

WEB DESIGN AND DEVELOPMENT





ASSIGNMENT 1

Alliance with  Education

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INTRODUCTION OF WORLD WIDE WEB

- ▶ The Internet:
 - ▶ Is a network of connected computers in the world
 - ▶ Is tool help life easier
 - ▶ There are many ways information can be passed
- ▶ The WEB was born in Geneva, Switzerland in 1989. With Tim Berners-Lee devised a method for navigating between files using
 - ▶ Hyperlink Framework (is later called HTTP)
 - ▶ Hyper Text Markup Language (HTML)
 - ▶ Web browser and web server

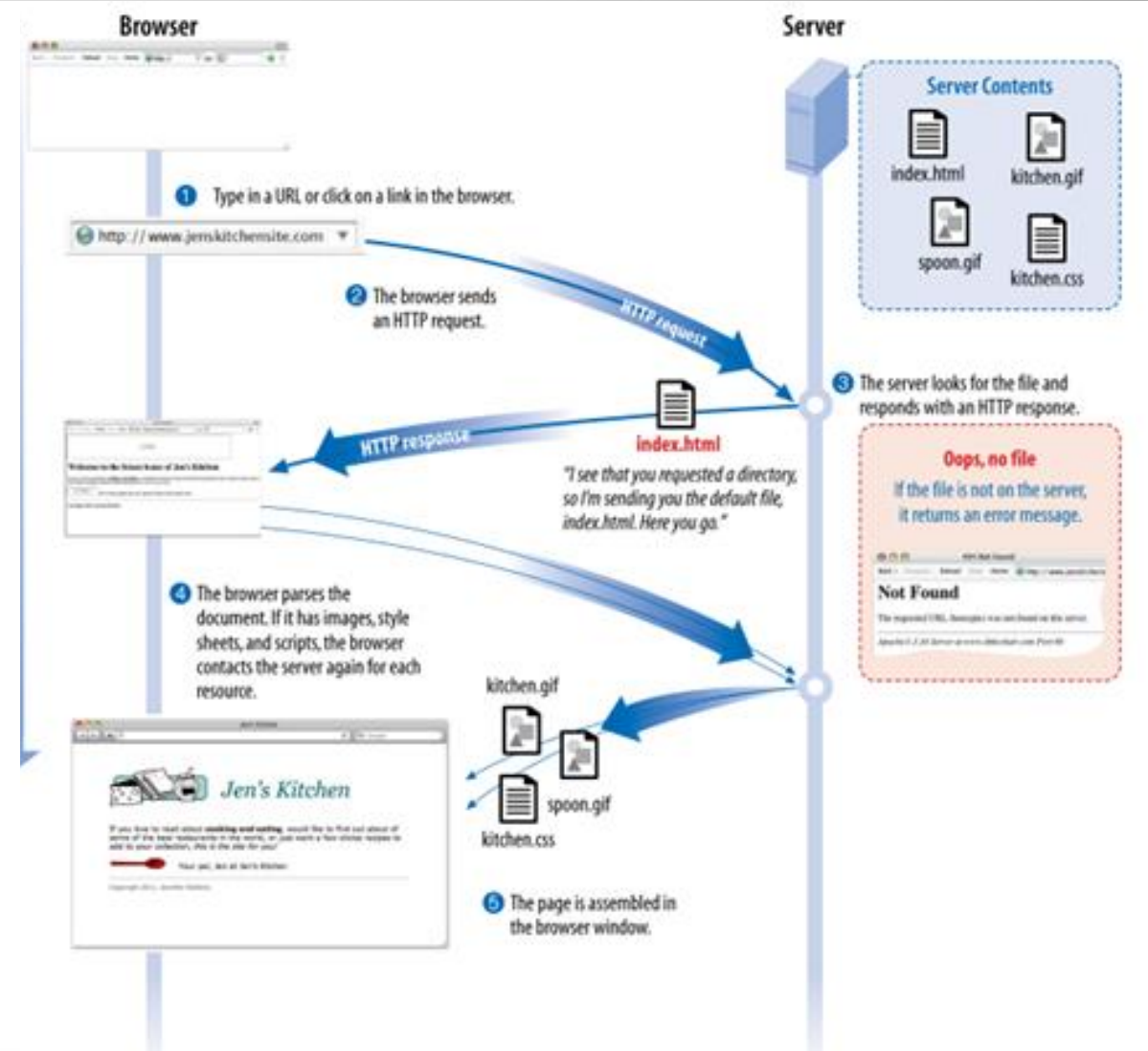
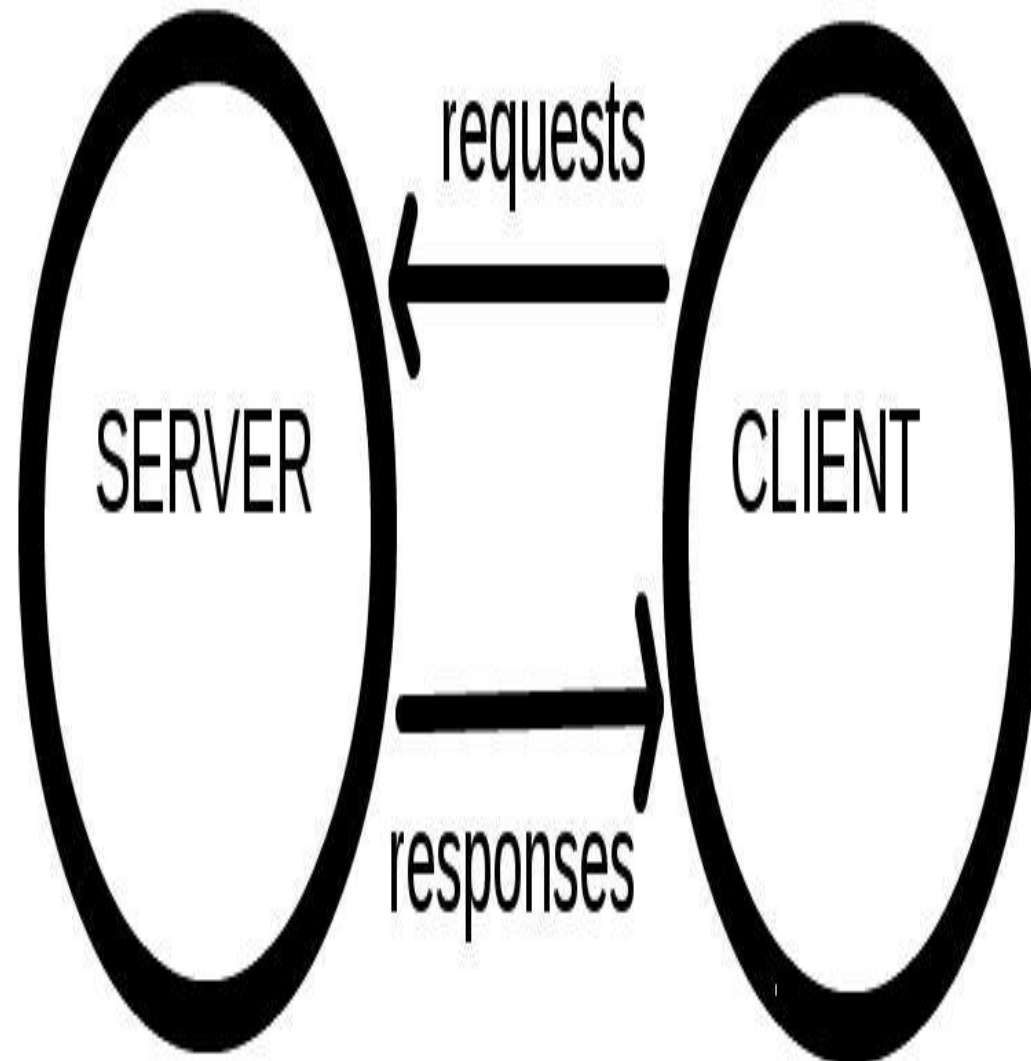
CONTENT TASK 1

- ▶ The architecture of web application and how do websites work?
- ▶ Requirements of hardware and software for web working
- ▶ Search engine -Google and how does Domain Name System work
- ▶ The form of URL for the web site.

