Pemrograman Web

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STT-NF

Responsive Web Design

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Apa itu RWD ?

- Cara praktis mendesain dan membuat konten web anda agar tampil optimal dan sama baiknya ketika diakses oleh bermacam-macam *devices*

Apa itu RWD ?

"Responsive design is not about 'designing for mobile'. But it's not about 'designing for the desktop', either. Rather, it's about adopting a more flexible, device-agnostic approach"

Ethan Marcotte author of Responsive Web Design [2010]

https://alistapart.com/article/responsive-web-design

Responsive Web Design
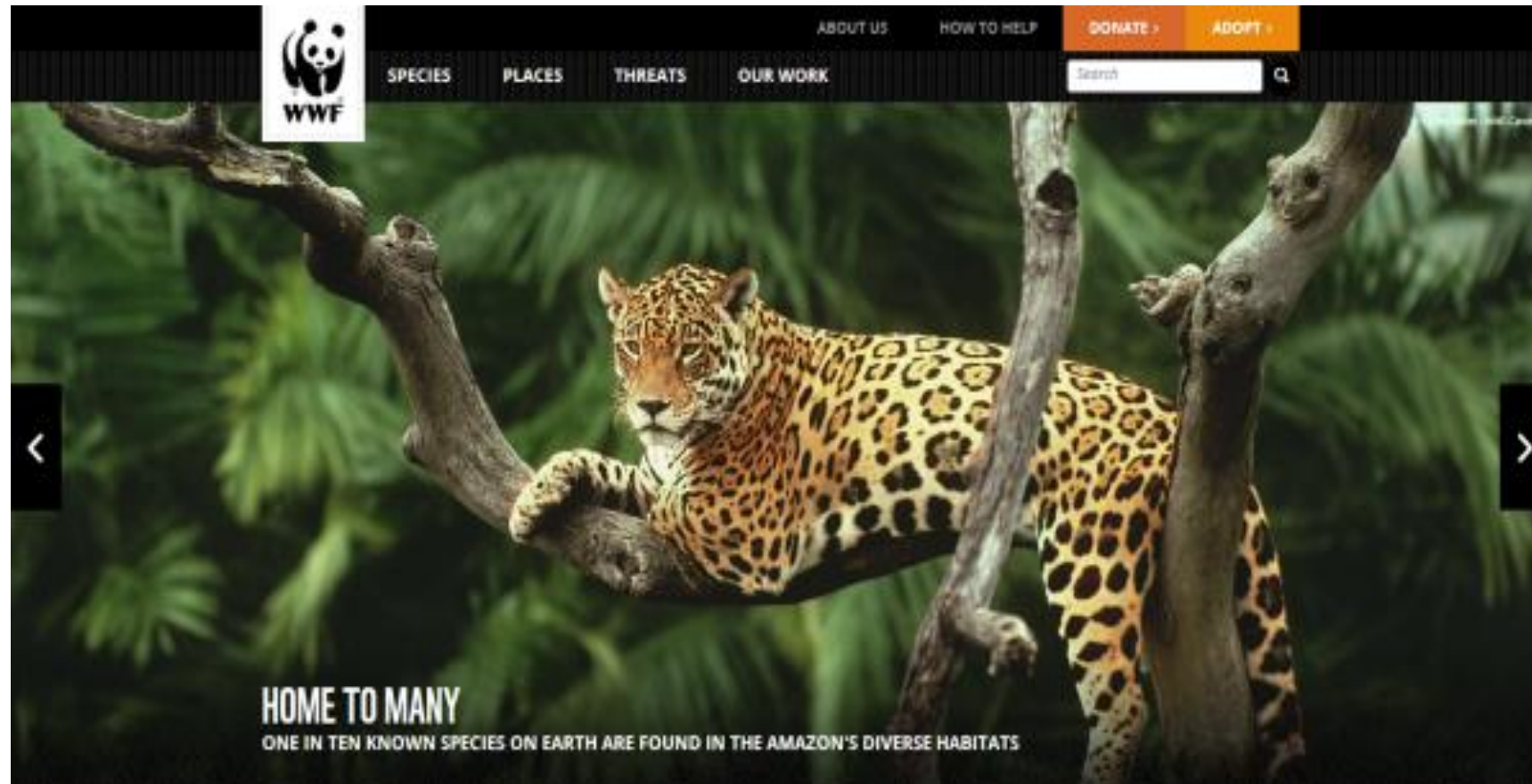
- Smartphone
- Tablet
- Notebook
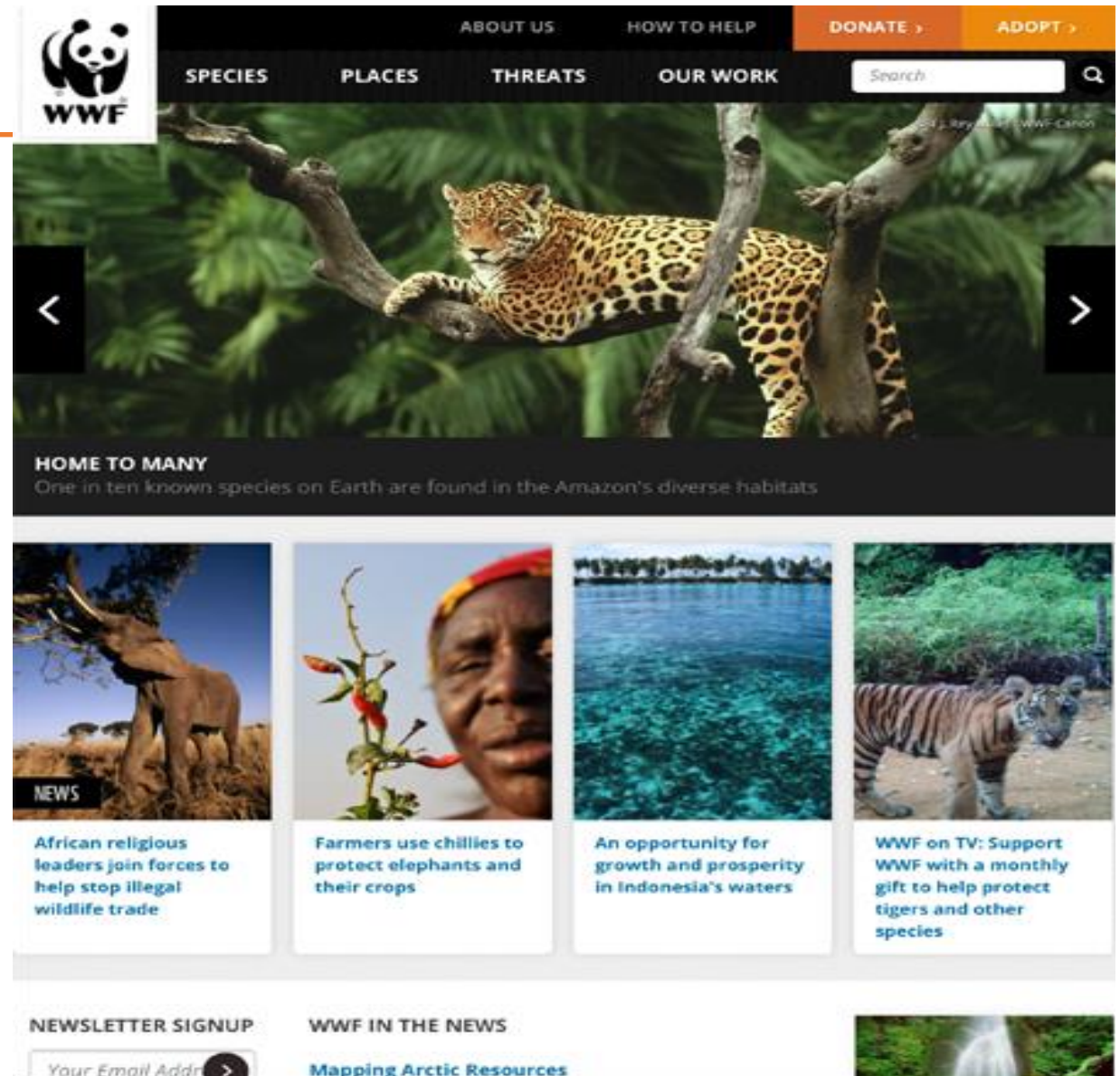- Netbook
- Monitor
- TV
- Web glasses
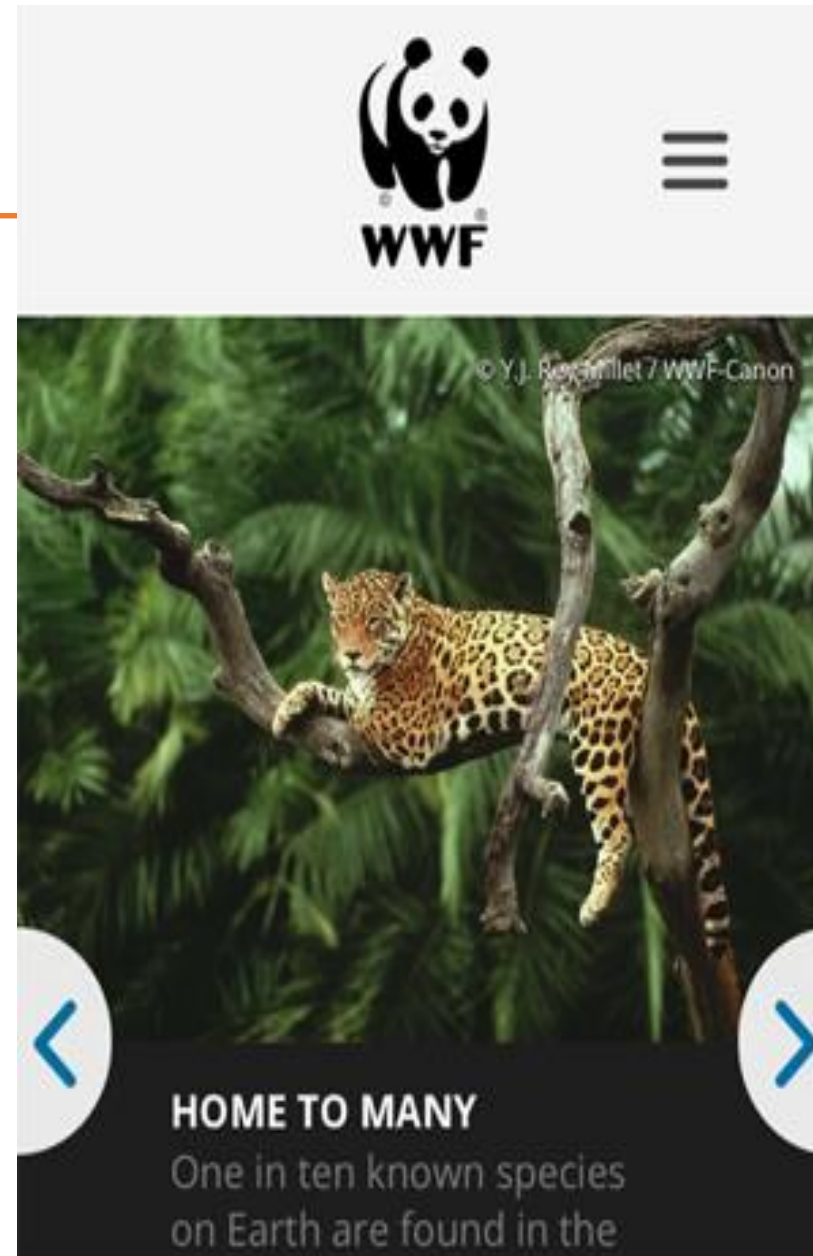
RWD - Desktop

