Web Development Workshop

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Venue: MIT, Pune

Curator: Tejas Rawal

What is WWW?

World **W**ide **W**eb

Global information medium

Not Internet! A service that operates over internet

Founder – Tim Berners-Lee

Early 1990s

What is Web Development?

- Developing web pages for internet (www) or intranet
- Includes
  - **web design,**
  - **web content development,**
  - **client-side/server-side scripting**
  - **network security configuration**

Things we will learn

- **PART 1:**
  - Find and select your web host
  - Naming your website
  - Register your site
  - Location of your website

- **PART 2:**
  - HTML fundamentals
  - CSS fundamentals
  - JS fundamentals

What is Web Hosting?

Service that allows people to post websites!

- Special equipment
- Support for that equipment
- Technology
  - Servers
  - Networking equipment
  - Dedicated network access

Different types of host

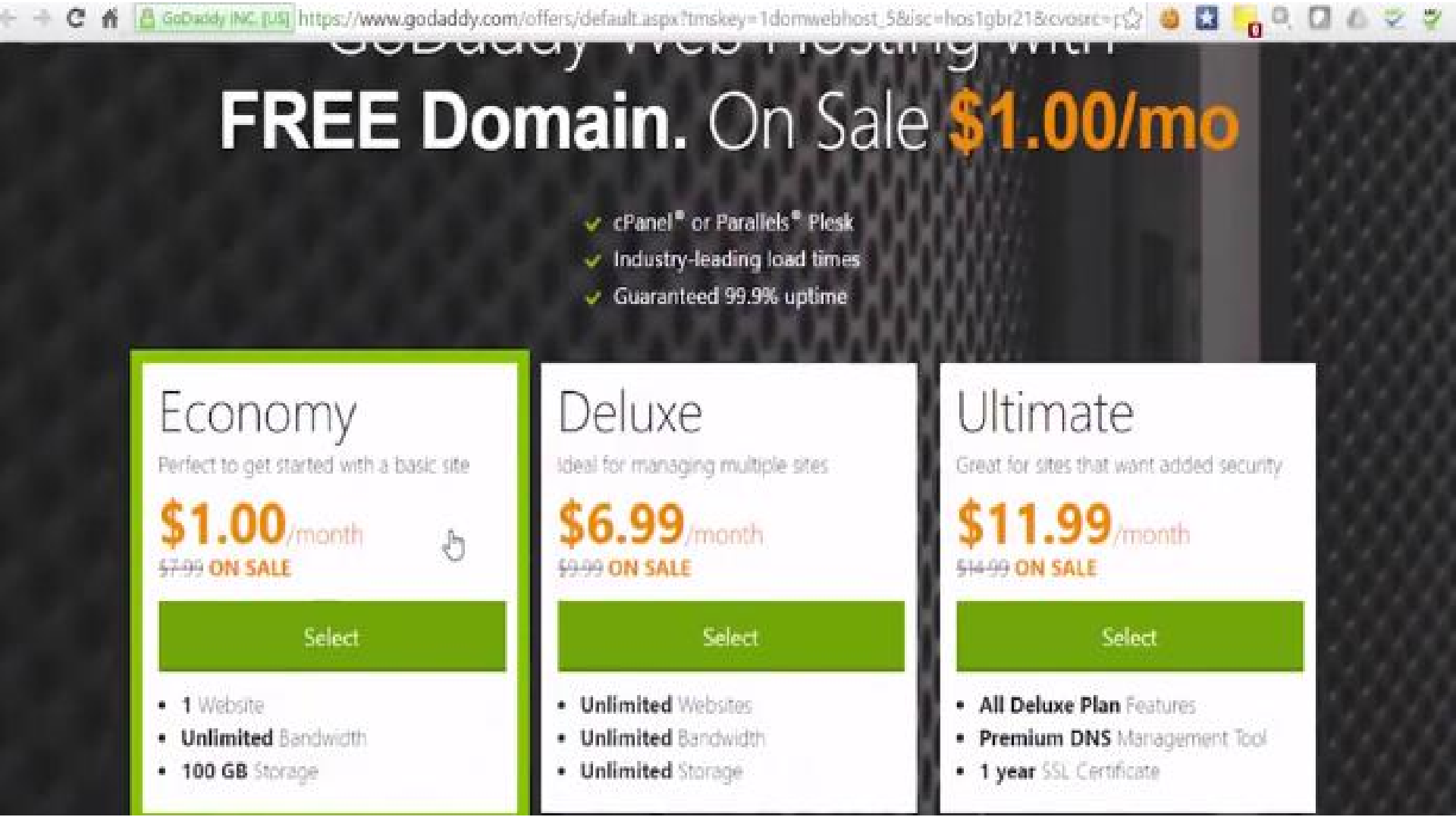
- **Free**
  - Convenient
  - Limited quality
  - Get what we pay for
- **Shared (most common)**
  - Low cost
  - Shared resources
- **Dedicated**
  - Higher cost
  - Personalized service
  - For large businesses

