

CODING MUM

LEVEL 01

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Coding Mum Singapore, Hongkong, Taiwan

¹ Buku ini akan terus disempurnakan untuk kenyamanan pengguna dan kelengkapan materi yang disesuaikan dengan kebutuhan industri. Buku ini akan dipublikasikan secara umum di akhir tahun 2017.

KATA PENGANTAR



Saya menyambut baik diluncurkannya buku pedoman pelatihan programmer paruh waktu yang ditujukan kepada ibu-ibu rumah tangga atau diistilahkan Coding Mum. Pelatihan coding mum diharapkan mencapai target menciptakan lapangan kerja dan sumber pendapatan baru yang membantu ekonomi sebuah rumah tangga. Dengan demikian, pelatihan ini merupakan bagian dari skenario besar bagaimana sektor Ekonomi Kreatif mampu menyerap tenaga kerja dan menambah Produk Domestik Bruto.

Di sisi yang lain, pelatihan ini untuk menyahuti era e-commerce dengan membantu ibu rumah tangga untuk mengenal dan mengerti konsep pemrograman awal terutama untuk web aplikasi. Coding Mum juga memberikan kemampuan untuk dapat mengembangkan kegiatan bisnis online mereka dengan cara membuat halaman web sendiri.

Jumlah Ibu-ibu rumah tangga yang berpendidikan tinggi namun harus menghabiskan sebagian besar waktunya di rumah, merupakan angkatan kerja yang tidak sedikit sekaligus sangat potensial. Oleh karena itu, saya ingin mengekspresikan rasa optimis saya bahwa pelatihan ini dapat menjadi kick off sebuah gerakan nasional yang memanfaatkan waktu luang ibu ibu untuk mengatasi alert coder atau kurangnya tenaga programmer di Indonesia.

Terima kasih kepada semua pihak yang telah membantu dan terlibat dalam pembuatan buku pedoman ini: Mandiri, 7-Eleven, MIKTI-Dilo, Clevio, ProCode CG, Tokopedia, M-Saku, Polytron, 7Langit, Sribulancer, BliBli.com, Digital Artha Media, Mandiri E-Cash, Bhinneka, dan OLX.

JAKARTA, 30 Maret 2016

TRIAWAN MUNAF

PENDAHULUAN

Badan Ekonomi Kreatif (BEKRAF) bekerjasama dengan 7-Eleven Indonesia, menyelenggarakan sebuah gerakan pemberdayaan perempuan yaitu Coding Mum. Gerakan ini merupakan sebuah rangkaian pendidikan dan pelatihan bahasa pemrograman bidang teknologi informasi untuk menghasilkan tenaga kerja programmer paruh waktu bagi ibu rumah tangga.

Gerakan ini juga sekaligus mendukung agenda strategis BEKRAF untuk menyerap tenaga kerja dari sektor industri ekonomi kreatif yang berjumlah 12,4 juta orang di tahun 2016 hingga 13 juta jiwa di tahun 2019.

Gerakan Coding Mum dimulai di tahun 2016 dengan kurikulum yang selalu diperbaiki setiap saat untuk memenuhi kebutuhan industri. Di tahun pertama, kegiatan dimulai di Jakarta dan berlanjut ke kota-kota besar lainnya seperti Malang, Surabaya, Bandung, Bogor, dan Makasar. Di tahun kedua, kegiatan akan berkembang di beberapa negara yang mempunyai Buruh Migran cukup banyak dan diharapkan mereka dapat pulang ke Indonesia dengan skill yang bertambah. Selain luar negeri, kegiatan di dalam negeri terus berlanjut ke daerah-daerah yang belum disambangi di tahun 2016.

Materi pelatihan Gerakan Coding Mum terus dikembangkan dengan bantuan para pelaku industri untuk memenuhi kebutuhan digital dan dibantu oleh beberapa institusi pendidikan yang berada di berbagai daerah : Dilo Mikti, ProCode CG Bandung, Clevio Coder Camp Cibubur, Inspire Singapore yang akan diberikan dalam bentuk coaching agar lebih mudah dimengerti oleh para ibu rumah tangga sebagai para peserta.

