta App (Android Smartphones)".
- course-content**: Located on the right side, containing the main content area with the text: "OPTIONAL: EDX MOBILE BETA APP" and "You were most recently in Mobile Beta App (Android Smartphones). If you're done with that, choose another section on the left."
- footer**: Located at the bottom, containing the edX logo, a paragraph of text about edX, and three columns of links: "About & Company Info" (with "About", "FAQ", and "edX Blog" links), "Follow Us" (with "Twitter", "Facebook", "Meetup", "LinkedIn", and "Google+" links), and a copyright notice "© 2014 edX, some rights reserved."

# What's restricted?

body min-width: 980px



edX: DemoX.1 Demo Course



Courseware

Course Info

Discussion

Wiki

Progress

Introduction

Week 1: Experiencing Course Content

Week 2: Being Social

Optional: Example Problem Types

Optional: edX Mobile Beta App

Mobile Beta App (Android Smartphones)

OPTIONAL: EDX MOBILE BETA APP

You were most recently in [Mobile Beta App \(Android Smartphones\)](#). If you're done with that, choose another section on the left.

.container max-width: 1180px; min-width: 760px;

.wrapper-footer max-width: 1180px; min-width: 760px;

EdX offers interactive online classes and MOOCs from the world's best universities. Online courses from MITx, HarvardX, BerkeleyX, UTx and many other universities. Topics include biology, business, chemistry, computer science, economics, finance, electronics, engineering, food and nutrition, history, humanities, law, literature, math, medicine, music, philosophy, physics, science, statistics and more. EdX is a non-profit online initiative created by founding partners Harvard and MIT.

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News

Contact

FAQ

edX Blog

Facebook

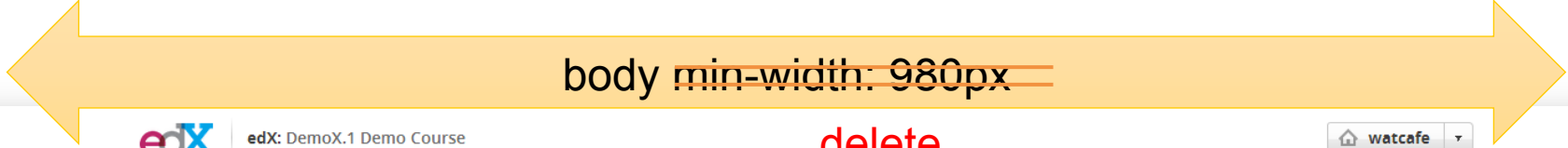
Meet

Link

Google

Non-liquid,  
Fixed layout

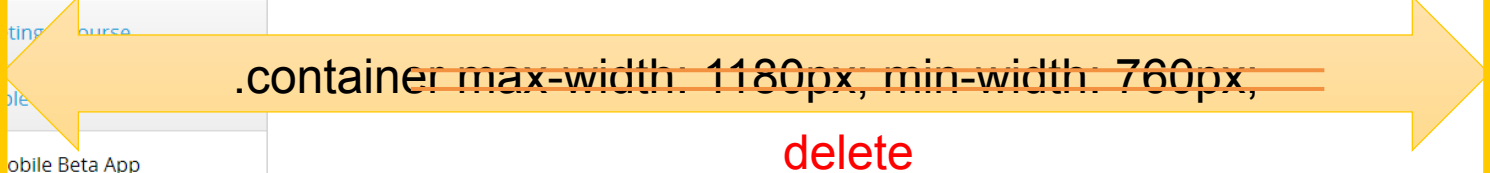
# Get flexibility with deboning



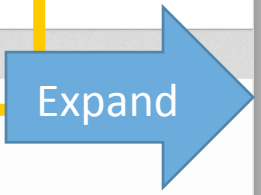
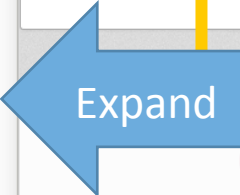
- Courseware
- Course Info
- Discussion
- Wiki
- Progress

- Help
- Introduction
- Week 1: Experiencing Course Content
- Week 2: Being Social
- Week 3: Completing a course
- Optional: Example
- Optional: edX Mobile Beta App
- Mobile Beta App (Android Smartphones)

OPTIONAL: EDX MOBILE BETA APP  
You were most recently in Mobile Beta App (Android Smartphones). If you're done with that, choose another section on the left



delete



edX  
EdX offers interactive online classes and MOOCs from the world's best universities. Online courses from MITx, HarvardX, BerkeleyX, UTx and many other universities. Topics include biology, business, chemistry, computer science, partners Harvard and MIT.  
© 2014 edX, some rights reserved.

- About & Company Info
- About
- News
- Contact

- Follow Us
- Twitter
- Facebook
- Meetup



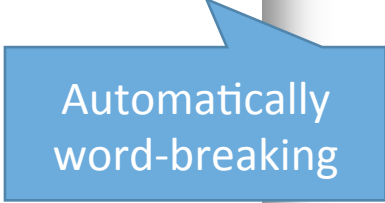
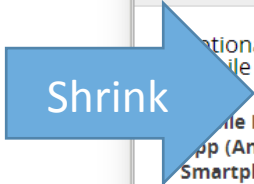
delete

liquid layout



# Getting flexibility with deboning

The screenshot shows the edX interface for a course titled "edX: DemoX.1 Demo Course". The top navigation bar includes "Courseware", "Course Info", "Discussion", "Wiki", and "Progress". A "watcafe" logo is visible in the top right. The left sidebar contains a "Help" section and a list of course sections: "Introduction", "Week 1: Experiencing Course Content", "Week 2: Being Social", "Week 3: Completing a Course", and "Optional: Example Problem Types". The main content area displays the text "OPTIONAL: EDX MOBILE BETA APP" followed by a paragraph: "You were most recently in [Mobile Beta App \(Android Smartphones\)](#). If you're done with that, choose another section on the left." The footer contains the edX logo, a description of EdX services, and links for "About & Company Info", "About", "News", "Contact", and "Follow Us" (Twitter, Facebook, Meetup).