Services provided by Web Hosting

- Disk Space for Files
- Email Accounts
- File Transfer Software
- Management Software
- Reliable Internet
- Economy

Is hosting service required during development?

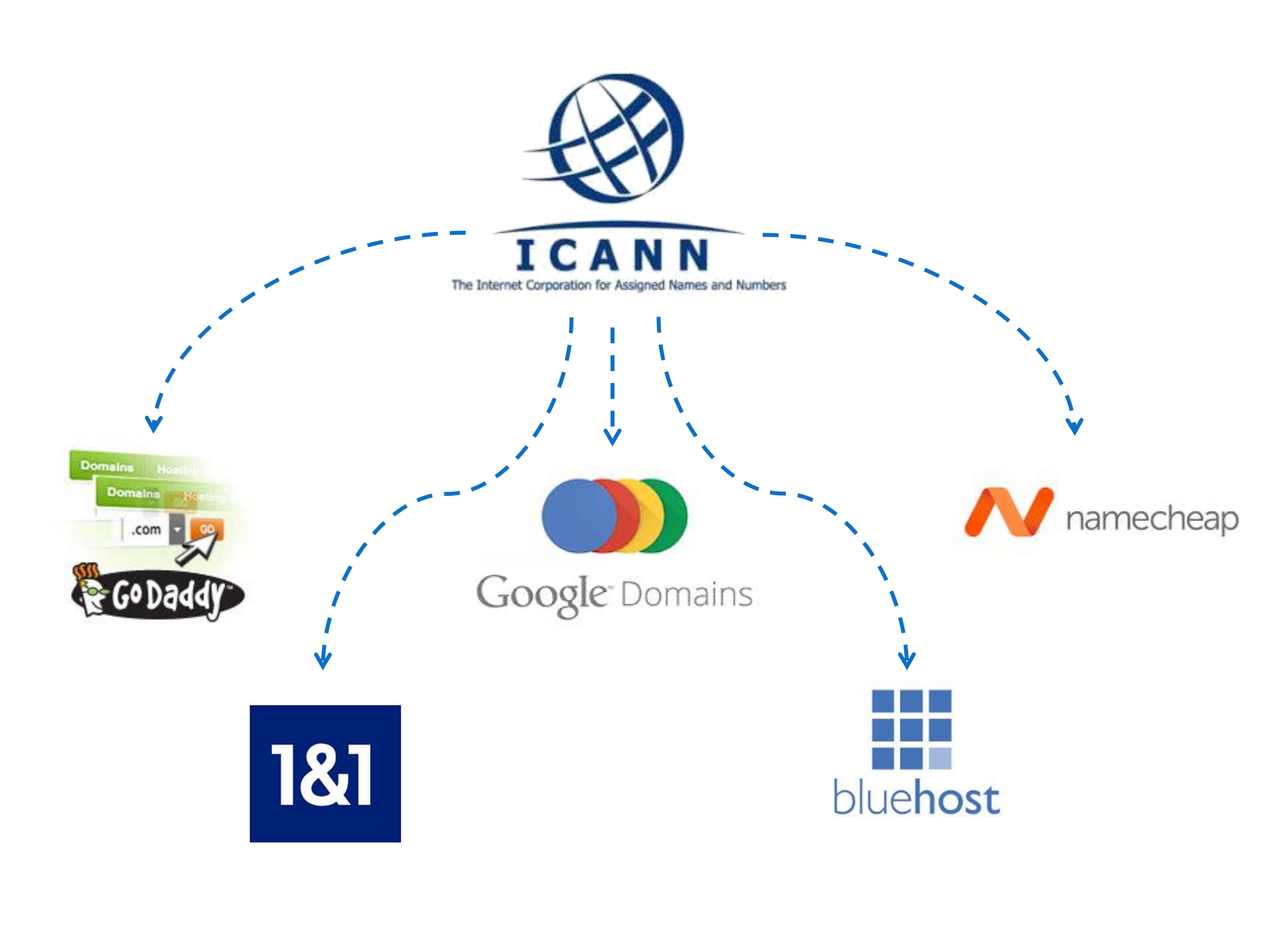
Example: godaddy.com



How to choose a good name for your website?