- worlwildlife.org : desktop

RWD - Tablet

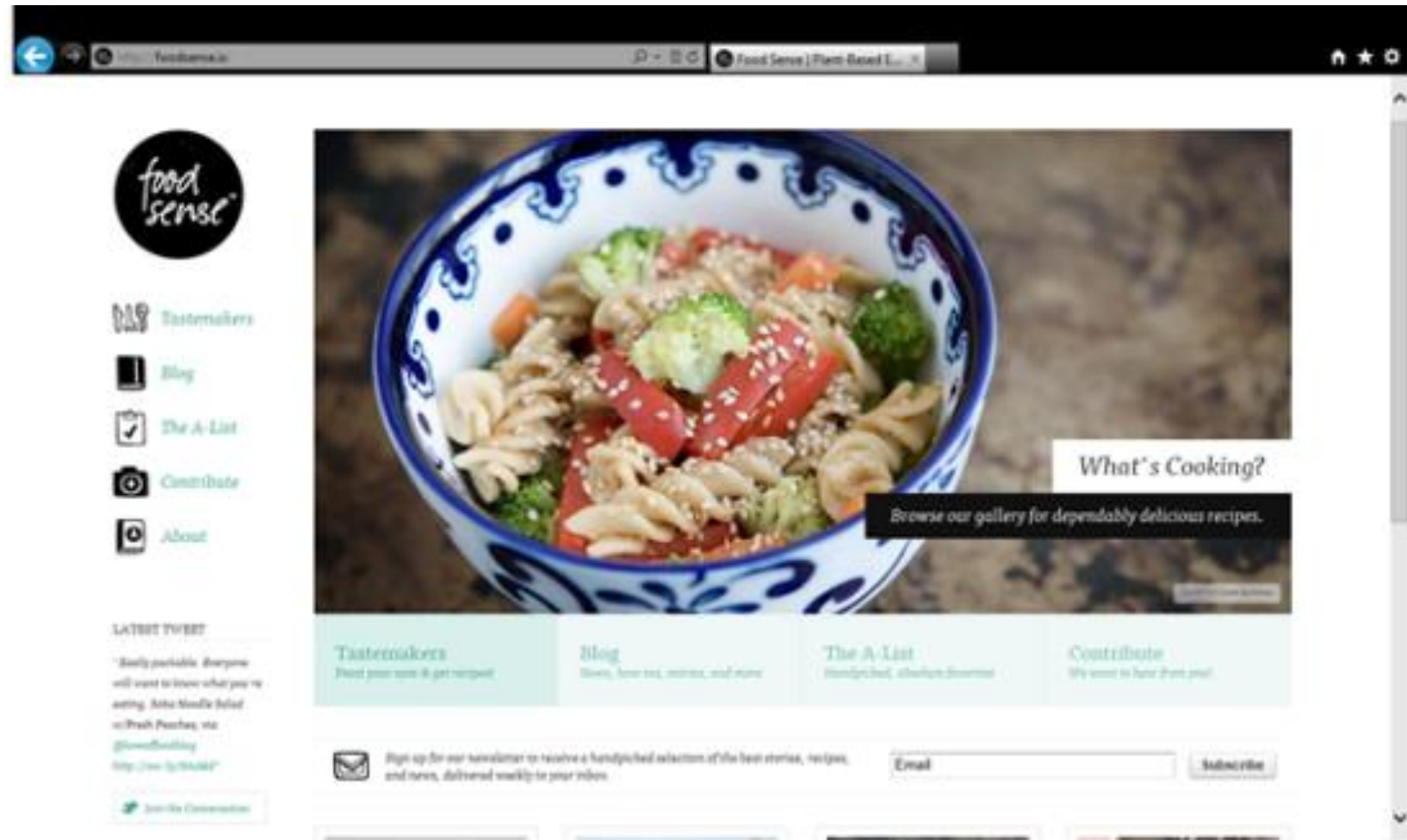- worlwildlife.org : tablet

RWD - Smartphone

- worlwildlife.org : Smartphone

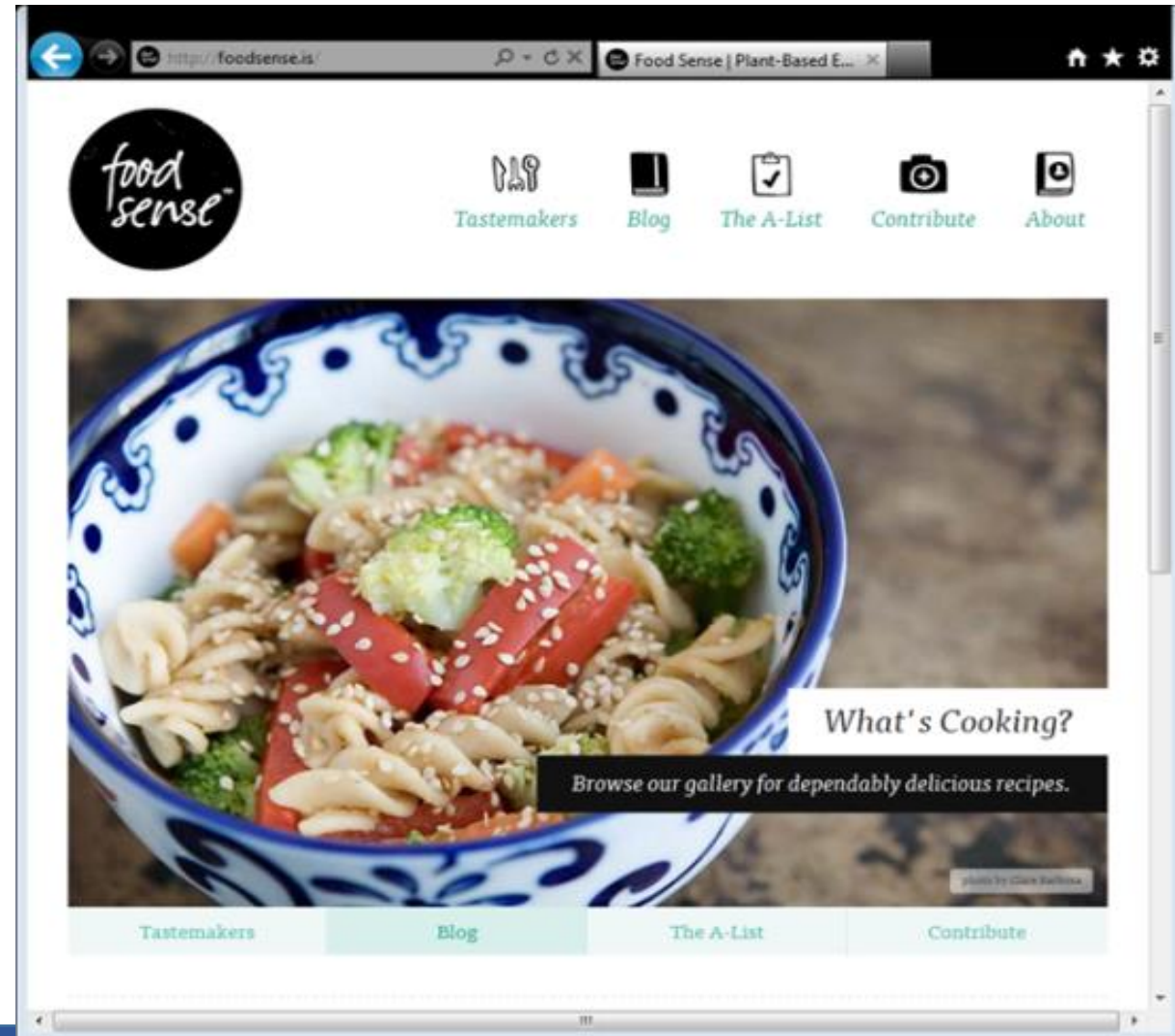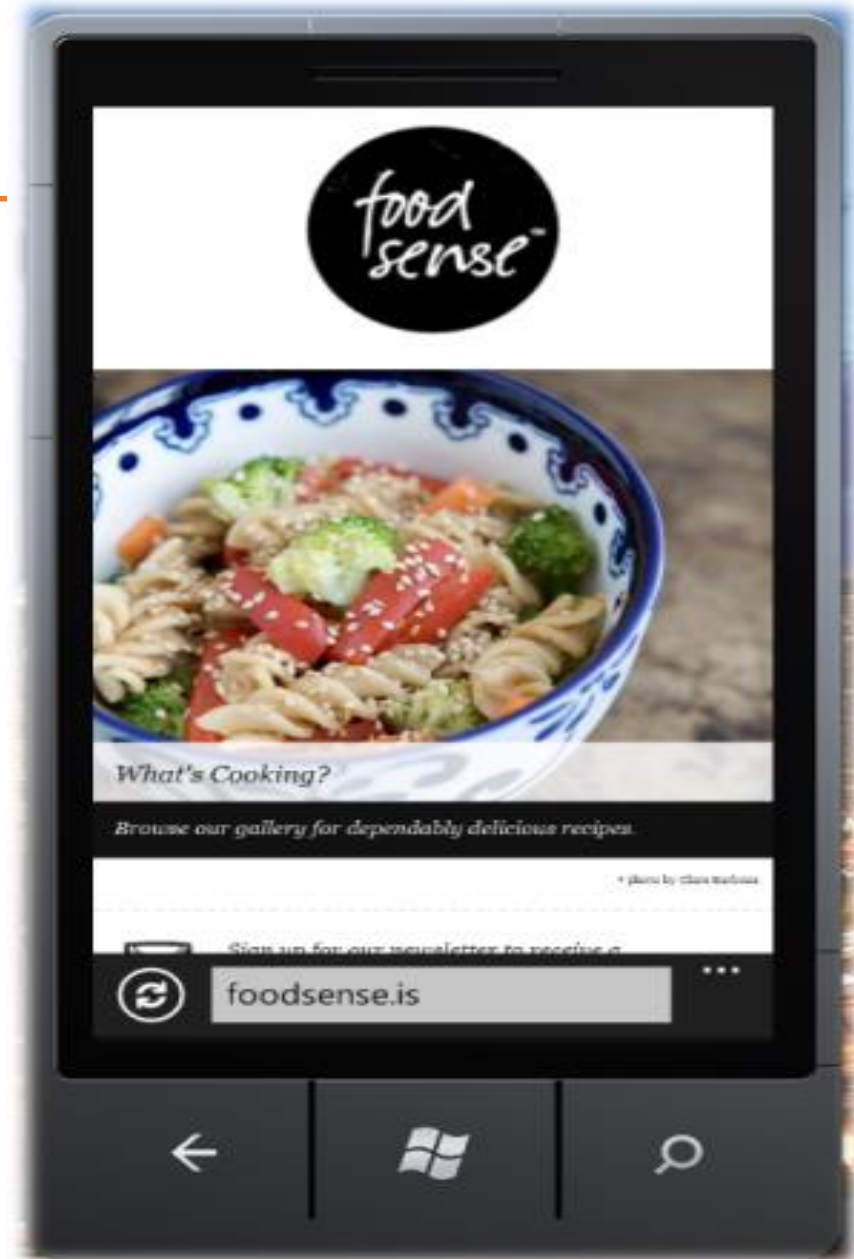# RWD – Navigasi Menu