# Video with deboning

edX DemoX:1 Demo Course

Courseware Course Info Discussion Wiki Progress

Help Introduction

Week 1: Experiencing Course Content

Lesson 1: edX Content Basics

Homework 1: Your First Grade Homework

Week 2: Being Social

Week 3: Completing a Course

Optional: Example Problem Types

Optional: edX Mobile Beta App

USING THE EDX VIDEO PLAYER

LYLA FISCHER: Hi. Welcome to edX. I'm Lyla Fischer, an edX fellow, helping to put together these courses. As you know, our courses are entirely

0:00 / 1:55

1.0x

Download video

Download transcript .txt

Sequence-nav looks good.

edX DemoX:1 Demo Course

Courseware Course Info Discussion Wiki Progress

Help Introduction

Week 1: Experiencing Course Content

Lesson 1: edX Content Basics

Homework 1: Your First Grade Homework

Week 3: Completing a Course

Optional: Example Problem Types

Optional: edX Mobile Beta App

USING THE EDX VIDEO PLAYER

0:44 / 2:33

1.50x 1.25x 1.0x 0.75x

1.0x

0:00 / 1:55

1.0x

Download video

Download transcript .txt

Without CC gets better.

# xModule with deboning

edX: DemoX:1 Demo Course

Courseware Course Info Discussion Wiki Progress

Introduction  
Week 1: Experiencing Course Content  
Week 2: Being Social  
Week 3: Completing a Course  
Optional: Example Problem Types  
Basic Problems  
STEM Problems  
Open Response Assessments  
Optional: edX Mobile Beta App

### MULTIPLE CHOICE PROBLEMS

There are three types of multiple choice problems: Checkbox, dropdown, and multiple choice.

- In standard **multiple choice** problems, you'll select one answer from a list of options.
- In **checkbox** problems, you'll select one or more options from a list of possible answers. You have to select all the correct options to get the right answer.
- In **dropdown** problems, you'll select one answer from a dropdown list. Unlike with standard multiple choice problems, you won't see the answer choices until you click the dropdown arrow.

Let's take a look at some examples.

#### STANDARD MULTIPLE CHOICE PROBLEM

Which of the following countries has the largest population?

- Brazil
- Germany
- Indonesia
- Russia

Check Show Answer

Standard xModules are fine, too.

### CHECKBOX PROBLEM (1 point possible)

The following languages are in the Indo-European family:

- Urdu
- Finnish
- Marathi
- French
- Hungarian

Note: Make sure you select all of the correct options—there may be more than one!

Check Show Answer

---

### DROPDOWN PROBLEM

(1 point possible)

Which of the following countries celebrates its Independence Day on August 15?

Check Show Answer

About & Company Info  
About  
News  
Contact  
FAQ

Follow Us  
Twitter  
Facebook  
Meetup  
LinkedIn  
Google+

# xBlock(ORA2) with deboning

edX DemoX.1 Demo Course

Courseware Course Info Discussion Wiki Progress

Introduction

Week 1: Experiencing Course Content

Week 2: Being Social

Week 3: Completing a Course

Optional: Example Problem Type

Basic Problems

STEM Problems

Open Response Assessment

Optional: edX Mobile Beta App

### EXAMPLE OPEN RESPONSE ASSESSMENT

This assignment has several steps. In the first step, you'll provide a response to the question. The other steps appear below the Your Response field.

Describe your favorite meal, and write a persuasive argument to convince someone to try that meal. Support your position with facts and examples from your experience.

**1** Your Response IN PROGRESS

due Jan. 1, 2029 00:00 UTC (in 14 years, 2 months)

Enter your response to the question. You can save your progress and return to complete your response at any time before the due date (Monday, Jan. 1, 2029 00:00 UTC). **After you submit your response, you cannot edit it.**

YOU MAY CONTINUE TO WORK ON YOUR RESPONSE UNTIL YOU SUBMIT IT.

Save Your Progress

THIS RESPONSE HAS NOT BEEN SAVED.

Submit your response and move to the next step ▶

**2** Learn to Assess Responses NOT AVAILABLE

**3** Assess Peers NOT AVAILABLE

due Jan. 1, 2029 00:00 UTC (in 14 years, 2 months)

**4** Assess Your Response NOT AVAILABLE

due Jan. 1, 2029 00:00 UTC (in 14 years, 2 months)

**Your Grade: Not Started**

You have not started this problem yet.

Beautiful!