CONTENT TASK 1

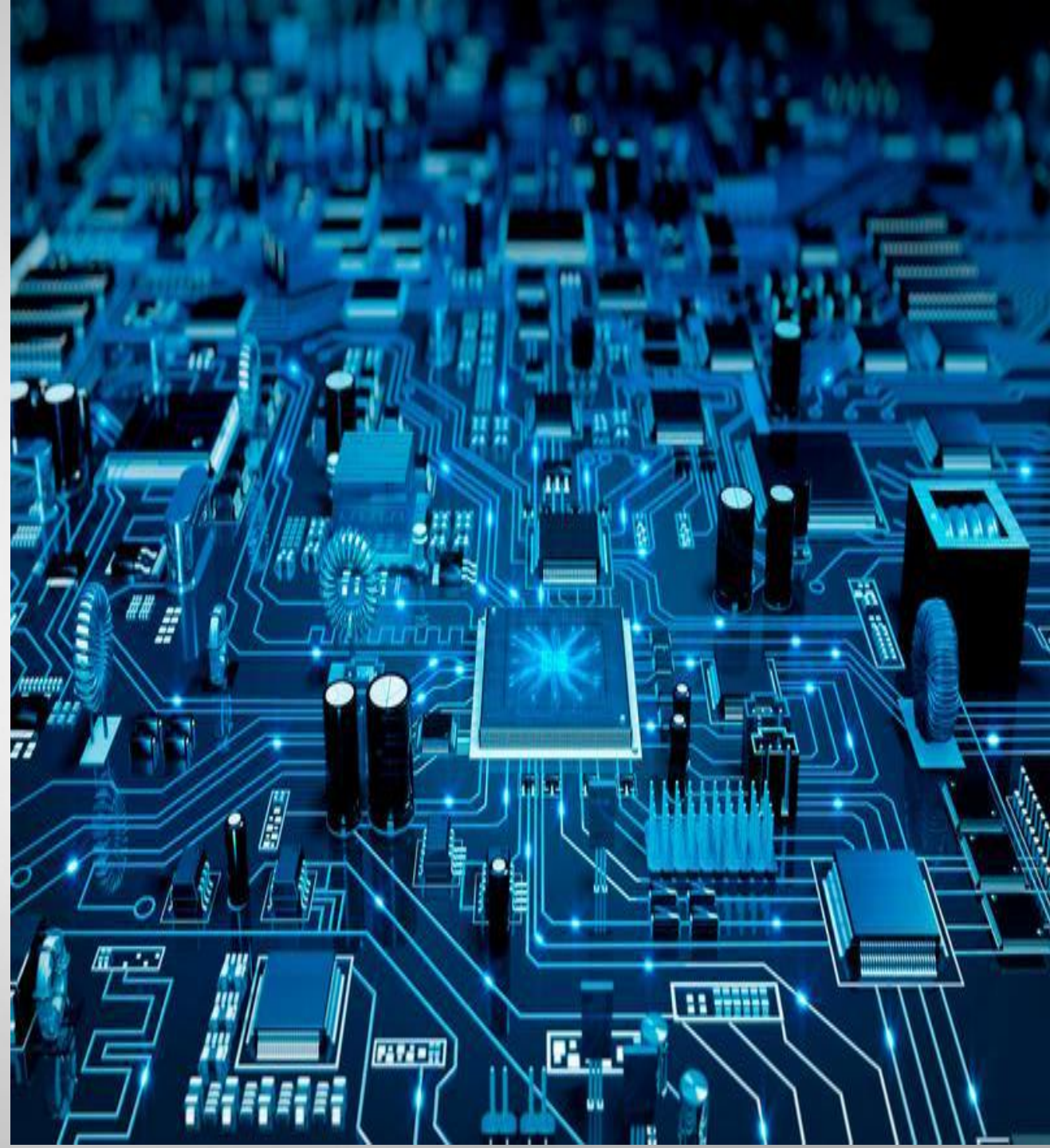
- ▶ Protocols and http protocols.
- ▶ Role of Server Operating System, Web Server, Domain Name System, Database Server
- ▶ How to register a domain and host, locate web to the host and publish the website
- ▶ Impact of technology and framework to the web
- ▶ How to improve the website with the optimal search engine

The architecture of web application and how do websites work?

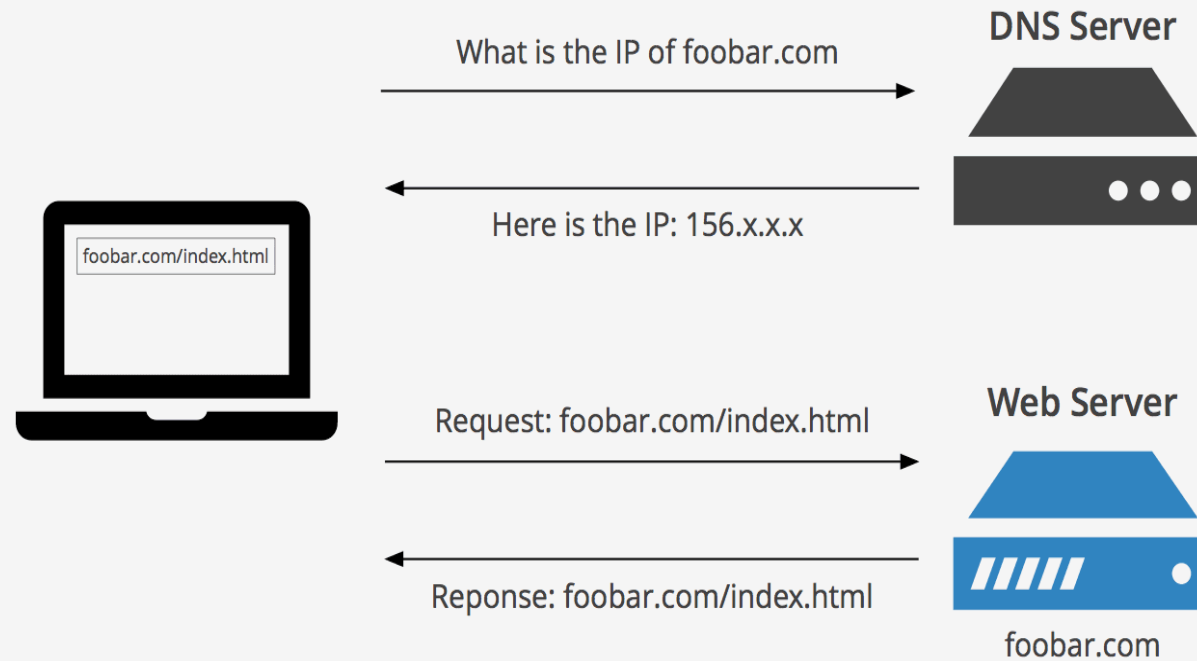


Requirements of hardware and software for web working

- ▶ What Hardware Is Needed to Build a Website?
 - ▶ Computer-for personal Server
 - ▶ Mobile Devices
- ▶ What software is needed to build a Website?
 - ▶ Web Browsers: chrome, Firefox, IE10, Safari (Mac)... support the technology we choose built web example are html, JavaScript
 - ▶ Web sever: Apache, IIL and support OS Linux, MS OS, mac OS



Purpose of Domain Name System?



What Is a DNS Server?

Search engine -Google

The Google logo is displayed in its characteristic multi-colored font. The letters are: 'G' (blue), 'o' (red), 'o' (yellow), 'g' (blue), 'l' (green), and 'e' (red). The logo is centered on a light gray background. In the top right corner, there is a faint circular watermark and a solid red rectangular block.