Posisi Navigasi di kiri:

RWD – Navigasi Menu
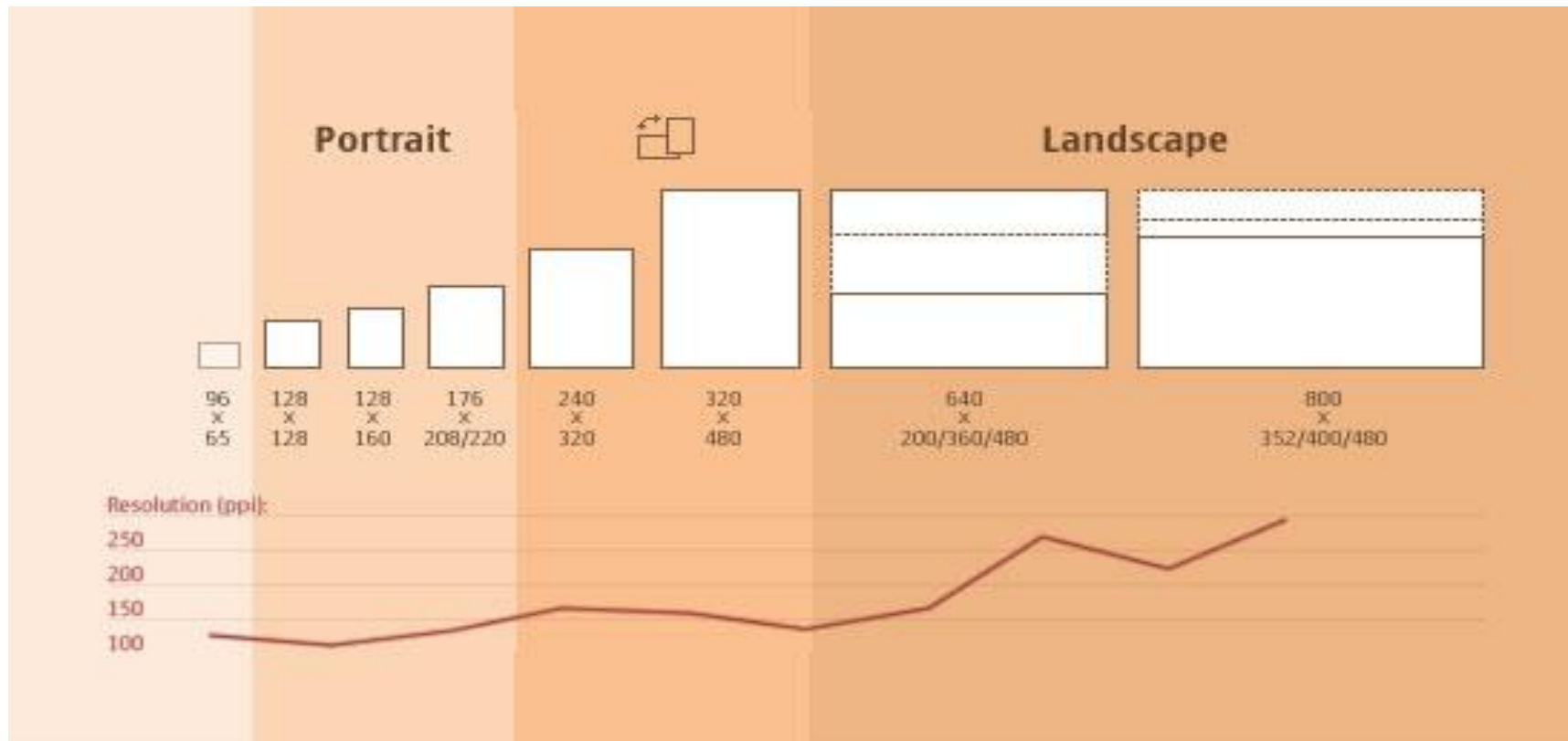
Dilayar 800x600:
 Navigasi pindah ke atas (top)

RWD – Navigasi Menu

Akses melalui Smartphone

Screen Size

- RWD : Antarmuka website mampu beradaptasi dengan browser berdasarkan ukuran layar, platform dan orientasi

Teknik pengembangan RWD :: HTML5

- CSS3 Media Queries
- Fluid-grid layouts
- Fluid-images and other media

CSS3 Media Queries

- Memungkinkan halaman web menggunakan aturan CSS yang berbeda sesuai karakteristik dari devices atau dan browser yang mengakses
- Secara spesifik CSS disesuaikan dengan:
  - Tinggi dan lebar devices
  - Tinggi dan lebar browser
  - Resolusi layar
  - Orientasi devices (mobile / tablet : landscape, portrait)
- Spesifikasi : www.w3.org/TR/css3-mediaqueries

CSS3 Media Queries

- Style CSS:
  body { background-color: red; }
  @media only screen and (max-width: 320px) {
   body { background-color: orange; }
  }
- Layar ukuran 0-320px: warna background akan orange
- Layar ukuran lebih besar dari 320px akan merah

CSS3 Media Queries

- Internal Style:
  @media only screen and (max-width: 320px) {
   /* kode css disini */
  }

- Eksternal Style link ke file CSS
    <link media="only screen and (max-width: 768px)"
  href="css/tablet.css"rel="stylesheet">

- Eksternal Style via @import file
  @import url("css/tablet.css") only screen and
  (max-width: 768px);

CSS3 Media Queries :: break point

Label	Layout Width
Smartphones	480px and below
Portrait Tables	480px to 768px
Landscape Tablets	768px to 940px
Default	940px and up
Large Screens	1210px and up

Fluid Grid Layout

- Style CSS di desain sesuai partisi ukuran lebar
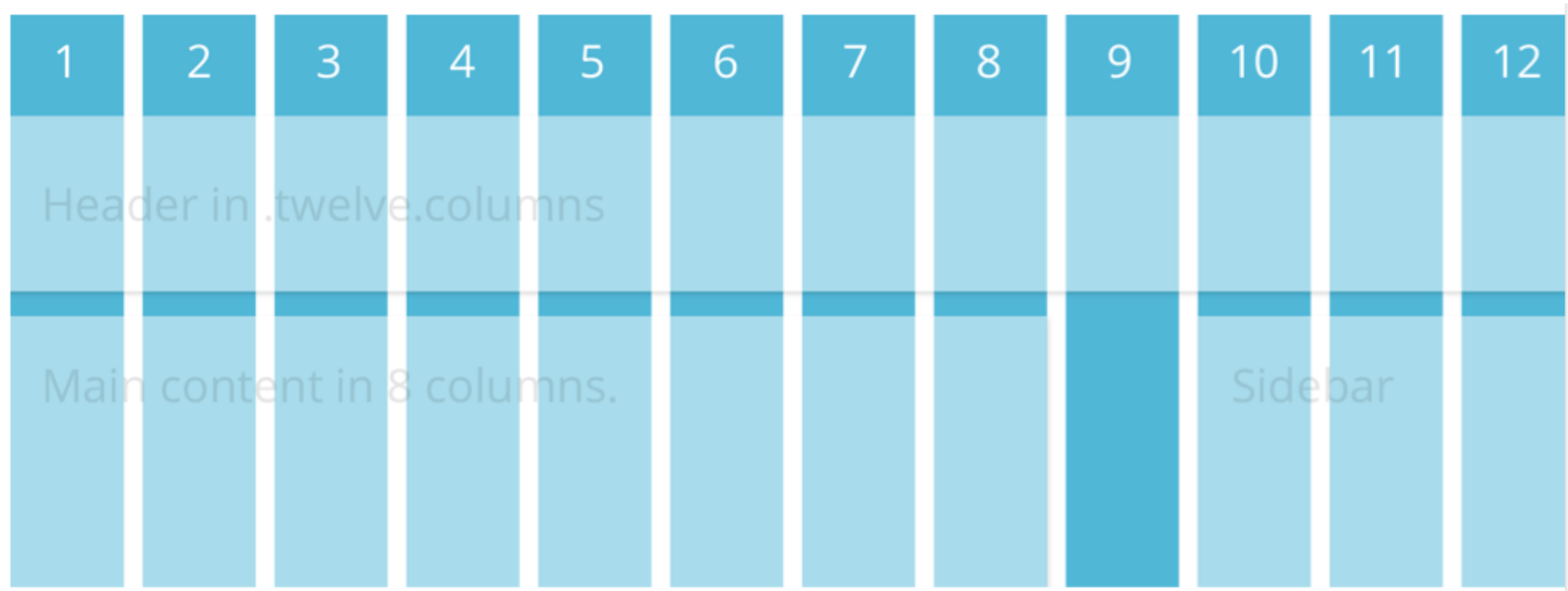
Fluid Grid Layout