Isi program Gerakan Coding Mum terdiri dari 3 level yang meliputi :

1. LEVEL 01 : Pembuatan Website Static (HTML, CSS, Bootstrap)
2. LEVEL 02 : Pembuatan Website Interactive (Java Script)
3. LEVEL 03 : Pembuatan Website ber Database (PHP dan MySQL)

Di setiap level tersebut di bagi menjadi 8 kali pertemuan. Diharapkan di akhir program, peserta sudah mampu menghasilkan website sendiri dan siap untuk bekerja paruh waktu di perusahaan sponsor Coding Mum atau untuk mengembangkan usaha pribadi masing-masing.

Akhir kata, Gerakan Coding Mum ini diharapkan menjadi sebuah gerakan pengajaran open source yang dapat dinikmati di seluruh Indonesia. Kunjungi website Coding Mum (www.codingmum.id) untuk mengetahui update terbaru dari gerakan Coding Mum ini.

Team Coding Mum

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(*) if there is a time, to polish the website, we can introduce bootstrap to the student to make it more pretty

CODING MUM TOOLS

Brackets, an open source code editor for web designers and front-end developers, brackets.io

Code Academy, with interactive lessons to help you review: www.codecademy.com/

Girldevelopit, material for Coding Mum presentation <https://www.girldevelopit.com/materials>

Git. **Git** is a free and open source distributed version control system designed to handle everything from small to very large projects with speed and efficiency. <https://git-scm.com/>

Github. Online project hosting using Git. <https://github.com/>

Firebase. **Firebase** is a complete platform for building mobile and web applications. <https://www.firebase.com/>

INSPIRING WEBSITE

Khan Academy has a lot more information about drawing and animations. The organization produces short lectures in the form of YouTube videos also. www.khanacademy.org

Thimble, write the web on the web. Thimble is an online code editor that makes it easy to create and publish your own web pages while learning HTML, CSS & JavaScript. <https://thimble.mozilla.org/en-US/>

W3schools. Is optimized for learning, testing, and training. www.w3schools.com

Tutorial point. More complex to learn programming. www.tutorialspoint.com

Site Point Free tutorials and reference manuals with examples www.sitepoint.com

HTML. Provides guides and help for developing of websites. www.html.net

Codeschool. Learn by Doing. **Interactive programming courses and coding challenges**, <https://www.codeschool.com/learn>

IMPORTANT WEBSITE

Developers Guide, from the Mozilla Developers Network: <https://developer.mozilla.org>

Code.org, from Facebook team: <https://code.org/>

Sribulancer, this is the place where you can get a freelance job from many places. www.sribulancer.com

INSPIRING WEBSITE

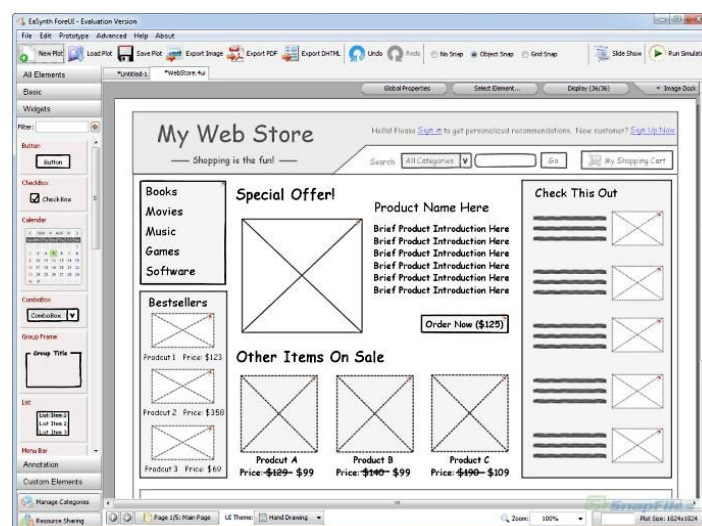
<https://id.pinterest.com/explore/web-design/>, <http://www.siteinspire.com/>,
<http://www.webdesign-inspiration.com/>, <http://www.awwwards.com/>