# Box Model

The image shows a screenshot of an edX course page with a box model overlay. The page is divided into several sections:

- header**: Located at the top, containing the edX logo, the course name "edX: DemoX.1 Demo Course", and a "watcafe" button.
- course-tabs**: A horizontal bar below the header with tabs for "Courseware", "Course Info", "Discussion", "Wiki", and "Progress".
- course-index**: A vertical sidebar on the left containing a list of course sections: "Introduction", "Week 1: Experiencing Course Content", "Week 2: Being Social", "Week 3: Completing a Course", "Optional: Example Problem Types", and "Optional: edX Mobile Beta App". Below the last item is a link for "Mobile Beta App (Android Smartphones)".
- course-content**: The main content area on the right, displaying the text "OPTIONAL: EDX MOBILE BETA APP" and "You were most recently in Mobile Beta App (Android Smartphones). If you're done with that, choose another section on the left."
- footer**: Located at the bottom, containing the edX logo, a paragraph of text about edX, and three columns of links: "About & Company Info" (with "About", "FAQ", and "edX Blog"), and "Follow Us" (with "Twitter", "Facebook", "Meetup", "LinkedIn", and "Google+").

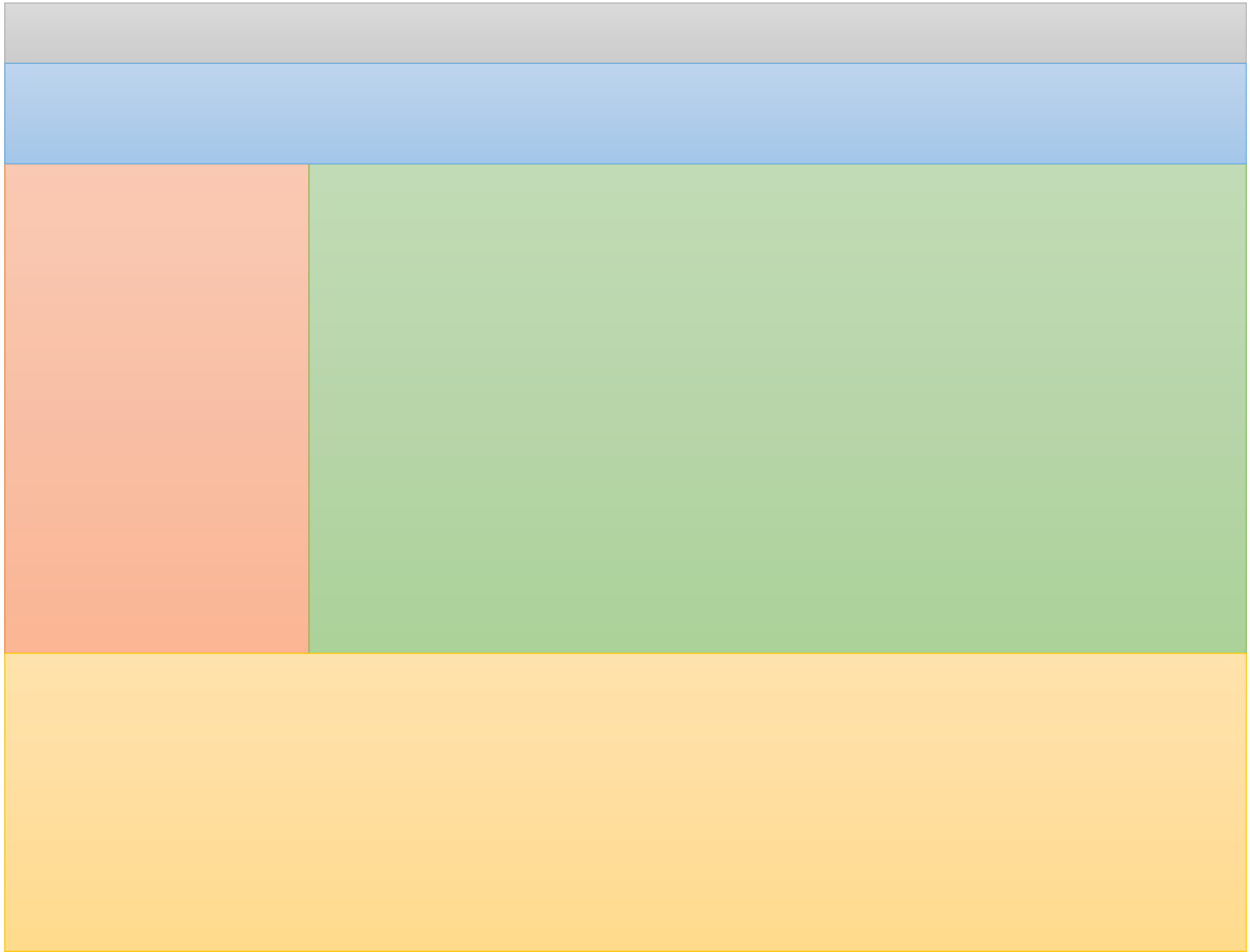
- ▶ Introduction
  - ▶ Week 1: Experiencing Course Content
  - ▶ Week 2: Being Social
  - ▶ Week 3: Completing a Course
  - ▶ Optional: Example Problem Types
  - ▼ Optional: edX Mobile Beta App
- Mobile Beta App (Android Smartphones)**

OPTIONAL: EDX MOBILE BETA APP

You were most recently in [Mobile Beta App \(Android Smartphones\)](#). If you're done with that, choose another section on the left.