Google

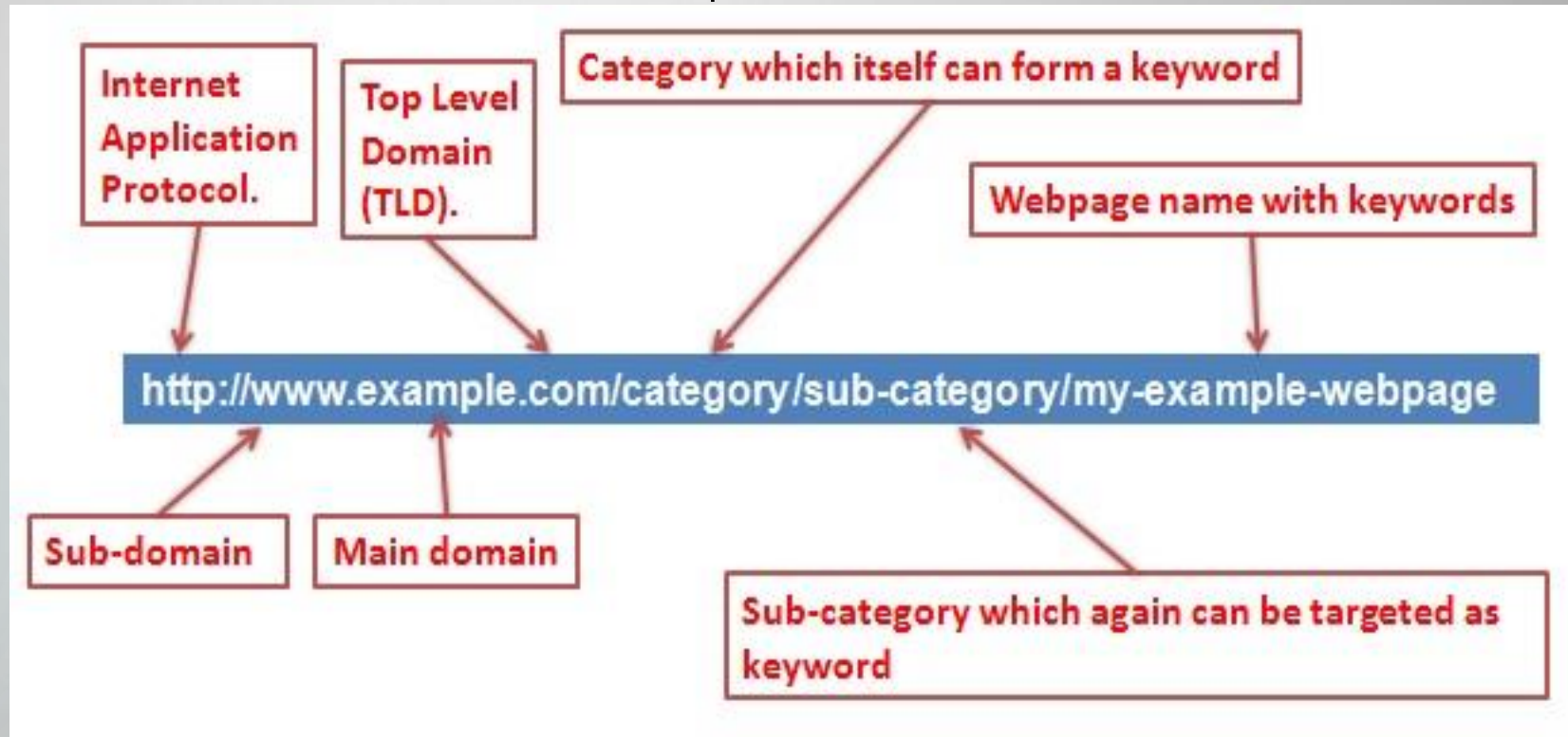
The influence of search engines on website performance

- ▶ Quality content
- ▶ Website always works smoothly
- ▶ Use keywords that are searched often
- ▶ Advertisement
- ▶ Never use illegal tricks



The form of URL for the website.

- ▶ A Uniform Resource Locator(URL)
- ▶ <http://www.cms.greenwich.edu.vn/index.php>
- ▶ URL formed by protocol, domain name and path.



Communication protocol

- ▶ Communication protocol is a standard description of digital formats.
- ▶ Communication protocols include authentication, error detection and error correction and signaling.
- ▶ Have a lot of protocols

- ▶ TCP. The transmission control protocol is used to communicate over the network. ...
- ▶ FTP. The file transfer protocol is basically used to transfer files to different networks. ...

Http protocols

- ▶ Hyper Text Transfer Protocol.
- ▶ HTTP is the basic protocol used by the World Wide Web and this protocol defines how messages are formatted and transmitted, and the actions that the server and Web browser will follow to various commands.
- ▶ A protocol for converting hypertext pages from Web Server to Web Browser.
- ▶ 3 step :
 - Step 1: Establish a TCP connection to the client server
 - Step 2 : Initialize HTTP client request to server
 - Step 3 : HTTP server responds to HTTP requests

Server Operating System

- ▶ SOS is an operating system specifically designed to run on servers, which are specialized computers operating in a client / server architecture to serve the requirements.
- ▶ Type of Server OS:
 - ▶ Windows server (2000, 2003 R3, 2008...)
 - ▶ Unix (Red Hat)
 - ▶ Mac OS X Server
- ▶ Some applications, which typically run on server
 - ▶ Web server
 - ▶ Database server
 - ▶ Mail server
 - ▶ DNS server

Web Server

A web server is server software, or hardware dedicated to running said software, that can satisfy World Wide Web client requests. A web server can, in general, contain one or more websites. A web server processes incoming network requests over HTTP and several other related protocols.



Most popular web server

- ▶ Apache HTTP Server : Apache HTTP Server is a freely-available Web server software package that is distributed under an open source license. Apache HTTP server was formerly known as Apache Web Server and has been offered since 1995 through the Apache Software Foundation.
- ▶ Internet Information Services: is an extensible web server created by Microsoft for use with the Windows NT family.

Apache

HTTP SERVER



Database server

- ▶ My SQL : Very popular , very easy , support almost popular operating systems
- ▶ Microsoft SQL Server: Database server produced by Microsoft, only can runs on Windows OS



Domain Name System

- ▶ Domain name system is a hierarchical naming system for computers, services or other resources connected to the Internet or private network. It links different information to the domain names assigned to each participating entity.




How to register a domain and host, locate web to the host and publish the website




INFINITY FREE

 Profile

 Accounts

 epiz_23637528

 epiz_23637832

 New Account

 Domains

Create Seamless Workflows

Move your business to the cloud with custom database web applications Tadabase

[SIGN UP](#)

Accounts

Active Accounts: 2 / 3



epiz_23637528

Website for tamnhucanphuc.epizy.com



epiz_23637832

Website for trunggbh17254.epizy.com

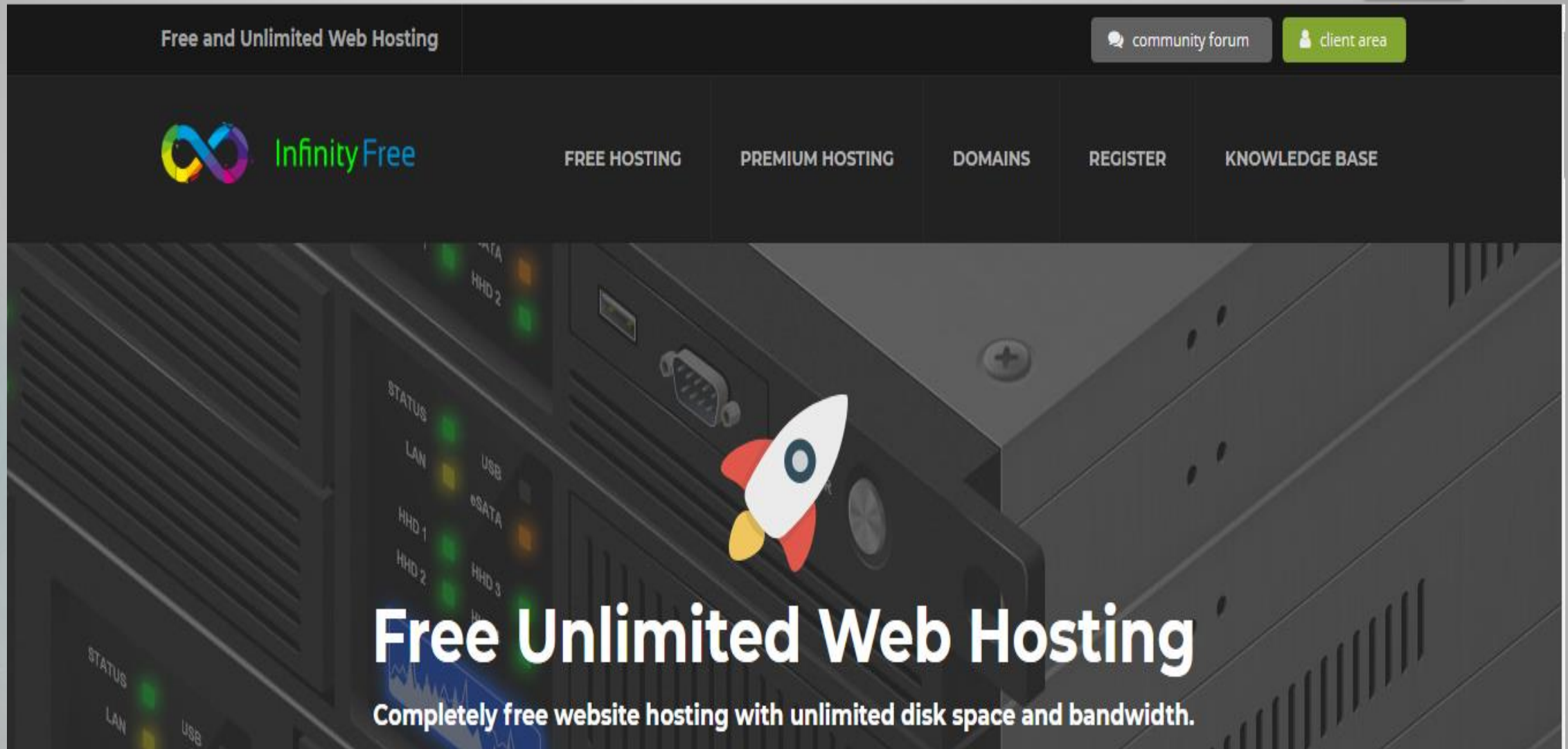
[+ NEW ACCOUNT](#)