LESSON 01: INTRO TO INTERNET WORLD AND PAPER PROTOTYPING

BREAKDOWN YOUR WEBSITE USE A PAPER

- Let's find any website that you like and follow the instruction :
 1. Take any blank paper and your pen!
 2. let's start create a breakdown from the website
 3. When you look closely the website, there is a lot of segment on the website
 4. Find the header and draw it to your paper
 5. Find the title and draw it to your paper
 6. Find the body and draw it to your paper
 7. Find the footer and draw it to your paper
 8. Look closely again, and you will see some repeated box all around the website, define it and draw it to your paper
 9. Try to open the website into your phone, do you see any difference? i guess you need to take another paper, start over to draw from instruction no. 4-8
 10. Did you see any table or do you see any segment that displaying a real time update from another website?
 11. Did you see any table or do you see any segment that changing when you visit the website again?
 12. Did you see any segment that will changing when we do something different?
 13. Did you see a fancy movement or a small animation inside the website?
 14. Did you see any segment of the website asking you to fill in any information?

Now you already understand about the website breakdown, it will help you easier to write a code later as you already mapping the design into your head!



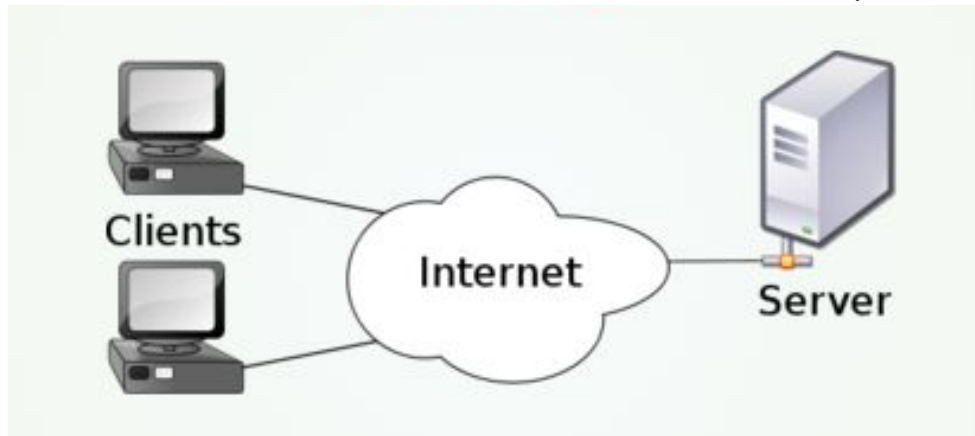
TERMS

HTML	CSS
WYSIWYG – wix.com	IDE
CMS	OPEN SOURCE
API	IP ADDRESS
DNS	SEO
WEB 2.0	THE CLOUD

WORLD WIDE WEB

Let's create hello world.html

What is the difference between a client and a server and how they communicate?



PARSING LANGUAGE & MEDIA

Client Side :	Server Side
<ul style="list-style-type: none">• HTML• CSS• JavaScript• Flash (with plugin)• Images	<ul style="list-style-type: none">• PHP• Perl• Python• Ruby• .Net, Java• ColdFusion• Databases

PARSING LANGUAGE & MEDIA

Web Browser:

- Chrome
- Firefox

Text Editor

- TextWrangler - Mac
- Notepad ++ - Windows

- Sublime Text - Linux, Mac or Windows
- gedit – Linux

FTP:

- WinSCP, Cyberduck, or CoffeeCup FTP

Optionally Image Editor:

- IrfanView, Gimp, or Photoshop

What do you need to know before building a web site?

What language should you use and what are the differences?