Fluid Grid Layout

```html
<div class="container">
  <!-- Give column value in word form (one, two..., twelve) -->
 <div class="sixteen columns">
    <h1>Full Width Column</h1>
 </div>
<div class="six columns clearfix">
  <!-- In nested columns give the first column a class of
alpha
   and the second a class of omega -->
   <div class="three columns alpha">...</div>
   <div class="three columns omega">...</div>
</div>
 <!-- Sweet nested columns cleared by wrapping a .row -->
 <div class="five columns">
   <div class="row">
    <div class="three columns alpha">...</div>
     <div class="two columns omega">...</div>
   </div>
</div>
</div>
```
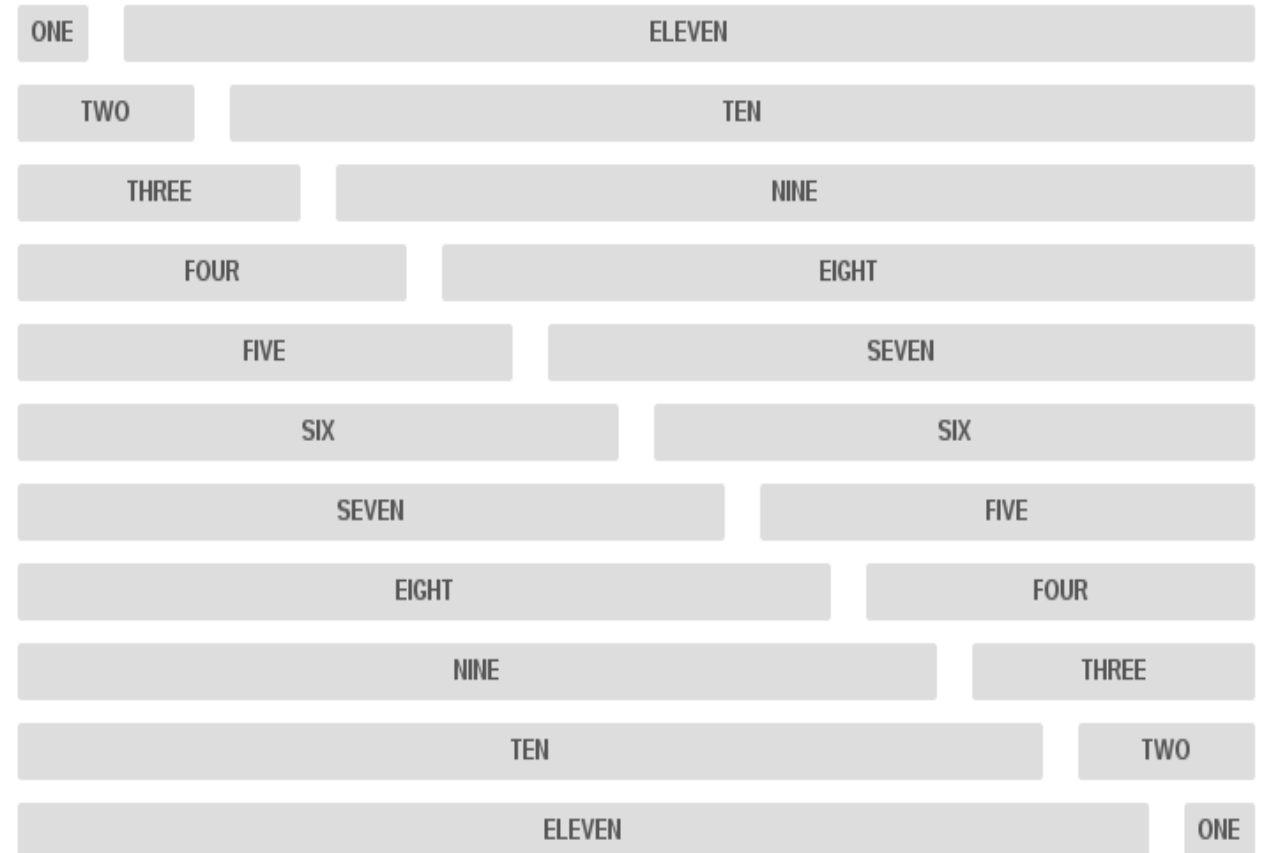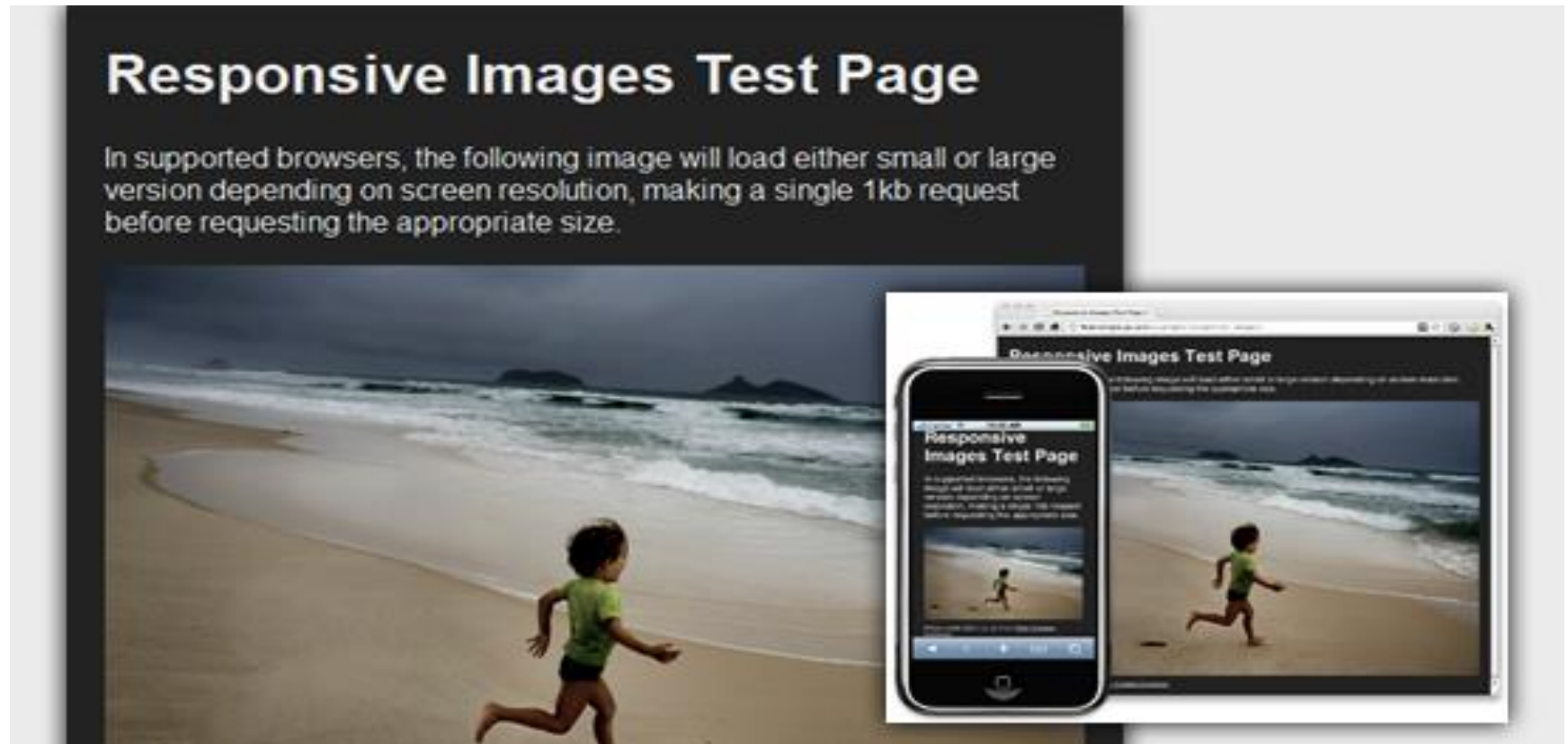
Fluid Images (Flexible Images)