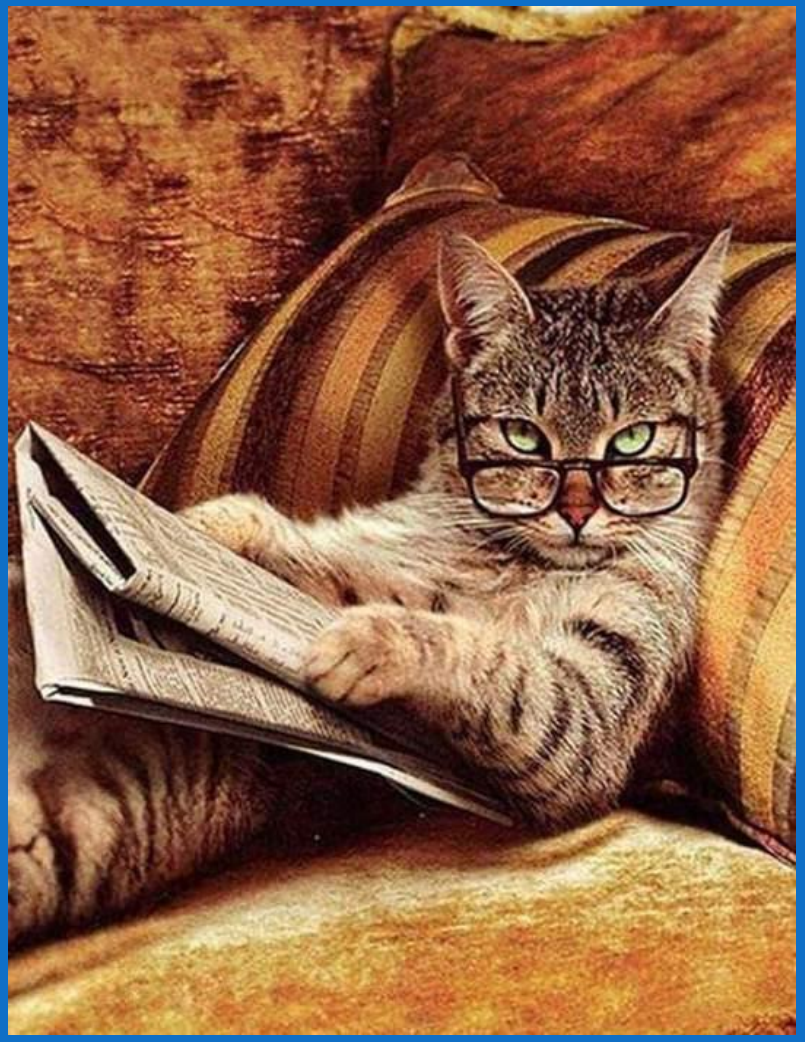
- Easy to type – Short
- Topic related
- Hyphens and numbers – A No No!
- Check with your friends
- Avoid legal troubles (Myyntra.com, Cocokola.com)
- Act fast
- Extensions - .com, .net, .co, .org, etc…

How to register your website?


ICANN
The Internet Corporation for Assigned Names and Numbers
Domains
Domains
.com
GO
GoDaddy
Google Domains
namecheap
1&1
bluehost