MEET THE WEB TEAM

Front end <ul style="list-style-type: none"> • User Experience Designer • Graphic Designer • Web Developer 	Back end <ul style="list-style-type: none"> • Server Admin • Database Admin • Software Engineer 	Overall <ul style="list-style-type: none"> • QA Engineer • Project Manager
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LESSON 02:

INTRO TO WEB CONCEPTS HTML :

HELLO WORLD! AND FROM DESIGN TO CODE

(LEARN <DIV>)

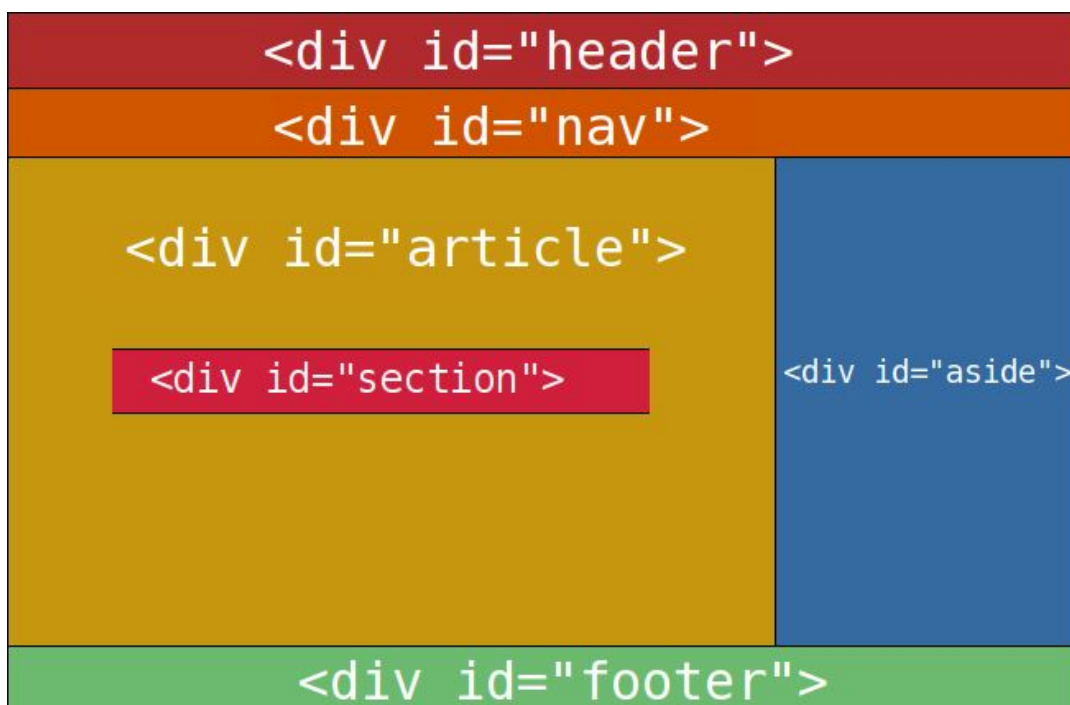
LET'S CREATE YOUR 1ST WEBSITE

- Let's try create some simple coding for simple website
 1. Download Notepad ++
<https://notepad-plus-plus.org/download/v6.9.1.html>
 2. Let's create a folder name : codingmum
 3. Open notepad and write your name, save it as index.html at your coding mum folder
 4. Open web browser and open your index.html. Vioolaa. You have your first website running 😊
- Let's learn something more complicated :
 1. Open this website
:https://www.codecademy.com/en/courses/make-a-website
 2. Create login for your account
 3. Let's follow the instruction
 4. While you play, you will learn more from all this 1st lesson

LET'S CREATE A WEBSITE TEMPLATE

You have your 1st website, but still not looks like a real website. Let's learn now to create some more complex website and we will create a template for the 1st time.

1. Create a folder with your website name and put another folder inside with folder name: css, images, js and you can add another folder later if needed.
2. Now open your index.html
3. Let's put the exactly same with the anatomy of html element inside your index.html
4. Let's slowly from your design last week, we create a template for your website using `<div>` and you will have a colorful box in your 1st website template



LESSON 03:

INTRODUCTION TO GIT/GITHUB

As no one in the world is perfect, let's learn GIT to save your day - when you lost your file - you still have your versioning in it and let's learn GITHUB so your work done faster by collaborate with other team and work together in it.