- Gambar / Video ditampilkan secara proporsional sesuai devices yang mengakses

Fluid Images (Resizable Images)

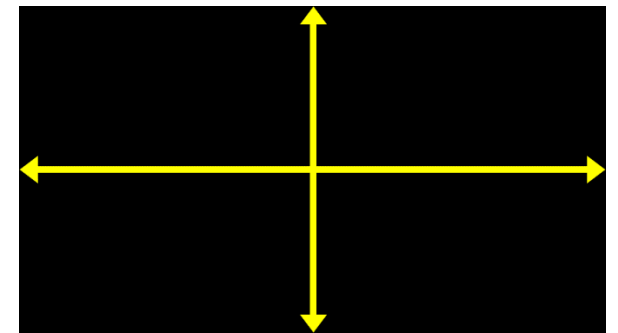- Hilangkan properti width dan height pada image:

- Styling CSS ukuran image yang resizable:

  ```
  img {
  max-width:100% ; height: auto;
  }
  ```
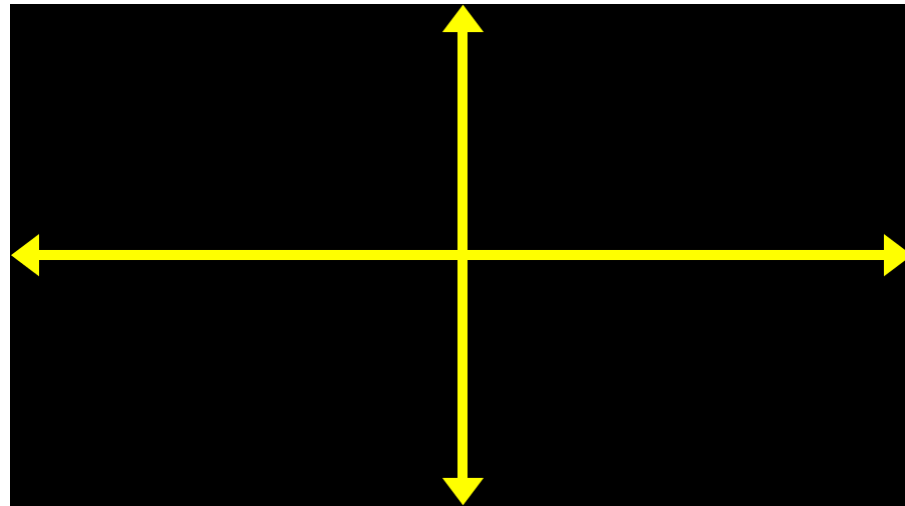
Proses desain web responsive: mobile first

- Buat design web versi mobile terlebih dahulu (phone, phablet, tablet)
- Gunakan desain versi mobile sebagai acuan untuk membuat design utama di Desktop Computer & Laptop

Proses desain web responsive: mobile first

- Mobile Layout:
    - Buat link / tombol yang cukup besar untuk di tekan
    - Tampilkan informasi yang penting dan paling penting dari website
    - Lupakan Mouse OnHover
    - Buat menu yang mudah untuk diakses pengguna

- Mobile Design:
    - Prototype lebih berguna dari Mockup
    - Tidak berkutan dengan Pixel Perfect Design
    - Jadikan design versi mobile sebagai acuan untuk membuat large screen design

Mockup Responsive

- https://app.moqups.com

- https://ninjamock.com

- https://mockflow.com
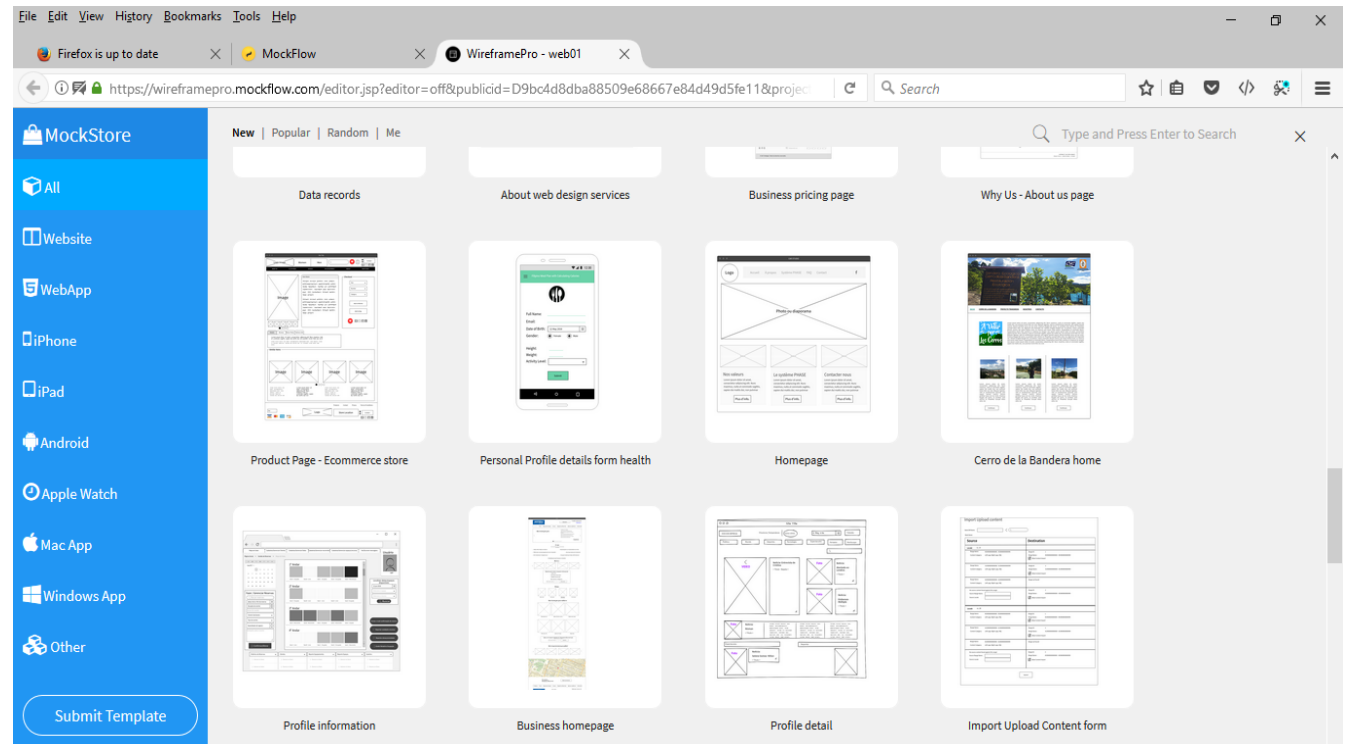
Responsive HTML5 Framework