# <div> Box Model

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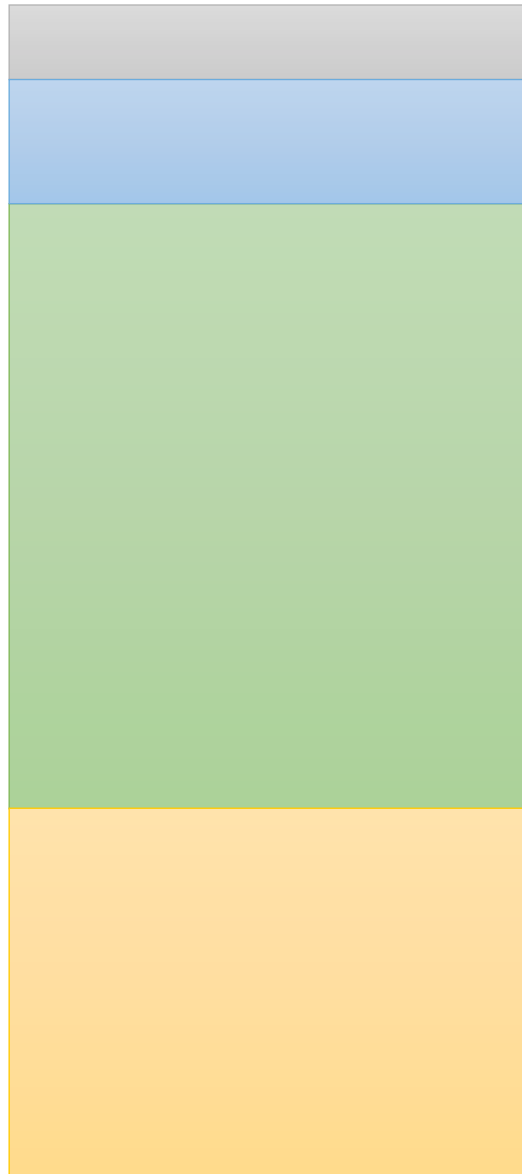


# <div> Box Model

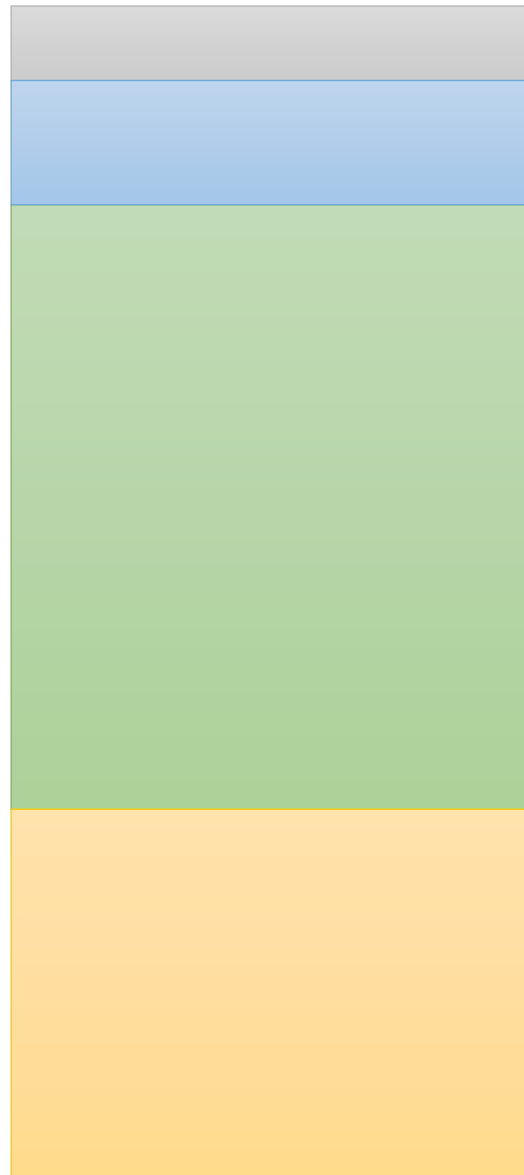
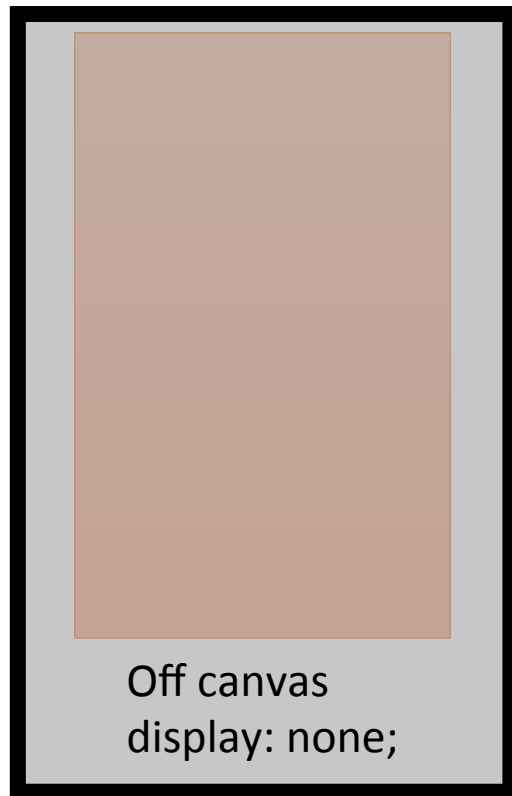
---