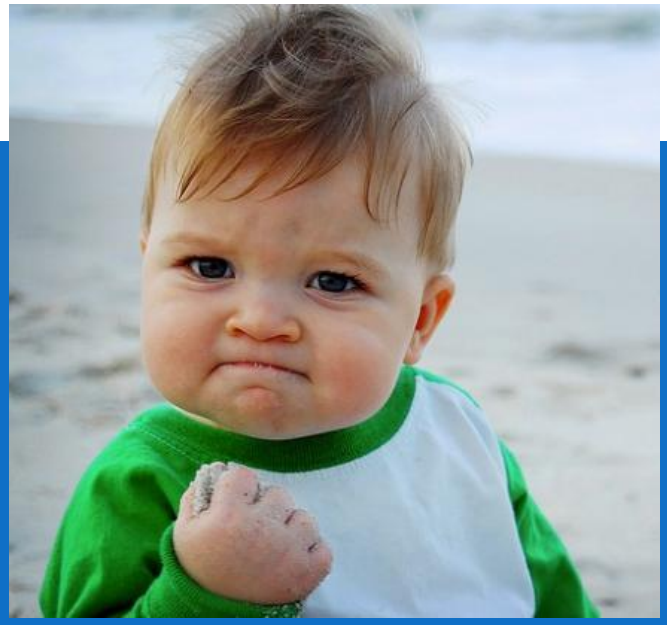
Some Tips!

- Avoid costly names
- Avoid auctions
- Purchase from your web host
- No transfer fees
- Choose reputable one



Where is a website?

- Yahoo.com
  - IP address - 209.191.88.254
- Domain Name System (DNS)



Advantages:

- Avoid complicated numbers and syntax
- Protects from changes

What are Web Development Tools?