[Find a Domain Name](#)

How to use infinity free to create website

- ▶ Step 1: Go to <https://app.infinityfree.net>
- ▶ Step 2 : Create account infinity free
- ▶ Step 3: Create domain free
- ▶ Step 4: Go to control panel manage
- ▶ Step 5: Summit file HTML to hosting

Step 1: Go to <https://app.infinityfree.net>




Step 2 : Create account infinity free




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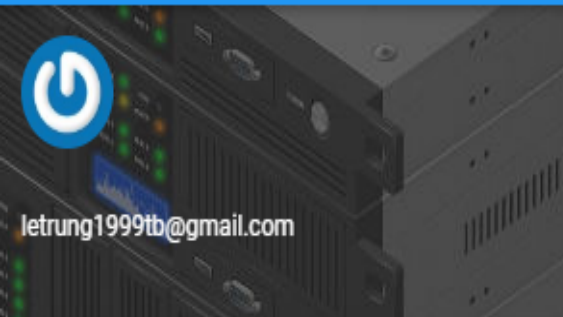
epiz_23637832

Website for trunggbh17254.epizy.com

[+ NEW ACCOUNT](#)

[Find a Domain Name](#)


Step 3: Create domain free




INFINITY FREE

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 epiz_23637528

 epiz_23637832

+ New Account

 Domains

Create Seamless Workflows

Move your business to the cloud with custom database web applications Tadbabase

SIGN UP

Create a hosting account

Choose a subdomain or enter your own domain to create an account for. You can add more domains later.

Use a Free Subdomain

No configuration necessary. You can add more (sub)domains later.

Enter a free subdomain...

.epizy.com

OR use your Own Domain

The domain needs to point to the nameservers: **ns1.epizy.com** and **ns2.epizy.com**. [Learn more](#).

Enter your own domain...

Account Username

(generated automatically)

Account Password

Step 4: Go to control panel manage

ADVERTISEMENT



Upgrade your boring browser

VPN, Ad Blocker, Integrated WhatsApp

Get Opera



SEARCH FOR A NEW DOMAIN NAME

.com ▼

Check Now

PREFERENCES



Update Contact Email



Getting Started



Account Upgrades



Account Settings



Account Statistics

Step 5: Summit file HTML to hosting

New dir

New file

Upload

Java Upload

Transform selected entries:


Copy

Move

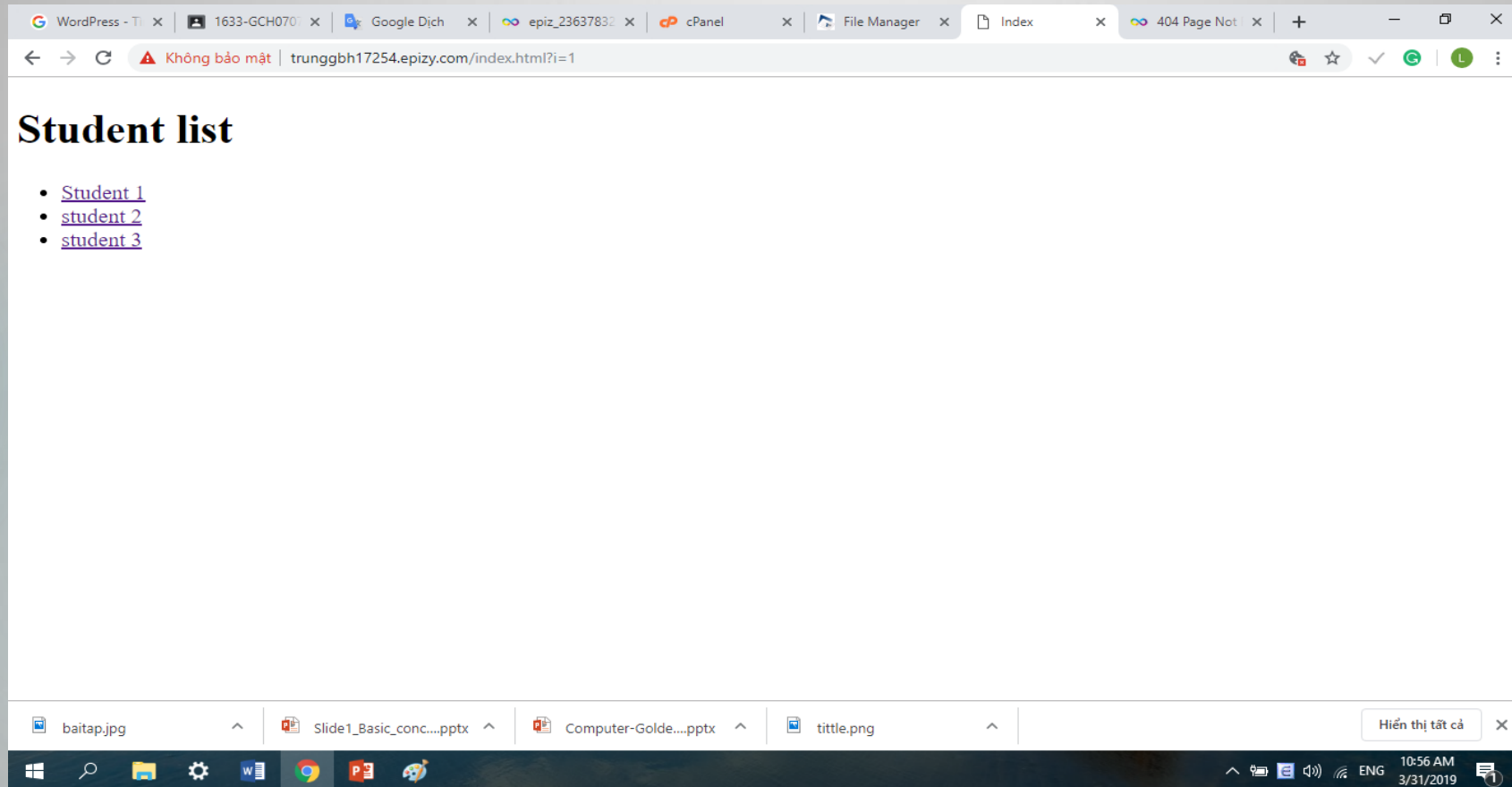
Delete

Rename

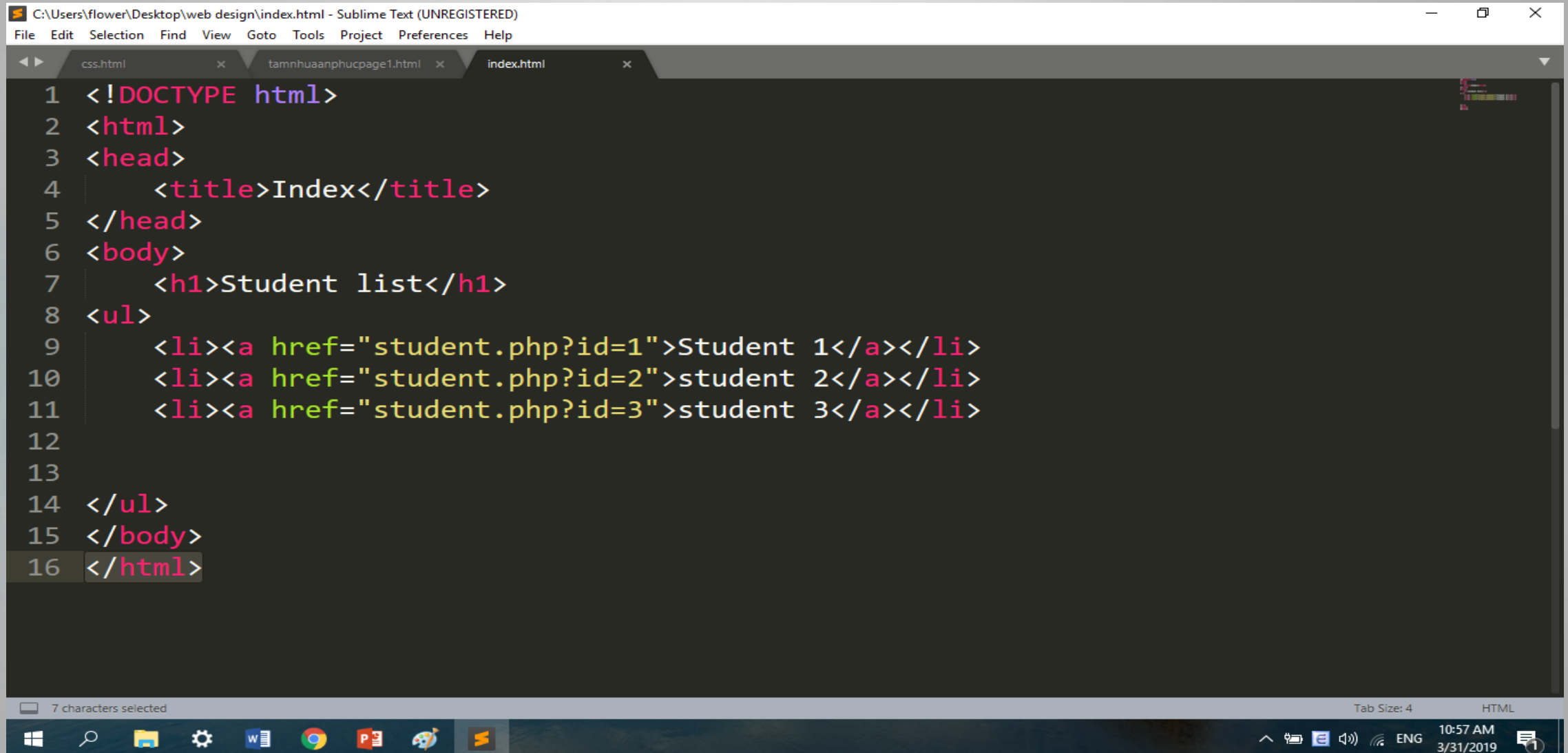
Chr

All	Name	Type	Size	Owner	Group	Perms	Mod Time	Actions
	 Up ..							
	 htdocs	Directory	4096	23637528	23637528	rwxr-xr-x	Mar 20 22:43	
	 .htaccess	HTACCESS File	680	0	0	r--f--f--	Mar 20 20:53	Edit
	 .override	OVERRIDE File	0	0	2	rw-f--f--	Mar 20 20:53	Edit
	 DO NOT UPLOAD FILES HERE	DO NOT UPLOAD FILES HERE File	0	0	2	rw-f--f--	Mar 20 20:53	Edit

And here is web page with code HTML



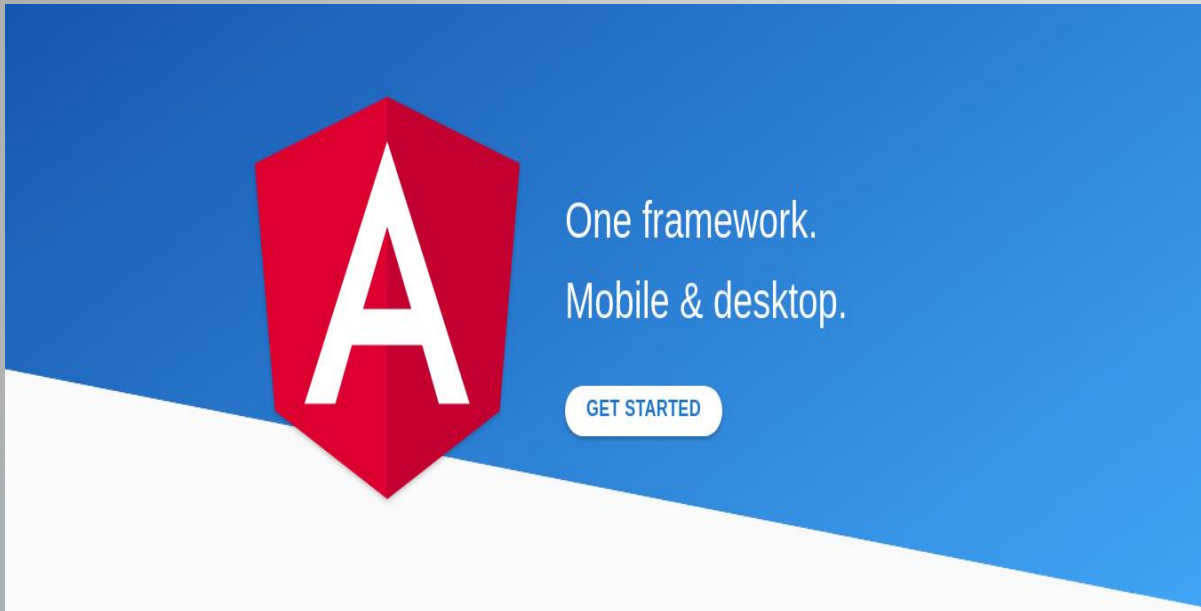
With code HTML



```
C:\Users\flower\Desktop\web design\index.html - Sublime Text (UNREGISTERED)
File Edit Selection Find View Goto Tools Project Preferences Help
css.html tamnhuaanphucpage1.html index.html
1 <!DOCTYPE html>
2 <html>
3 <head>
4   <title>Index</title>
5 </head>
6 <body>
7   <h1>Student list</h1>
8   <ul>
9     <li><a href="student.php?id=1">Student 1</a></li>
10    <li><a href="student.php?id=2">student 2</a></li>
11    <li><a href="student.php?id=3">student 3</a></li>
12
13
14 </ul>
15 </body>
16 </html>
```

7 characters selected Tab Size: 4 HTML

Impact of technology and framework to the web



Allows designers and developers to build framework-based and framework-based features instead of recreating from the beginning

With the benefit of open source and supporting documentation, it is easy to link to the website thanks to the integrated tool.

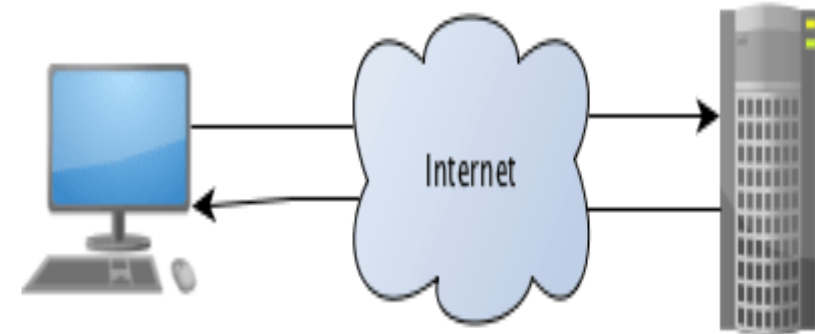
However, the frameworks and frameworks are limited compared to making a website from the root. Site performance may be affected. The cost to use the full framework and framework is a limitation.

CONTENT TASK 2

- ▶ Static/Dynamic web sites
- ▶ The difference between front-end design and back-end development, special tools and technologies
- ▶ Technologies used for front-end design and roles of technology.

Static websites

- ▶ Static WEB :
 - ▶ A static web page is a web page that is delivered to the user exactly as stored
 - ▶ A static site can be built by simply creating a few HTML pages and publishing them to a Web server.
- ▶ Barriers
- ▶ There is no user interaction with the site
- ▶ Difficult to improve
- ▶ Inflexible

