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# Introduction to Web development

By: Prakamya Mishra

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# Git & Github

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# Overview

- Installing git and creating a github account
- What is git
- How does git work
- What is github
- Example of using Git and github

# Installing **git**!

- Linux (debian):
  - ◆ Command : `sudo apt-get install git`
- Linux (Fedora):
  - ◆ Command : `sudo yum install git`
- Mac :
  - ◆ <http://git-scm.com/download/mac>
- Windows :
  - ◆ <http://git-scm.com/download/win>

# What is **version control**?

- A system that keeps record of your changes
- Allow for collaborative development
- Allow you to know who made what changes and when
- Allow you to revert any changes and go back to a previous state.

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# What is Git?

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# What is **version control**?

- Distributed version control
- User keeps entire code and history on their location machine
  - ◆ User can make any changes without internet access
  - ◆ Except pushing or pulling changes from a remote server

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# What is GitHub?

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# What is GitHub?

- Largest web-based git repository hosting service
  - ◆ Aka hosts **remote repositories**
- Allows code collaboration with anyone online
- Adds extra functionalities on top of git
  - ◆ UI, Documentation, bug tracking, pull requests and more.

# Tools Required!

- Text Editor
  - ◆ Atom (Open Source)
  - ◆ Microsoft Visual Studio
- Browser
  - ◆ Chrome

# One of Three **Core Languages!**

- HTML - Controls the structure of your web page
- CSS - Controls the presentation/design
- JavaScript - Add behaviour and interactivity

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# HTML

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# What does **HTML** stands for?

Hyper Text **Markup** Language

# What We'll Learn!

- What is HTML
- Structure of a HTML Document
- Different types of HTML elements (HTML tags)
- Adding CSS to a webpage
- Adding JavaScript to a webpage

# HTML Tags!

- `<p>` Paragraph text `</p>`
- `<a>` Link to another page `</a>`
- `<h1>` Heading `</h1>`
- `<blockquote>` Quotes `</blockquote>`
- `<img>`

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# CSS

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# What does **CSS** stands for?

Cascading **Style Sheet**

# Box Model



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# JavaScript

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# What Should You Know!

→ HTML

→ CSS

# What We'll Learn!

- What JavaScript is & when we use it
- Basic JavaScript syntax
- Working with data types (integers, string etc)
- Control flow (loop and conditional statements)
- The Document Object Model (DOM)

# JavaScript is a **Scripting Language!**

- Intentionally limited
- Doesn't have the same features as other programming languages (C++, Java)
- Cannot communicate directly with a database, or file system on a computer
- However it is great at manipulating web pages

# JavaScript is a Client Side Language!

Client / Browser



HTML  
CSS  
JavaScript

Server



Ruby on Rails  
PHP  
ASP.NET



## — And Finally...

- JavaScript is NOT, and has nothing to do with JAVA
- JavaScript is just a name that was given to it while JAVA was really popular
- The official name for Javascript is ECMAScript



# Connect

- <https://gitter.im/SNU-ACM/community>
- <https://github.com/prakamya-mishra>