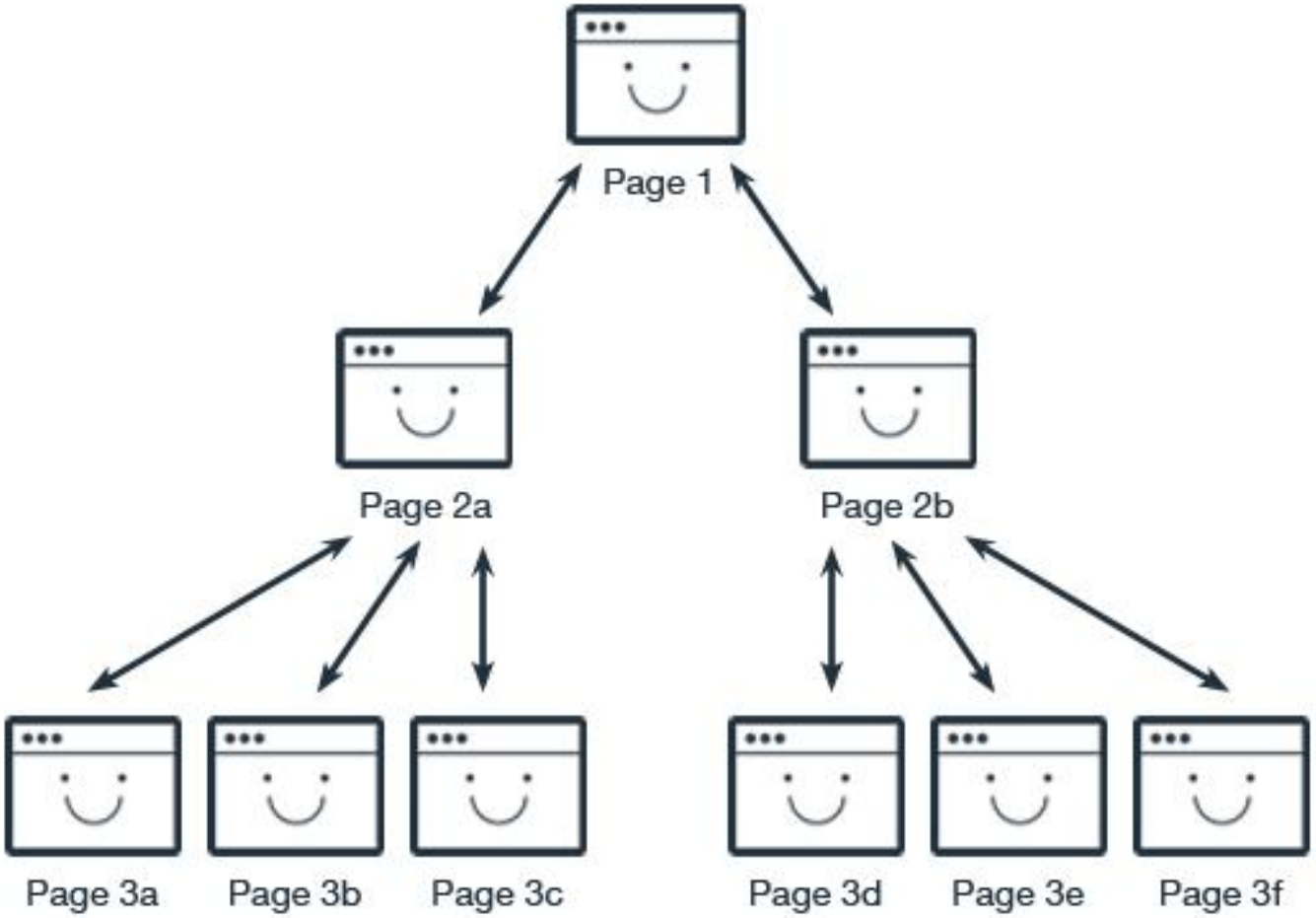
Visual
Studio

Notepad++

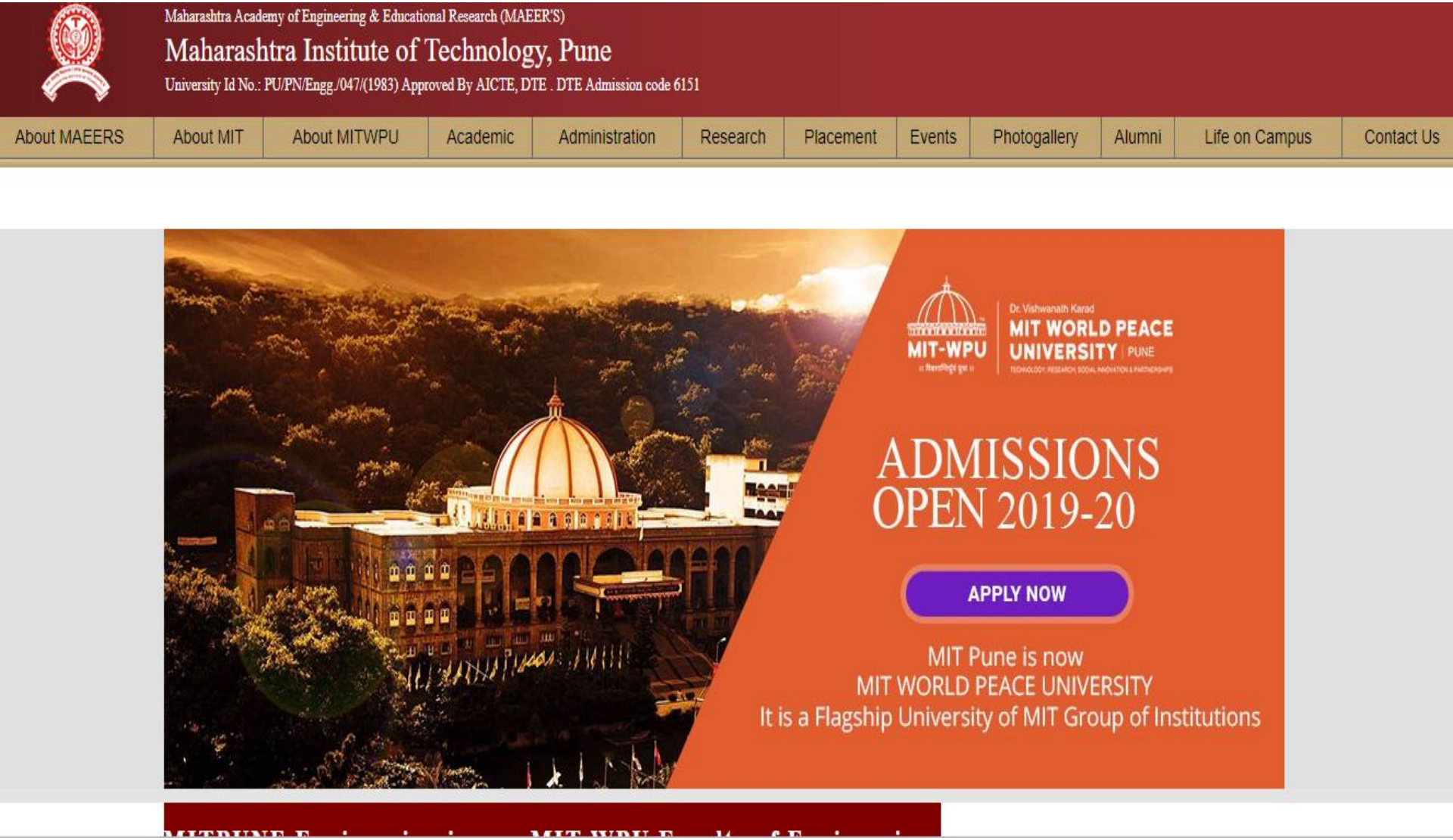
PC
PyCharm

Web Development Fundamentals