- Kumpulan library DHTML yang mendukung pengembangan website dengan responsive web design
- Framework meyediakan styling CSS yang mendukung teknik-teknik RWD
- Framework dilengkapi dengan library JavaScript yang mendukung RWD

Responsive HTML5 Framework

- http://getbootstrap.com/ - bootstrap
- http://foundation.zurb.com/ - foundation
- https://purecss.io/- pure
- http://getskeleton.com/- skeleton
- http://montagestudio.com/montagejs/ - montage
- https://siimple.juanes.xyz/ - simple
- https://www.gumbyframework.com/ - gumby
- https://semantic-ui.com/ - semantic
- http://www.cascade-framework.com/ - cascade

https://blog.templatetoaster.com/best-responsive-web-design-frameworks/

RWD : bootstrap (http://getbootstrap.com/)

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- Reason #1: Rich Features

Designed for everyone, everywhere.

Need reasons to love Bootstrap? Look no further.

Built for and by nerds
Like you, we love building awesome products on the web. We love it so much, we decided to help people just like us do it easier, better, and faster. Bootstrap is built for you.

For all skill levels
Bootstrap is designed to help people of all skill levels— designer or developer, huge nerd or early beginner. Use it as a complete kit or use to start something more complex.

Cross-everything
Originally built with only modern browsers in mind, Bootstrap has evolved to include support for all major browsers (even IE7!) and, with Bootstrap 2, tablets and smartphones, too.

12-column grid
Grid systems aren't everything, but having a durable and flexible one at the core of your work can make development much simpler. Use our built-in grid classes or roll your own.

Responsive design
With Bootstrap 2, we've gone fully responsive. Our components are scaled according to a range of resolutions and devices to provide a consistent experience, no matter what.

Styleguide docs
Unlike other front-end toolkits, Bootstrap was designed first and foremost as a styleguide to document not only our features, but best practices and living, coded examples.

Growing library
Despite being only 10kb (gzipped), Bootstrap is one of the most complete front-end toolkits out there with dozens of fully functional components ready to be put to use.

Custom jQuery plugins
What good is an awesome design component without easy-to-use, proper, and extensible interactions? With Bootstrap, you get custom-built jQuery plugins to bring your projects to life.

Built on LESS
Where vanilla CSS falters, LESS excels. Variables, nesting, operations, and mixins in LESS makes coding CSS faster and more efficient with minimal overhead.

HTML5
Built to support new HTML5 elements and syntax.

CSS3
Progressively enhanced components for ultimate style.

Open-source
Built for and maintained by the community via GitHub.

Made at Twitter
Brought to you by an experienced engineer and designer.

RWD : bootstrap (http://getbootstrap.com/)

- Reason #2: Popularity

RWD : bootstrap (http://getbootstrap.com/)
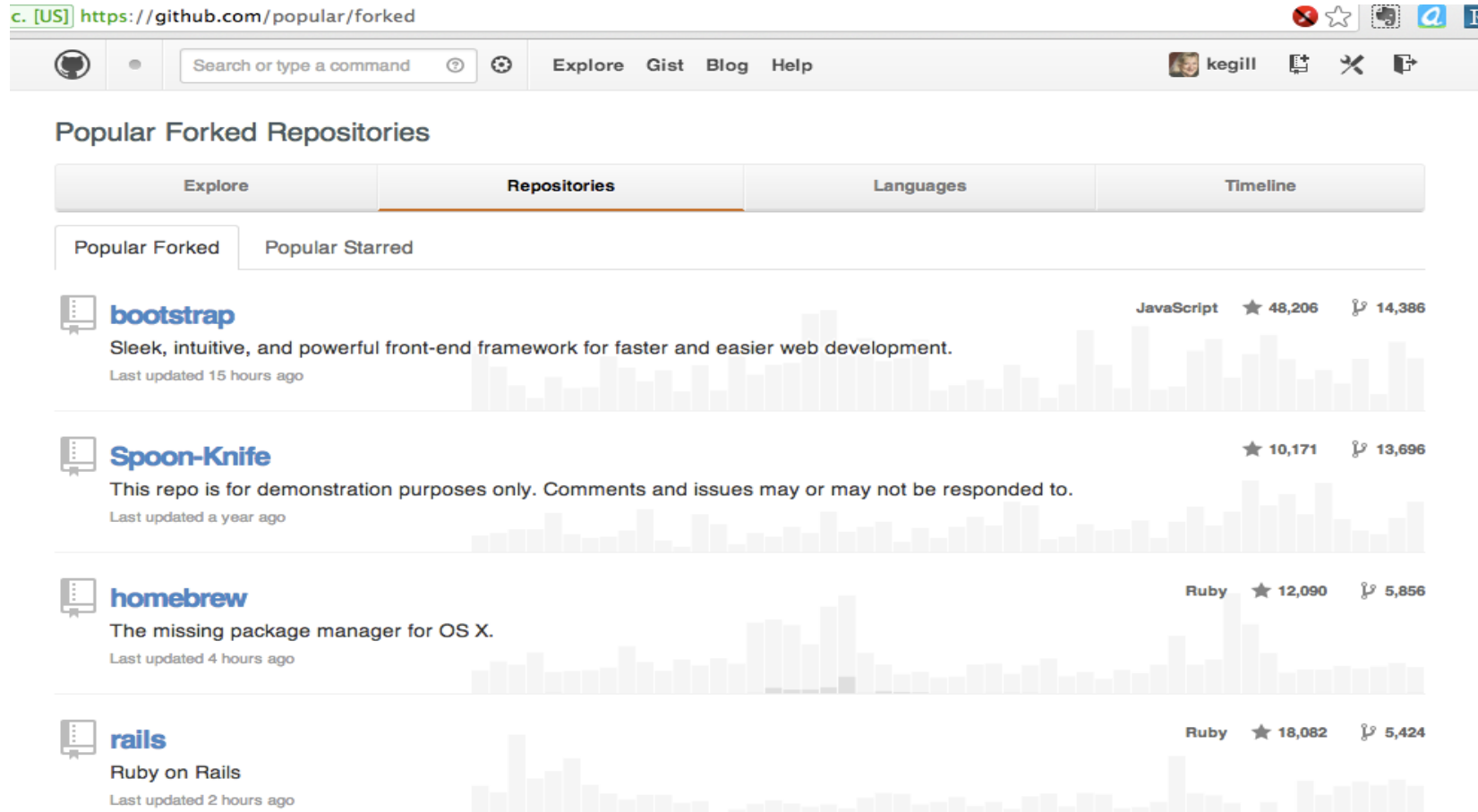
- Reason #3: Browser Support

RWD : bootstrap (http://getbootstrap.com/)