Here is the website link: <https://github.com/>

LET'S CREATE YOUR GIT ACCOUNT

Let's try create Github account:

1. create account at github.com
2. download from <https://desktop.github.com/>
3. Install git to your computer
4. Create repository : coding_mum
5. Save your index.html inside your repository coding_mum
6. Change the index.html inside git and try to pull it to your local computers

REPOSITORY



ADD FILES



CHANGES FILES

A large, empty rounded rectangular box with a red border, intended for listing changes to files.

COMMIT FILES

A large, empty rounded rectangular box with a red border, intended for listing files to be committed.

MERGING

A large, empty rounded rectangular box with a red border, intended for describing the merging process.

PUSH & PULL TO GITHUB REPO

A large, empty rounded rectangular box with a red border, intended for describing the push and pull process to the GitHub repository.

FORKING

A large, empty rounded rectangular box with a red border, intended for notes related to the 'FORKING' section.

PULL REQUESTS

A large, empty rounded rectangular box with a red border, intended for notes related to the 'PULL REQUESTS' section.

BRANCING

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LESSON 04:

HTML, BEYOND THE BASIC

WHAT IS HTML?

TERMS

Web design

Web development

Front End

Back End



TOOLS

Browser

- Chrome
- Firefox

Development Toolkit

- Chrome - Inspector
- Firefox - Firebug

Text Editor

- Text Wrangler - Mac
- Notepad ++ - Windows
- Sublime Text - Linux, Mac or Windows
- gedit – Linux

GET STARTED: FOLDER STRUCTURE

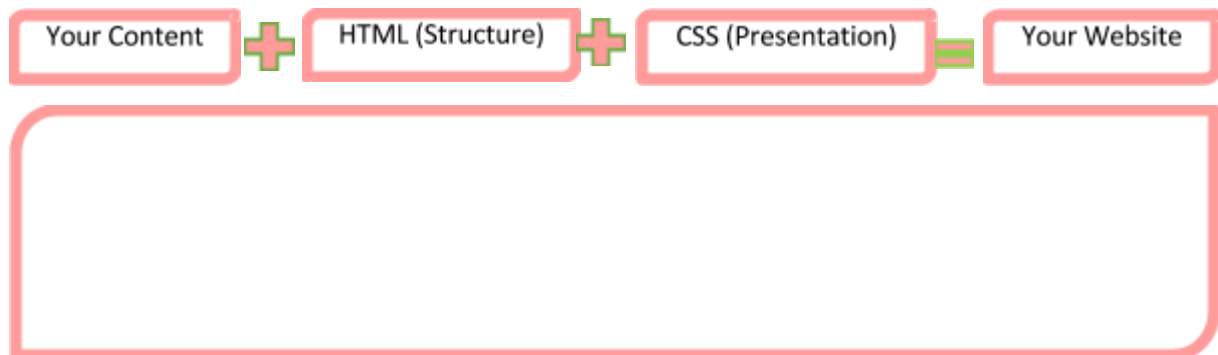
All the files for your site should be stored within the same folder.

This includes:

- HTML Files
- CSS Files
- Images
- Script files
- Anything else that will appear on your site

Note: File names should not include spaces or special characters. File names ARE case sensitive.