Structure of Website



Example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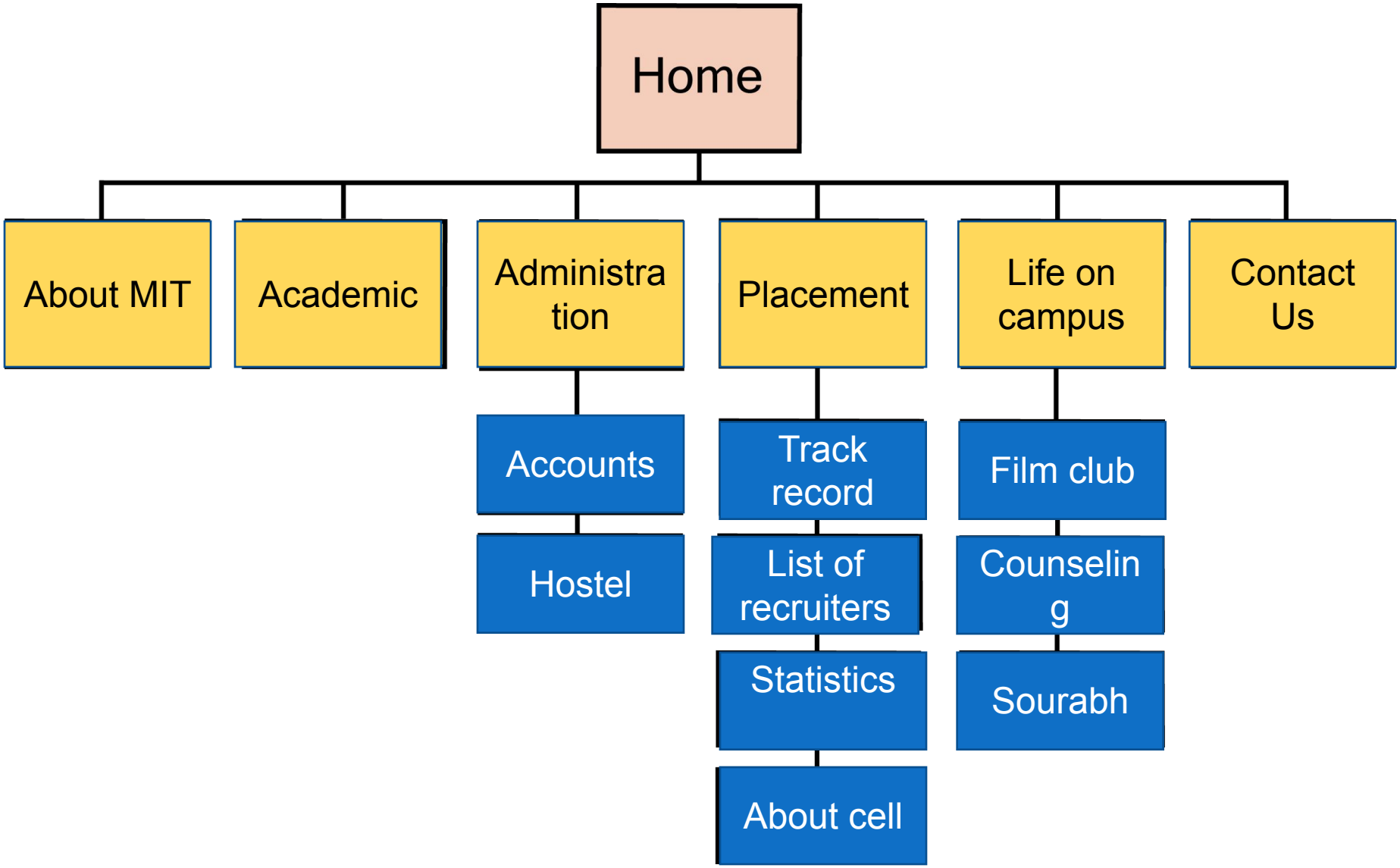
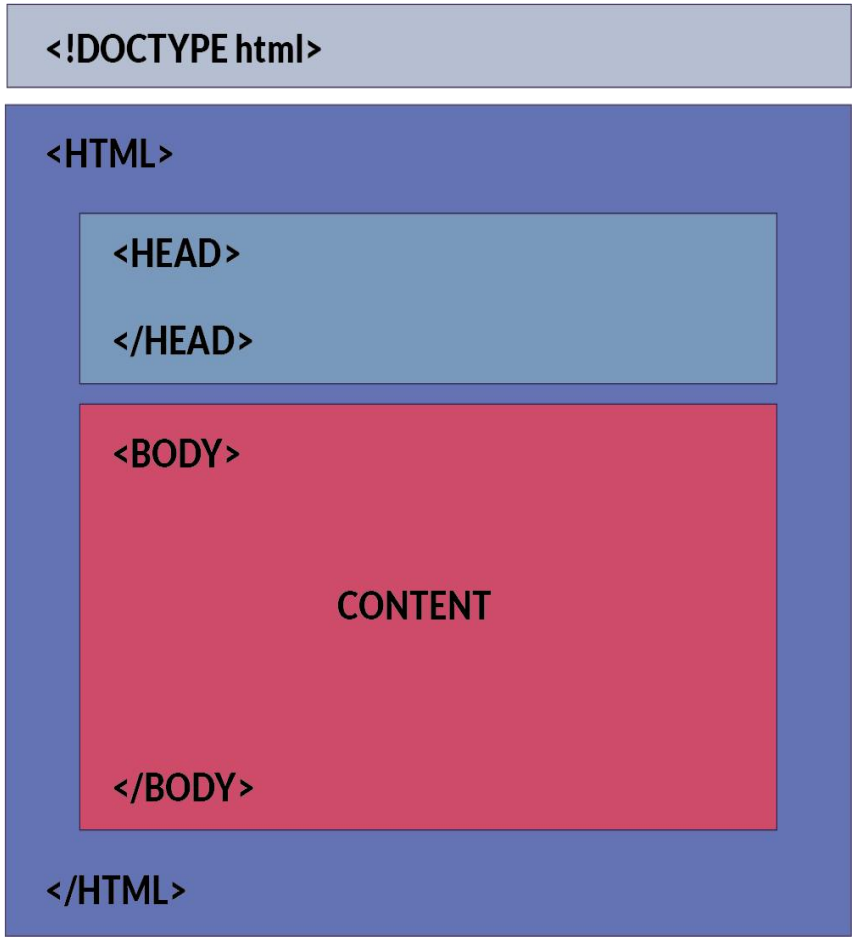