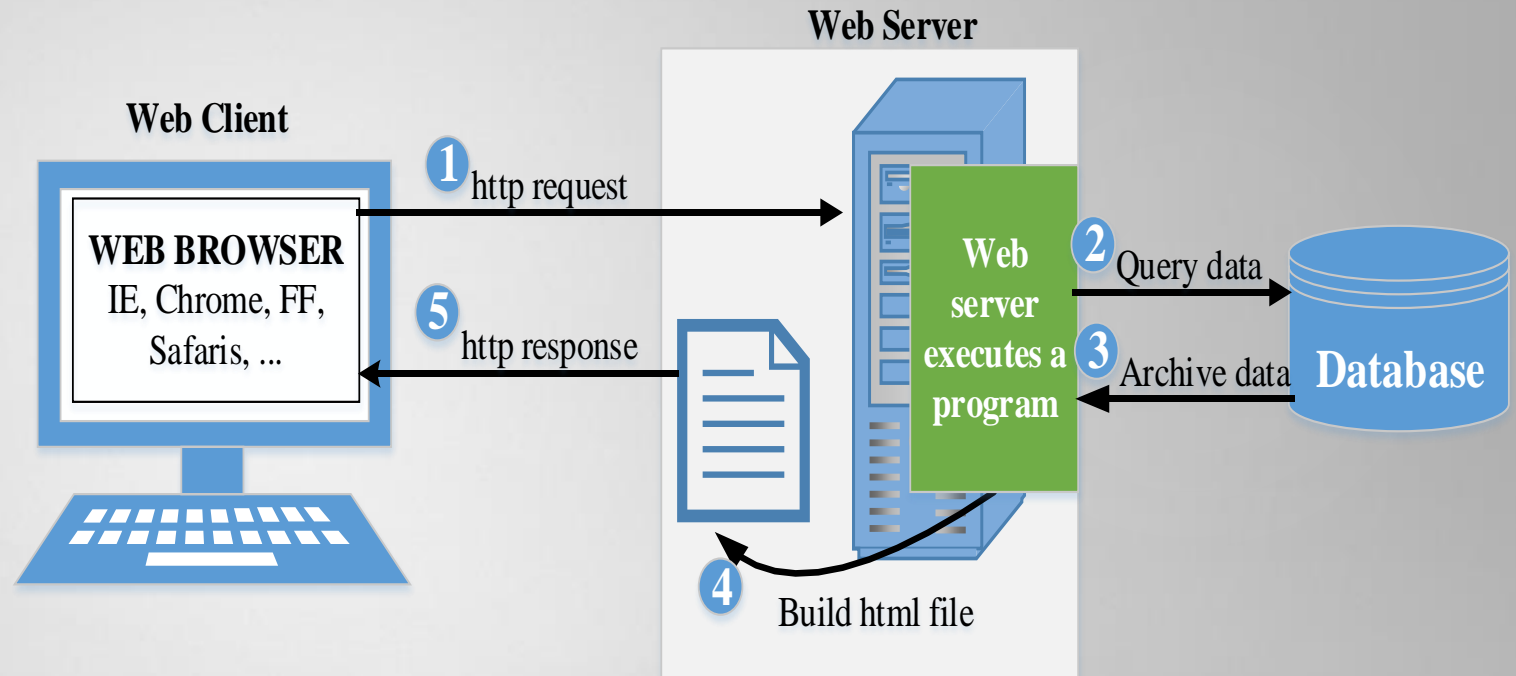


Local Computer requesting
<http://staticwebsite.com/>

Web server responding with
static html page.

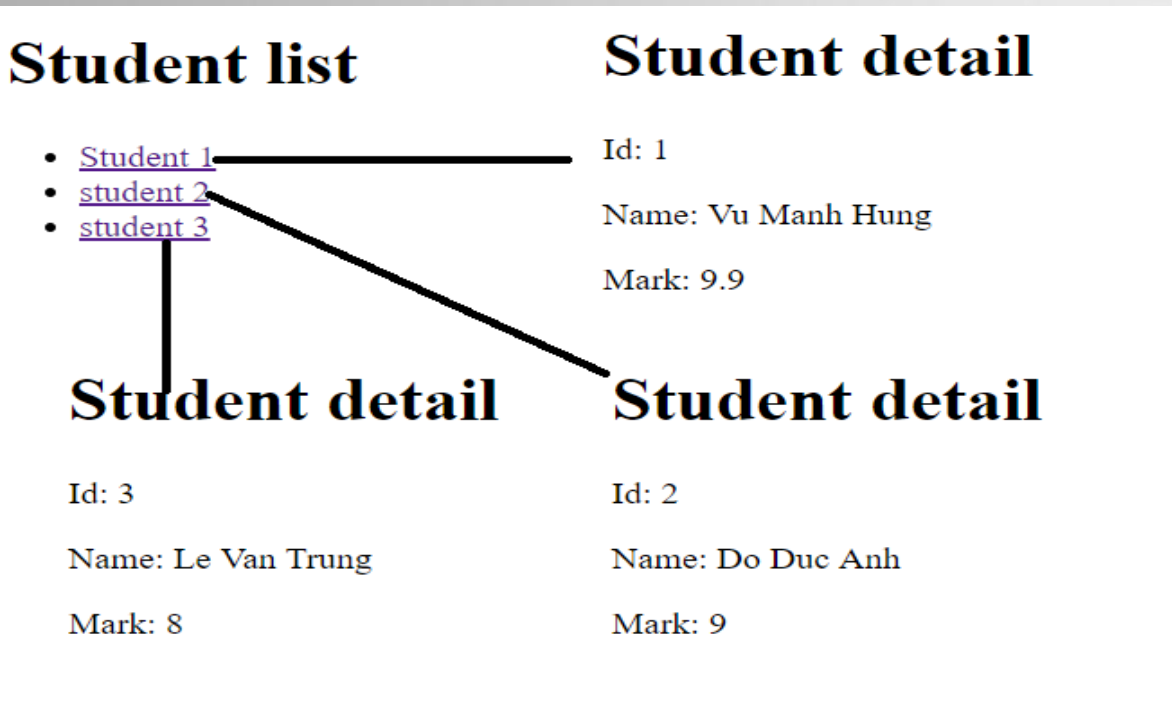
Dynamic web sites

- ▶ Dynamic web
 - ▶ A dynamic website contains information that changes, depending on the viewer, time of day, time zone, language ...
 - ▶ A dynamic website contains client-side scripts or server-side scripts to create content that changes or incorporates both types of scripts.

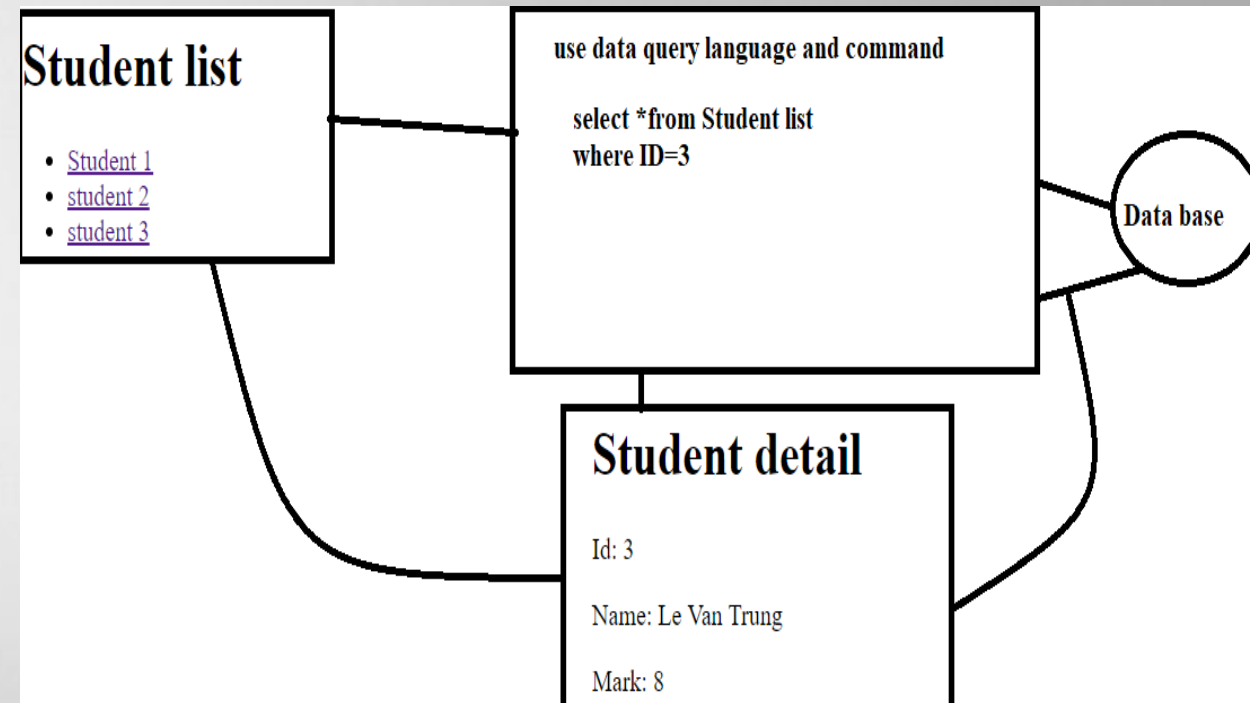


The difference between static/dynamic websites

► Static web



Dynamic web



The difference between front-end design and back-end development

Web application Front-end design:

- ▶ Interface of web
- ▶ Seen on the web as a graphical user interface including flashy buttons, colorful images, navigation menus,
- ▶ Tools include HTML, CSS and JavaScript.