Course  
index

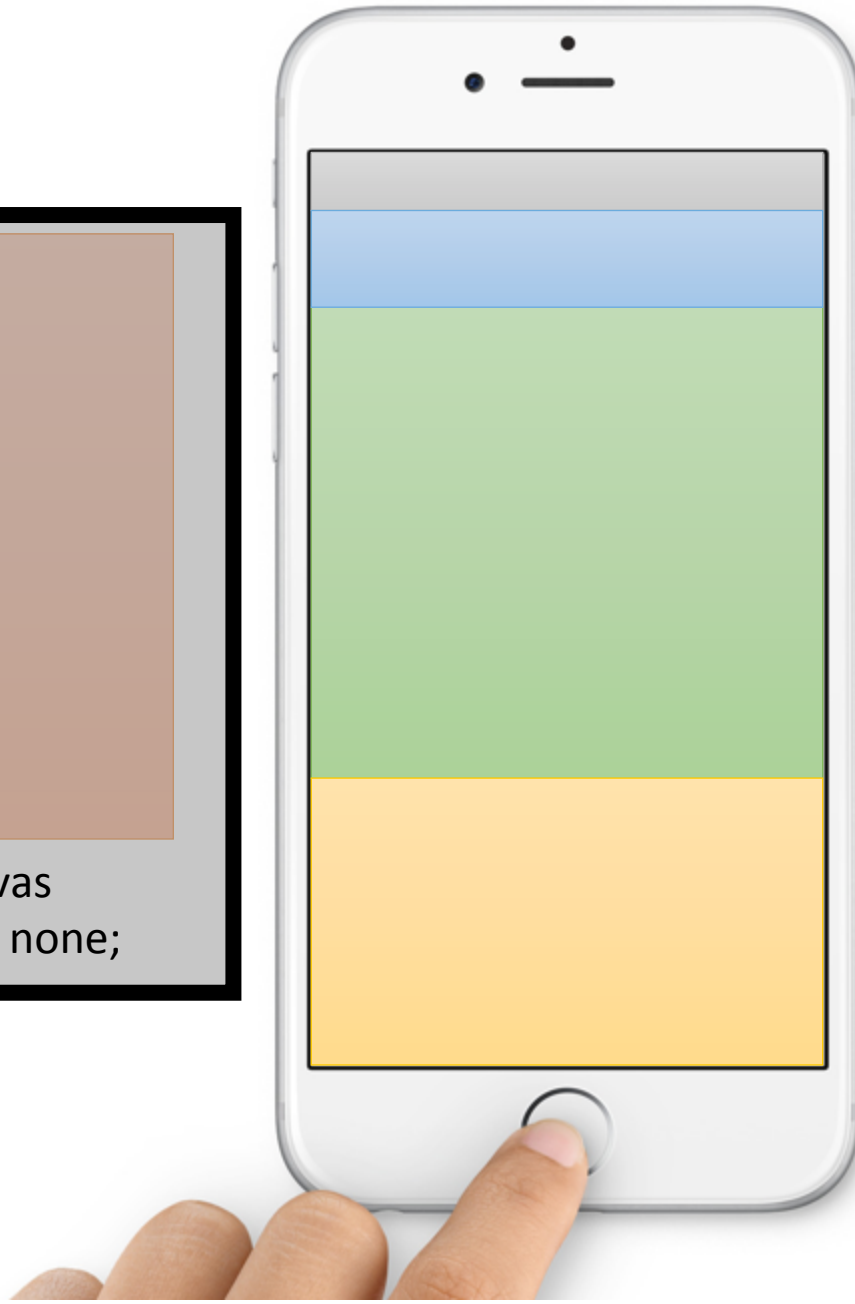
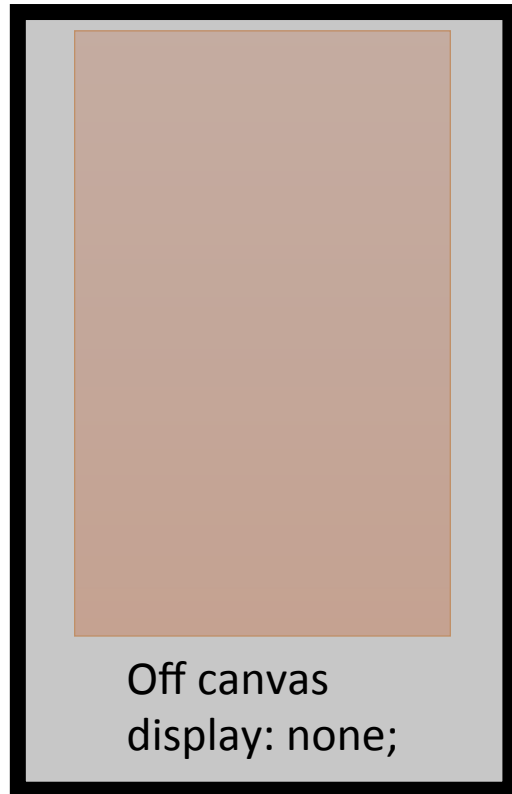