- Reason #4: Icon set

RWD : bootstrap (http://getbootstrap.com/)

- Reason #5: Grid System

| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |

| 4 | 4 | 4 |

| 4 | 8 |

| 6 | 6 |

| 12 |

RWD : bootstrap (http://getbootstrap.com/)
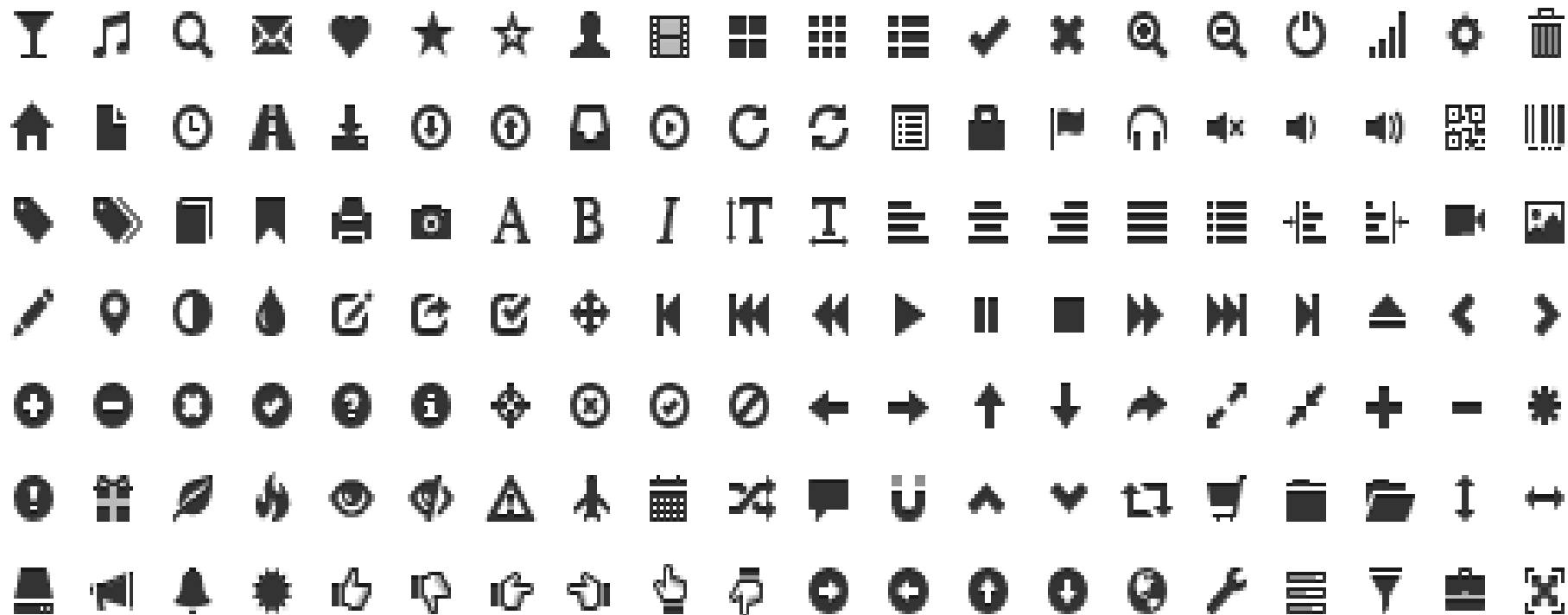
- **Reason #6: Components**

  - Buttons:

    | Action ▾ | Action ▾ | Danger ▾ | Warning ▾ | Success ▾ | Info ▾ | Inverse ▾ |

  - Tabs:

  - Breadcrumb:

  - Pagination:

    « | 1 | 2 | 3 | 4 | 5 | »
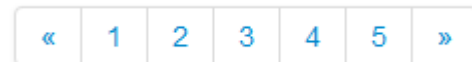
  - Alerts:

    Warning! Best check yo self, you're not looking too good. ✕

  - Progress bar:

RWD : bootstrap (http://getbootstrap.com/)
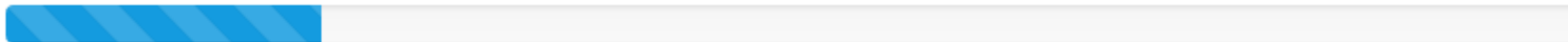
- Reason #7: Component

1. Choose components

Toggle all

Scaffolding

- ☑ Normalize and reset
- ☑ Body type and links
- ☑ Grid system
- ☑ Layouts

Base CSS

- ☑ Headings, body, etc
- ☑ Code and pre
- ☑ Labels and badges
- ☑ Tables
- ☑ Forms
- ☑ Buttons

Components

- ☑ Button groups and dropdowns
- ☑ Navs, tabs, and pills
- ☑ Navbar
- ☑ Breadcrumbs
- ☑ Pagination
- ☑ Pager
- ☑ Thumbnails
- ☑ Alerts
- ☑ Progress bars
- ☑ Hero unit
- ☑ Media component

Miscellaneous

- ☑ Media object
- ☑ Wells
- ☑ Close icon
- ☑ Utilities
- ☑ Component animations

Responsive

- ☑ Visible/hidden classes
- ☑ Narrow tablets and below (<767px)
- ☑ Tablets to desktops (767-979px)
- ☑ Large desktops (>1200px)
- ☑ Responsive navbar

RWD : bootstrap (http://getbootstrap.com/)

- Reason #8: JavaScript / JQuery

☑ Transitions (required for any animation)	☑ Affix
☑ Modals	☑ Alert messages
☑ Dropdowns	☑ Buttons
☑ Scrollspy	☑ Collapse
☑ Togglable tabs	☑ Carousel
☑ Tooltips	☑ Typeahead
☑ Popovers (requires Tooltips)	

Heads up!

All checked plugins will be compiled into a single file, bootstrap.js. All plugins require the latest version of jQuery to be included.
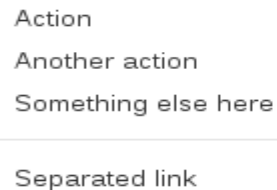
RWD : bootstrap (http://getbootstrap.com/)

- Reason #9: Well Documentation & Example

Dropdown menus

Example

Toggleable, contextual menu for displaying lists of links. Made interactive with the dropdown JavaS

Example

Action
Another action
Something else here

Separated link

```
<ul class="dropdown-menu" role="menu" aria-labelledby="dropdownMenu">
  <li><a tabindex="-1" href="#">Action</a></li>
  <li><a tabindex="-1" href="#">Another action</a></li>
  <li><a tabindex="-1" href="#">Something else here</a></li>
  <li class="divider"></li>
  <li><a tabindex="-1" href="#">Separated link</a></li>
</ul>
```

RWD : bootstrap (http://getbootstrap.com/)

- Reason #10: Integration with Server Side Program

- PHP
  - Framework : Component Yii Framework, Laravel, CI
- Java Web (Servlet / JSP)
  - Framework : Spring, Tapestry
- ASP.NET
  - ASP.NET MVC
- Ruby
  - Ruby On Rails
- Python
  - Djanggo

RWD : bootstrap (http://getbootstrap.com/)

- Reason #11: Integration with CMS Themes
- Joomla
- Wordpress
- Drupal

RWD : bootstrap Version & Design

- Version:
  - v2.3.2
  - v3.3.7 : flat grafical style & themes
  - v4 Alpha 6
- Design Online
  - http://www.boottheme.com/
  - http://www.layoutit.com/
  - https://bootsnipp.com/
- Web Template
  - http://bootswatch.com
  - http://startbootstrap.com

Let's design