The difference between front-end design and back-end development

Web application Back-end design:

- ▶ Part of the website that you can't see and interact with.
- ▶ It runs on the server side but communicates with the frontend to make sure everything works well.
- ▶ It is brain of website.
- ▶ Development includes ruby, python, java, .NET
- ▶ Data base sever: My Sql, oracle, DB2
- ▶ Server side

FRONTEND VERSUS BACKEND

Frontend	Backend
Frontend refers to the client-side of the application.	Backend refers to the server-side of the application.
It is the part of the website users can see and interact with.	It constitutes everything that happens behind the scenes.
It typically includes everything that attributes to the visual aspects of websites.	It generally includes a web server that communicates with a database to serve requests that the frontend presents.
It forms the basis of what users can touch and experience on their web browsers.	It is the brain of the website that is never visible to the end users.
The essentials of frontend web development include HTML, CSS, and JavaScript.	The essentials of backend development include Ruby, Python, Java, .Net, etc.

Special tools for Font-end

- ▶ Sublime Text. It is a first-rate front-end code editor with a well-designed, have a lot of highlight and support to code super-efficient and ultra-fast user interface. ...
- ▶ Can code HTML, CSS, PHP... and support very large language



Design Font-end

```
C:\Users\flower\Desktop\web design\form.html - Sublime Text (UNREGISTERED)
File Edit Selection Find View Goto Tools Project Preferences Help

css.html x form.html x tamnhuanphucpage1.html x index.html x

1 <!DOCTYPE html>
2 <html>
3 <head>
4   <title> form c</title>
5 </head>
6 <body> <center><form><table><span style="font-size: 30px"      >
7 <u>Registration Form</u></span>
8 <table border="0"> <tr><td>First name:</td><td><input type="text" name="First
name"></td><br></tr>
9   <tr><td>Last name :</td><td><input type="text" name="Last name"></td></tr>
10 <tr><td>   Age      :</td><td><input type="number" name="Age"></td></tr>
11 <tr><td>E-mails   :</td><td><input type="text" name="E-mails"></td></tr>
12 <tr><td>Password  :<td><input type="password" name="Password"></td></td></tr>
13 <tr><td>SEX:</td><td><input type="radio" name="SEX">Male</td>
14   <td><input type="radio" name="SEX">Female</td></tr>
15 <tr><td>Checkbox:</td><td><input type="checkbox" name="Checkbox" > I am
student</td>
16   <td><input type="checkbox" name="Checkbox" > I am business person</td>
17
18 <tr><td>Birthday:</td><td><input type="date" name="Birthday"></td></tr>
```

Registration Form

First name:

Last name :

Age :

E-mails :

Password :

SEX: ☐ Male ☐ Female

Checkbox: ☐ I am student ☐ I am business pe

Birthday:

Submit :

Reset :

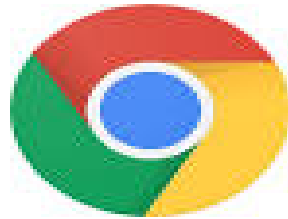
Technologies for Font-end



Vue.js



Angular



Google
Chrome



Ionic



npm



TensorFlow
Tensor...



GRUNT
Grunt

- 1) Vue.js **Front-end** Development **Tools**.
- 2) Angular **Front-end** Development **Tools**.
- 3) Chrome Developer **Tools Front-end** Development **Tools**.
- 4) Ionic 2.
- 5) Npm Top **front-end** development **tools**.
- 6) Tensorflow.
- 7) Grid Guide **Front-end** technologies.
- 8) Grunt **Front-end** technologies.

Technologies for Font-end

- Vue.js is an open-source JavaScript framework for building user interfaces and single-page applications.
- Write by JavaScript



vuejs

vuejs / vue

Simple yet powerful library for building modern web interfaces.

<http://vuejs.org>

Star

★ 130549

Fetches on 2016/10/25 02:38

Example technologies for Font-end

```
html>  
  <head>  
    <link rel="stylesheet" href="index.css">  
    <script src="https://cdn.jsdelivr.net/npm/vue/dist/vue.js"></script>  
  </head>  
  <body>  
    <div id="app">  
      {{ message }}  
    </div>  
    <script src="index.js"></script>  
  </body>  
</html>
```

index.html

Hello Vue!

index.js

```
1 var app = new Vue({  
2   el: '#app',  
3   data: {  
4     message: 'Hello Vue!'  
5   }  
6 });  
7
```

index.html

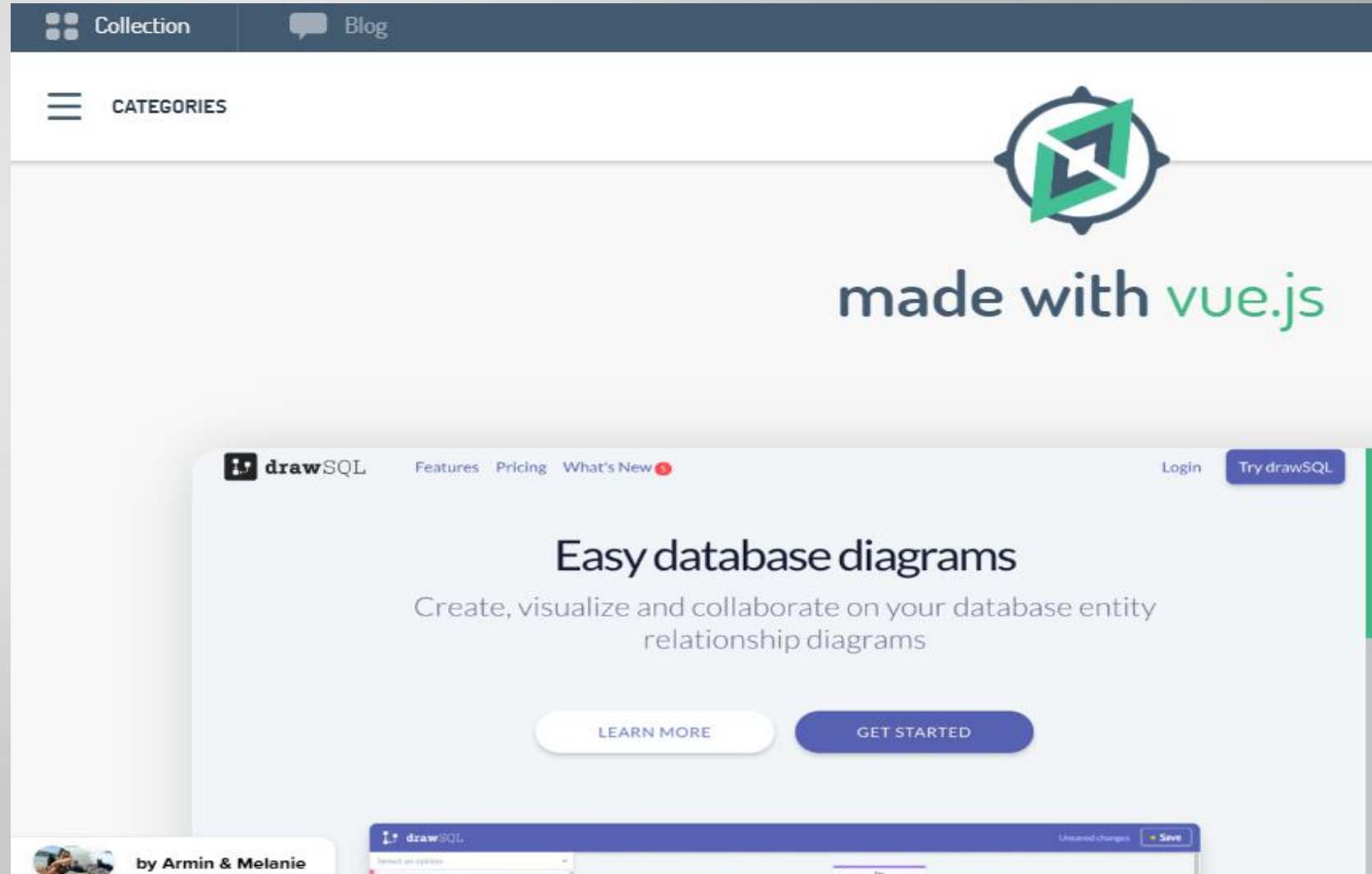
Hello Vue!