ANATOMY OF A WEBSITE



ANATOMY OF AN HTML ELEMENT

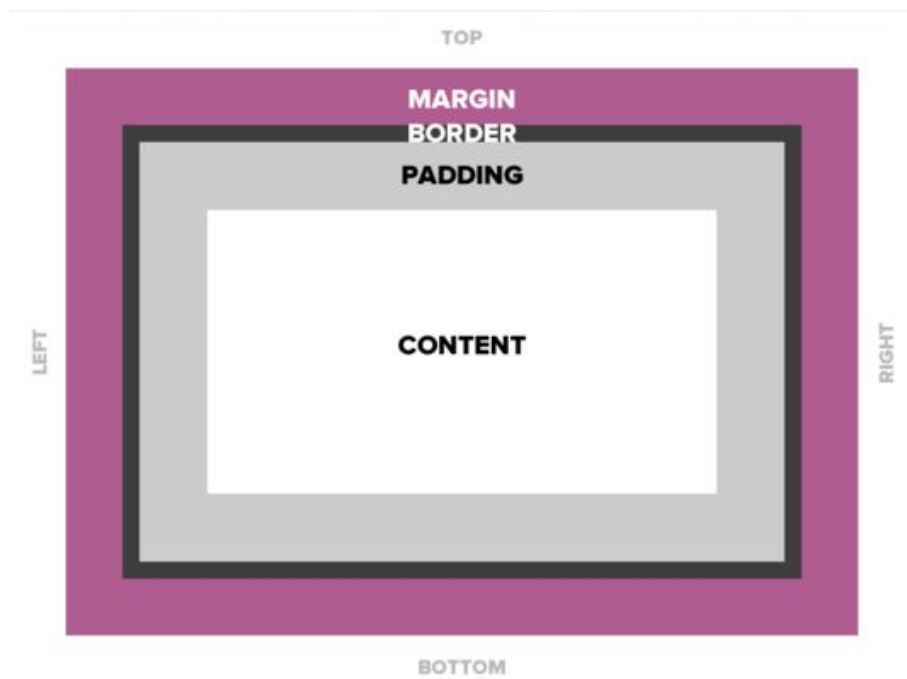
Let's start create our very 1st website while we learn HTML Element:

HTML Structure

```
<!DOCTYPE html>
<html>
  <head>
    <title>Title of the page </title>
  </head>
  <body>
    The page content here.
  </body>
</html>
```

While you create your website, slowly you will start to understand below term:

TAG	HEAD and BODY TAGS
CONTAINER ELEMENT	NESTING
STAND ALONE ELEMENT	COMMENTS
ATTRIBUTE	TABLES
VALUE	CHARACTERS CODE



LESSON 05:

INTRO TO CSS

Cascading Style Sheets are used to describe the appearance of Web content.

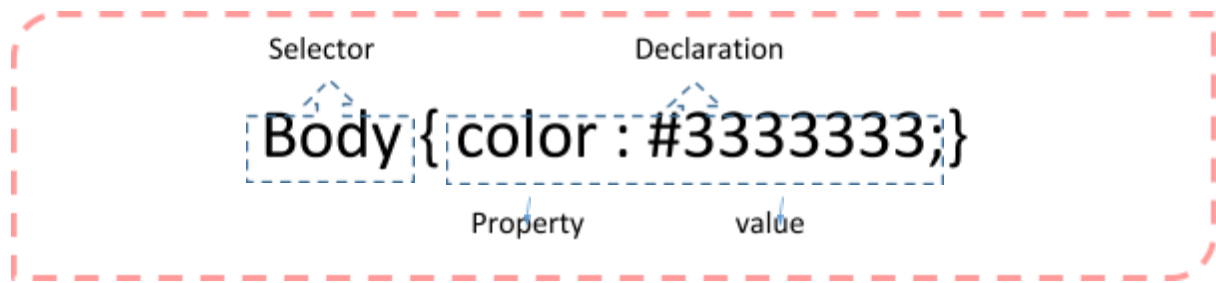
Your website still looks boring and not beautiful, let's put some more effort so your website done nicely.

LET'S DECORATE YOUR WEBSITE

1. Inside your css folder, create file name : style.css
2. Let's connect style.css to your index.html
3. Now test it with changing some color from your previous website
4. We will learn element selector to save your time :
 - a. Change all the color in html body
 - b. Change all the color in tag html h1
 - c. Change all the color in paragraph
5. We will learn id selector to save your another time :
 - a. Change the header to another color
6. We will learn class selector to save your entire life :
 - a. How to create 'image' and recipe content in left side?
 - b. How to change font style?
 - c. Change link HTML?
 - d. Create border style?
 - e. How to change Button Style?
 - f. How to create DROP DOWN Menu with CSS?

WHAT IS CSS?

CSS RULE



CSS Selector:

- o Element
- o ID
- o LESSON
- o Position

CSS Property Values:

- o Background-color
- o Font-family
- o Font-size
- o Color
- o Width
- o Height

CONECTING CSS AND HTML