# <div> Box Model

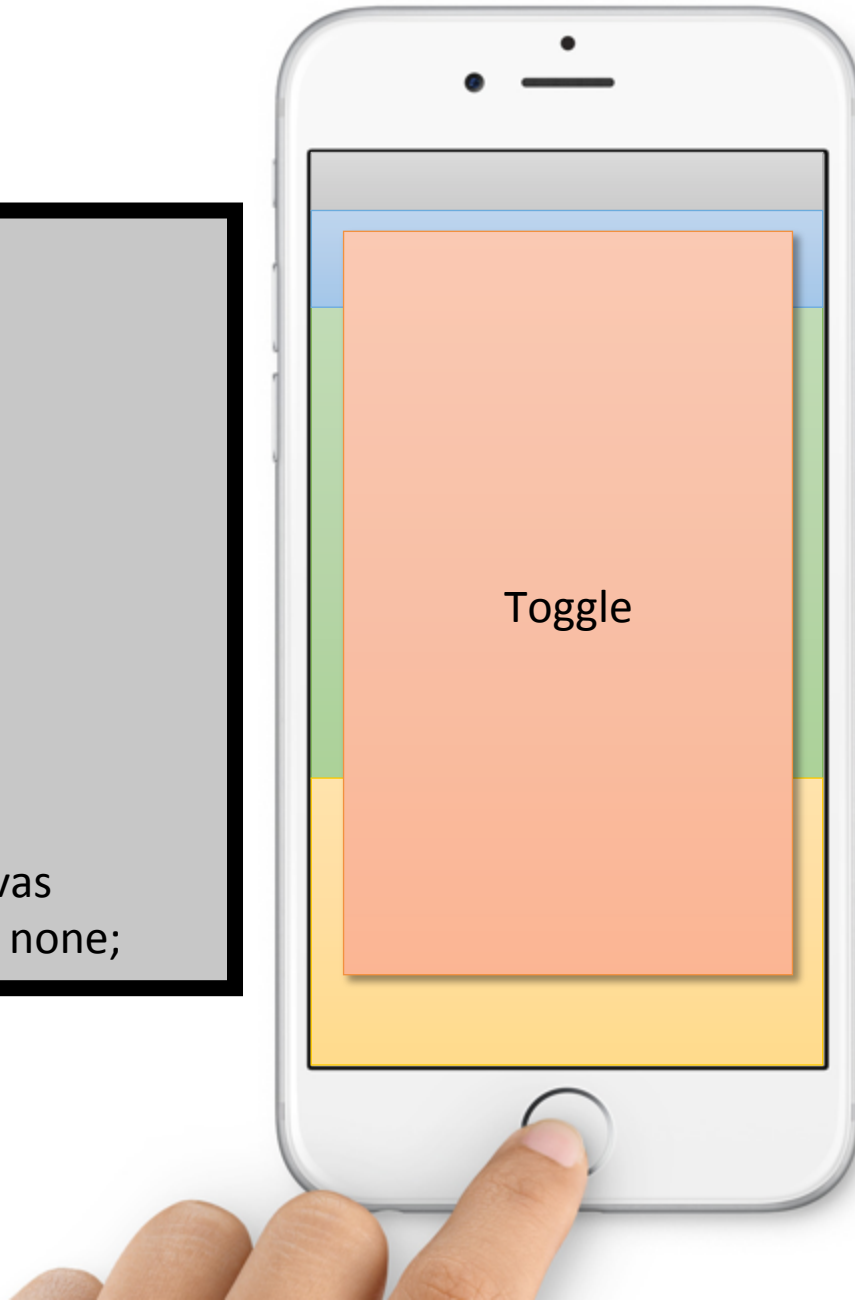
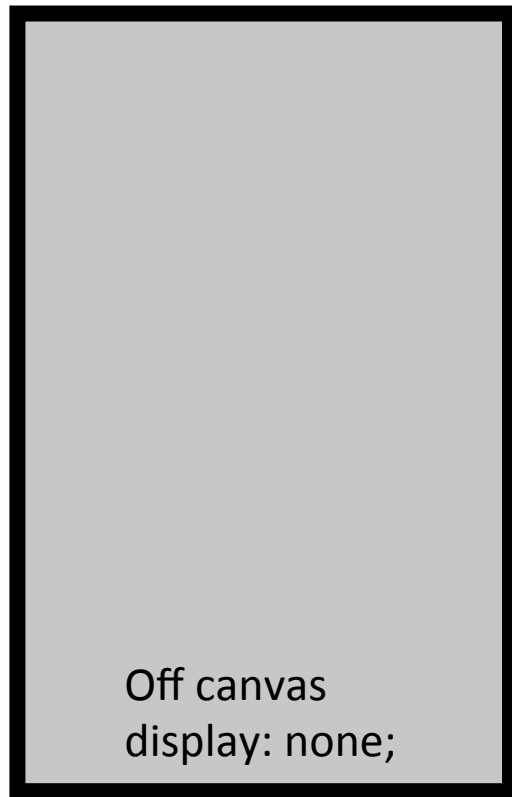