Home
About MIT
Academic
Administration
Placement
Life on campus
Contact Us
Accounts
Hostel
Track record
List of recruiters
Statistics
About cell
Film club
Counseling
Sourabh

HTML

- **H**yper **T**ext **M**arkup **L**anguage
- Clear text, case insensitive
- Ignores white spaces
- Comprised of <tags/>
- Open tags - <hr/>,
- Closed tags - <body>Hello</body>
- Comments - <!-- text -->
- Extension - .html, .htm

Document Structure




```
<html>

        <head>
          <title> The title of your html
page    </title>
       </head>

       <body>
          <! --your web page content
and markup -->
        </body>

</html>
```

Basic Tags

Tag	Description
<!DOCTYPE>	Defines the document type
<html>	Defines an HTML document
<head>	Defines information about the document
<title>	Defines a title for the document
<body>	Defines the document's body
<h1> to <h6>	Defines HTML headings
<p>	Defines a paragraph
 	Inserts a single line break
<hr>	Defines a thematic change in the content
<!--...-->	Defines a comment
<marquee>	Defines auto scrolling of text
<button>	Defines a button

Code1.html

```
1  <html>
2
3      <head>
4          <title>
5              Basic code
6          </title>
7          <h2> Hey Peeps </h2>
8      </head>
9
10     <body>
11         <p> Welcome to Web Development Workshop! </p>
12         <hr/>
13         Learn and share!
14         <br/>
15         <button type="button">Click Me!</button>
16     </body>
17
18 </html>
```

Some more tags!