Example technologies for Font-end

Go to

<https://madewithvuejs.com/>

To see front-end built with
vue.js



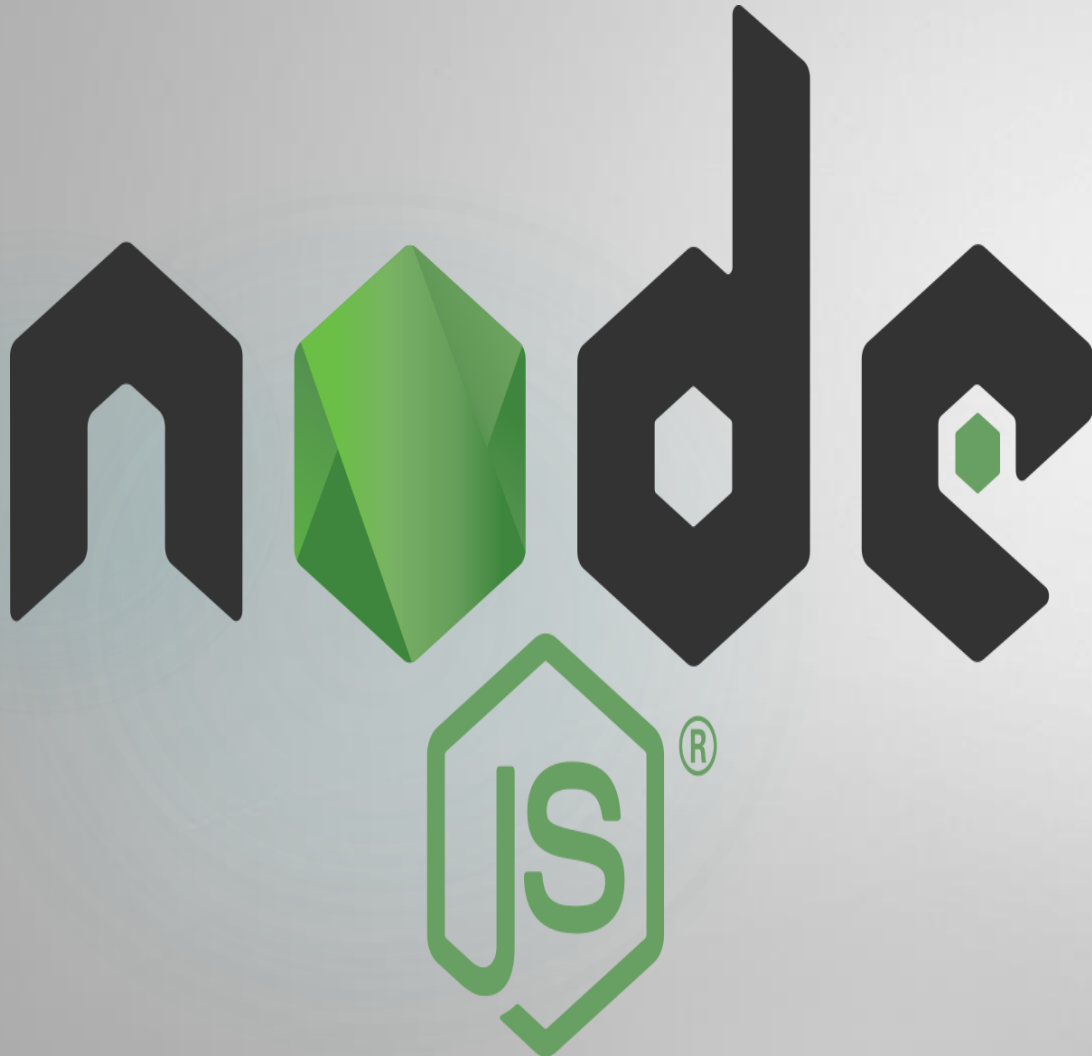
Special tools and technologies for Back-end

Developed back- end needs some tool and technologies to help

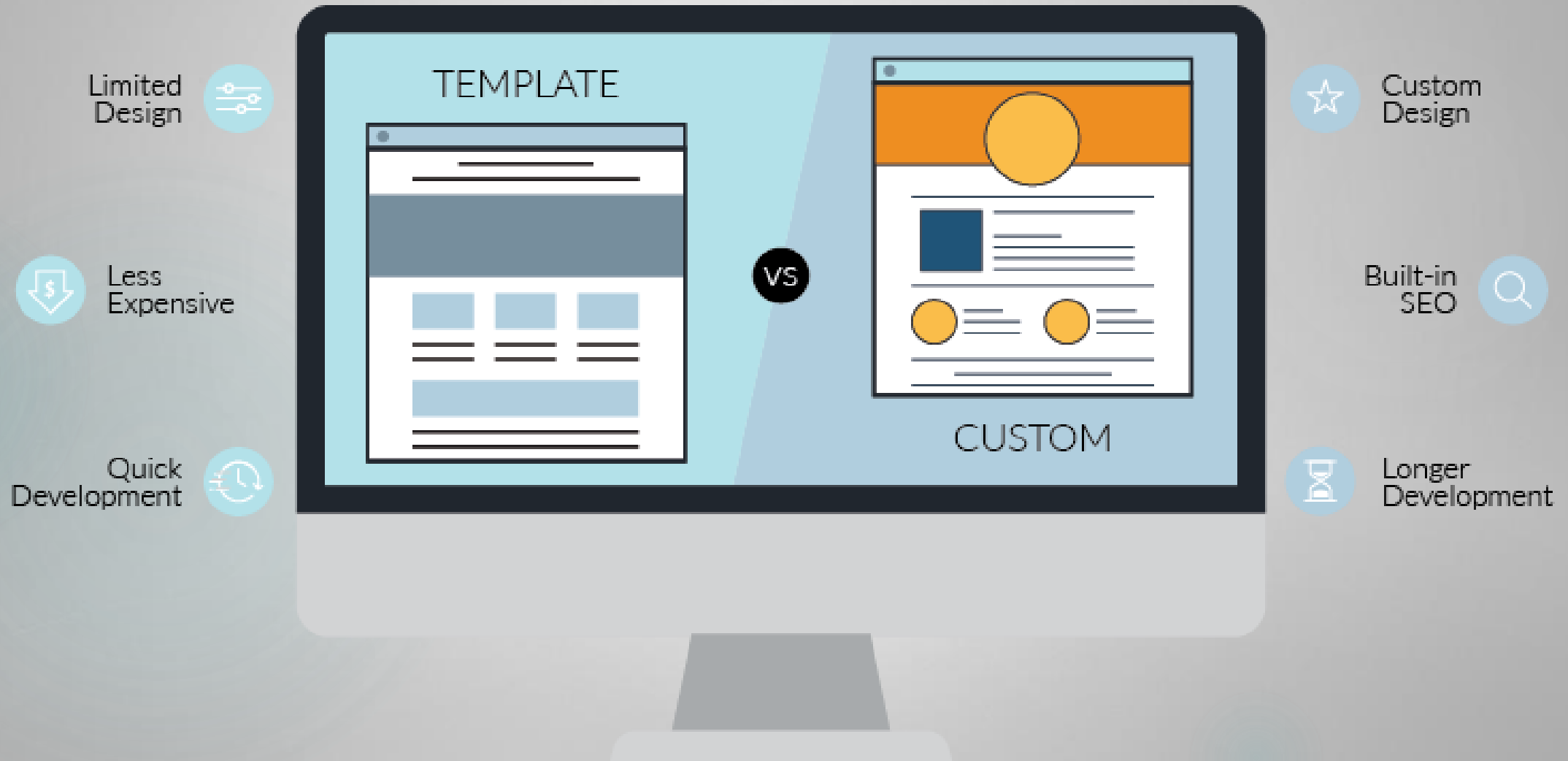
- Languages & **Frameworks**.
- **PHP**. In the 23 years since its **introduction**, **PHP** has become the world's most popular server-side scripting language. ...
- **Python**. ...
- **Ruby on Rails**. ...
- **Node.js**. ...
- **Laravel**. ...
- **Apache**. ...
- **NGINX**.

Review some server-side web scripting languages

node.js and PHP



The differences between online website creation tools and custom built sites



Evaluate techniques available to design websites and use IDE for built websites

- ▶ **General assessment:** Web sites created with built-in tools or IDE have an intuitive interface. Both can use common programming languages for front-end design.
- ▶ Using the tools available will reduce the cost and time of website creation.
- ▶ Support multiple Plugins, available theme
- ▶ But There is significantly reduced security. Difficult to edit in depth.
- ▶ There are not many individual ideas

Use IDE for built websites

- ▶ Know and master the programming language
- ▶ If there is no idea, the site will be bad
- ▶ Easy for cross-platform connectivity
- ▶ Easy for deep editing
- ▶ Customize as you like

Summary

- ▶ In general, people can understand how to create a website
- ▶ Can choose software, hardware, tools to create a website
- ▶ You can choose to create a website using IDE or available tools thanks to the evaluation