# <div> Box Model



# <div> Box Model



## Actual system Demo By Mr.Kawasaki

# Demo

(iPhone View)

gacco.org

gacco Certified by JMOAC

三

## Your Learning, Your Style.

### 無料で学べる大学講座

最高の教授陣による本気の授業  
目標を共にする仲間との白熱した論議  
未来へのパスポート、修了証があなたの手に

#### gacco headline news

11月13日、募集。アウトプットしよう！  
「ポップパワー」

POP POWER

Japan pop culture

UNREGISTERED TRADE MARK

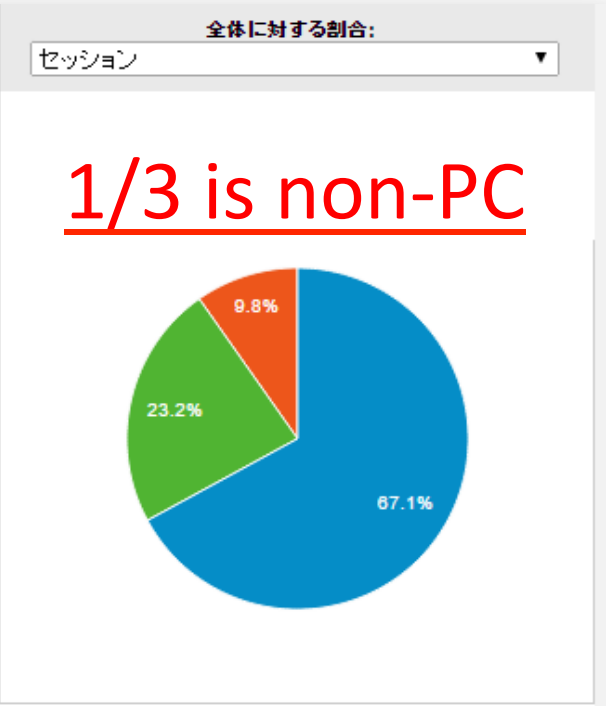
See detail

<https://github.com/nttks/>



# Insight through usage

デバイス カテゴリ	セッション	セッション
	228,697 全体に対する割合: 100.00% (228,697)	228,697 全体に対する割合: 100.00% (228,697)
1. desktop	153,362	67.06%
2. mobile	53,021	23.18%
3. tablet	22,314	9.76%

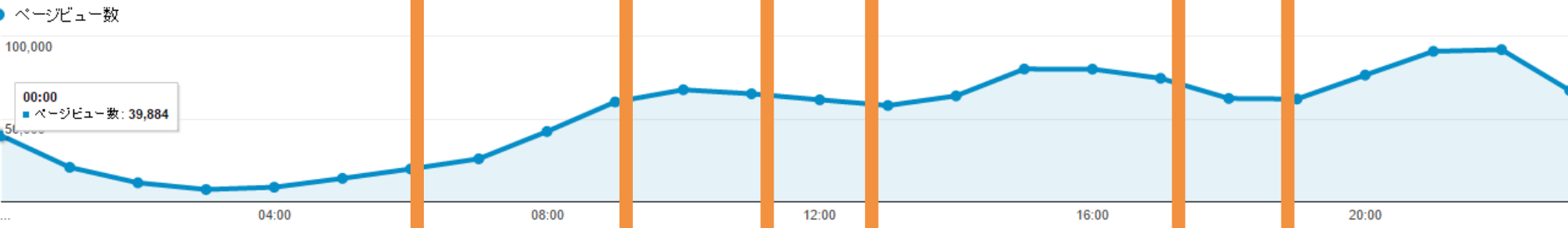


Or/And

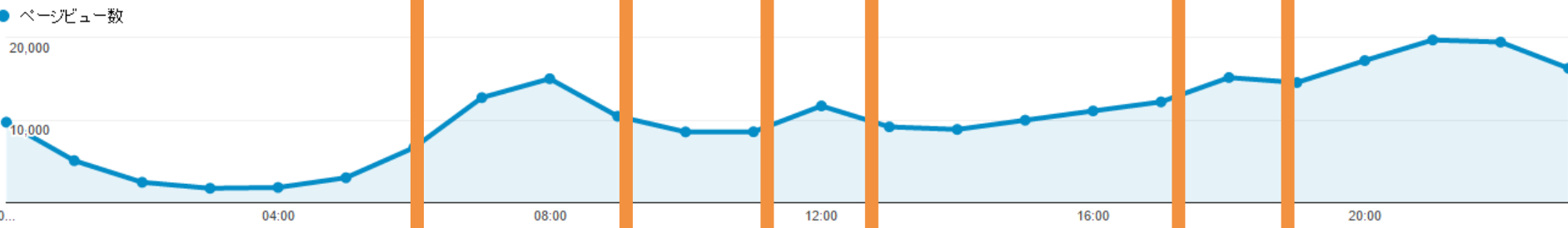


# Insight through usage

## Desktop



## Mobile



Commuter

Lunch

Commuter

\*1 hour is average commuter time in Tokyo

Course with No DL video...



Don't take DL videos away!  
I'd like to watch and study in....





We deboned Open edX for mobile to be RWD.  
In contrast, Japanese gets large-boned body  
by studying with “gacco” in dreadful trains!

奇評





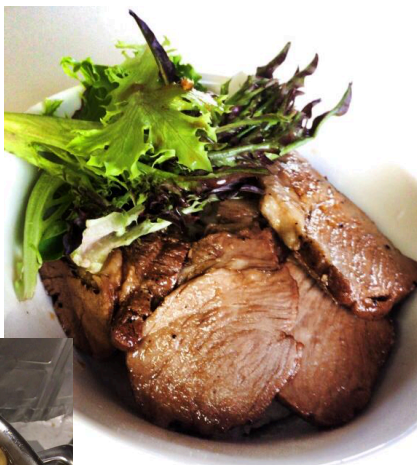
What's like your home party, chef/barista:  
Everyone calls as **wat**-café (My Name **WAT**anabe)  
3~8 friends comes my house(small), I love it.



My partner:  
Professional mill  
→hand drip!!!