Tag	Description
<b>	For making text Bold
<i>	For making text Italics
<u>	For making text Underline
<button>	For creating a button
<pre>	For printing text as it is, Includes white space
<block>	For creating block and starting block in new line
	For creating block and starting block in new line
	For creating inline element

Exercise 1

Create a web page which consists of the following:

1. ‘Biodata’ as title
2. ‘Your Name’ as heading
3. ‘Hobbies’ as sub-heading
4. A horizontal line
5. ‘Your hobbies’ in content

CSS

- **C**ascading **S**tyle **S**heets
- Describes the style of an HTML document
- Consistent and good look
- Control the layout of multiple web pages
- Syntax - Consists of 2 blocks:
  - Selector – Name of element/class
  - Declaration – Property/Value pair
- *Example: h1 {color: red;}*
- Declarations always end in semi-colons
- Types of selectors: Element name, class, Id

Properties in CSS

Property	Description
color, font-color	To change color of font
font-size	To change size of the font
font-family	To change style of the font
Background, background-color	To change background color of the font
text-align	To set alignment of the text
border	To give border
height, width	To set height and width of element/class respectively
padding	To give space at the border
left, right, top, bottom	To set position of the element

Code2.html

```
<html>
    <head>
        <title>
            Biodata
        </title>
    </head>

    <body>
        <h2 style="color: navy; text-align: center;"><u> Armin Bodhanwala </u></h2>
        <br/>
        <b class="hobby-style">Hobbies:</b>
        <hr/>
        <p>Travelling, Dancing</p>
    </body>

    <style>
        .hobby-style {
            background: yellow;
            font-family: "Arial";
        }

        p {
            font-size: 25px;
            color: red;
        }
    </style>
</html>
```

Exercise 2

- Create a web page for dairy products with following specifications:

i. ‘Dairy Products’, ‘Milk’, ‘Paneer’ – Red color
ii. ‘Curd’ – Blue color and Cursive font style
iii. ‘Curd’, ‘Milk’, ‘Paneer’ – Font size 12px
iv. ‘Milk’, ‘Paneer’ – Yellow background color

JavaScript

WHY the name **JAVA**script?

- Developed as **“Mocha”**
- First released as **“LiveScript”**
- In 3 months it was renamed as **“JavaScript”**
- It has simply nothing to do with Java! It was taken out of fame of the Actual Language

- **Why JavaScript?**

  Agreement between Netscape Communications and Sun Microsystems.

- Programming the behavior of web pages
- Easy to learn
- Case sensitive
- Ignores white spaces
- Single line Comment - `//`
- Multi line Comment - `/* ---- */`
- Accepts both double and single quotes
- Inserted between `<script>` and `</script>` tags in HTML or under inline elements
- Can be inserted in `<head>` or `<body>` or both
- Semi-colons allow multiple statements in one

JavaScript Can Change HTML Content

```
<html>

    <head>
        <title>
            Basic code
        </title>
        <h2> Hey Peeps </h2>
    </head>

    <body>
        <p id="welcome"> Welcome to Web Development Workshop! </p>
        <hr/>
        Learn and share!
        <br/>
        <button type="button" onclick='document.getElementById("welcome").innerHTML = "Hello JavaScript!"'>Click Me!</button>
    </body>

</html>
```

- JavaScript Can Hide HTML Elements

  document.getElementById("demo").style.display = "none";

- JavaScript Can Show HTML Elements

  document.getElementById("demo").style.display = "block";

- JavaScript Can Write In The Document

  document.write(5+6);

- JavaScript Can Display An Alert Box

  window.alert(“Hello!”);

- JavaScript Can Be Used For Debugging

  console.log(“Hello!”);

List of keywords

Keyword	Description
break	Terminates a switch or a loop
continue	Jumps out of a loop and starts at the top
debugger	Stops the execution of JavaScript, and calls (if available) the debugging function
do ... while	Executes a block of statements, and repeats the block, while a condition is true
for	Marks a block of statements to be executed, as long as a condition is true
function	Declares a function
if ... else	Marks a block of statements to be executed, depending on a condition
return	Exits a function
switch	Marks a block of statements to be executed, depending on different cases
try ... catch	Implements error handling to a block of statements
var	Declares a variable

Famous Frameworks

Thank you!

You are awesome!

Shoot your questions! C'mon!

CREDITS:

Icon Creators - The Noun Project
MIT WPU Poly - For Invitation and Hospitality

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