Oden : Japanese stew



Roasted pork



Chinese  
dumpling

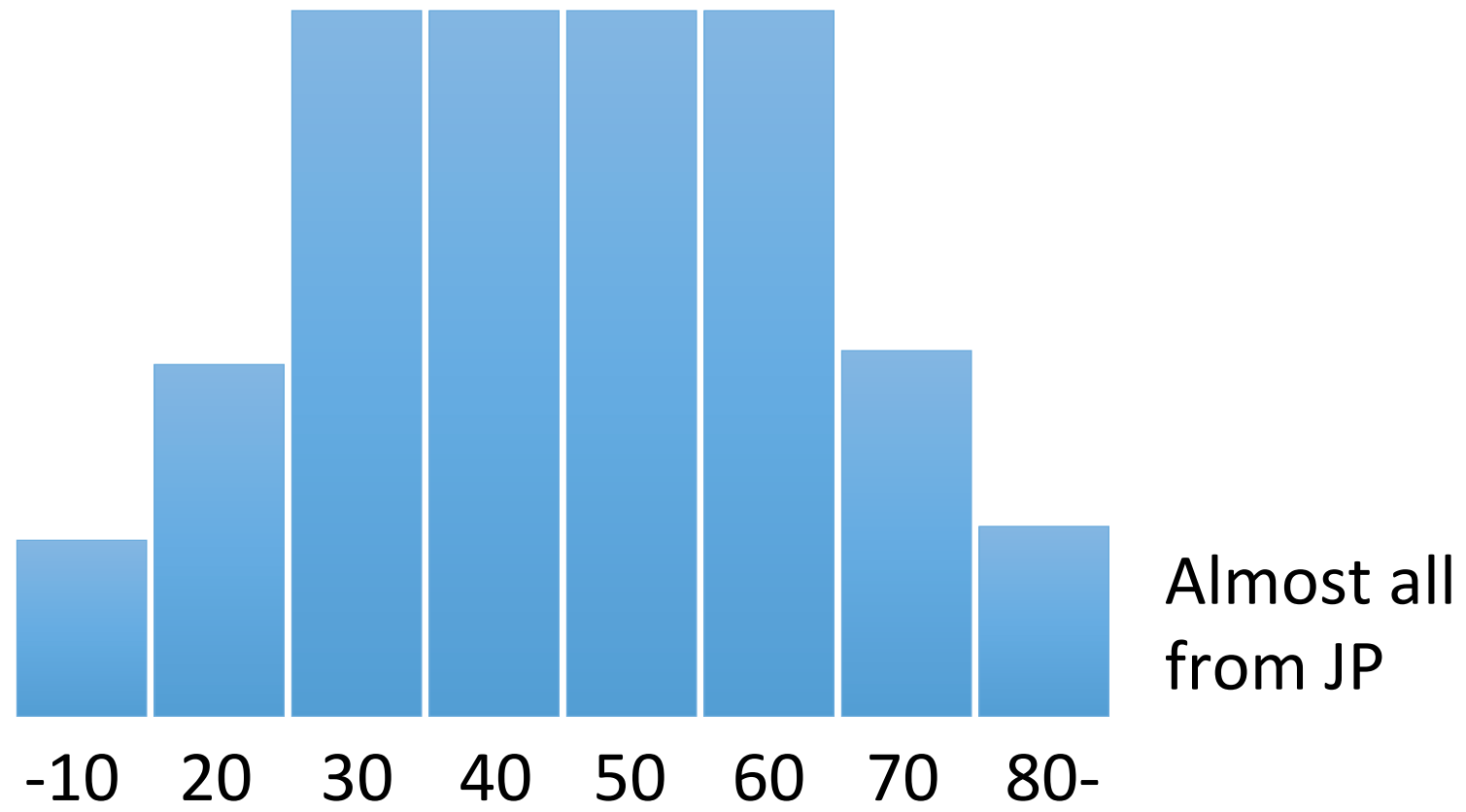


catering service(handmade)

Appendix

Amount of users:

80,000 and more (Yesterday exceeded 80,000 users)



## Appendix

Courses :

about 30 courses we've announced

>>6 courses were closed,

>>8 courses are open now,

>>the others are enrollment only.

max enrollment 20000 users, average 5000 users.

Generally 4 weeks course,

8-10 videos / week, every video ranges 8-15 min.

disclose every week new video & assessments.

## Appendix

Rate of achieving certification:

Rate ranges 8-20%

open assessments only course is likely to low rate.  
Quiz to open assessment method course is likely to high rate.

Almost half user of 1points or more points  
(non-0point) gets CERT.

## Appendix

How to earn / Business model :

Ticket for flipped class room(\$45 to \$450/event)

In-company SPOC(small private online course)

Service for government and regional institute,  
educational advertising for citizen.

In future, recruiting business on changing job,  
matching employee & employer.

Big data – as NTT docomo user, cross-service  
analytics to maximize user engagement.

## Appendix

Promotion :

Collaboration with Univ/College

Media AD post(Gizmodo, EdTech news etc...)

SNS(Blog, fb, twitter)

Interview or visit for media coverage(TV)

Now trial on paid promo, Google adwords etc...



## Appendix

Cultivation of courses :

In-query (1~3 / month)

Private offer to attractive teachers.

Information session with JMOOC\*.

\*JMOOC = Japan MOOC

Japan Open Online Education Promotion Council.

JMOOC is co-funded by industry-academia collaboration.