# INF221

## (Web Design and Development)

Paul Sembereka, Isaac Mwakabira

# BUT… WHY INF 221?

"Introduce you to morden tools, methods, standards and technologies in website and web applications design and development"

- Management

# WORLD WIDE WEB!!!!

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"The World Wide Web (known as "WWW', "Web" or "W3") is the universe of network-accessible information, the embodiment of human knowledge."

- W3C

"The WWW is an information space where documents and other web resources are identified by Uniform Resource Locators (URLs, such as *https://www.example.com/*), which may be interlinked by hypertext, and are accessible via the Internet"

- Wikipedia

"The World Wide Web (WWW) is combination of all resources and users on the Internet that are using the Hypertext Transfer Protocol (HTTP)."

- techtarget.com

# WORLD WIDE WEB!!!!

"The World Wide Web is the universe of network-accessible resources, which may be interlinked by hypertext, and are accessible via the Internet using the Hypertext Transfer Protocol (HTTP)."

- INF 221

# INF 221

The World Wide Web is the universe of network-accessible resources, which may be interlinked by hypertext, and are accessible via the Internet using the Hypertext Transfer Protocol (HTTP).

# WEB DESIGN VS WEB DEVELOPMENT

# Web Design VS Web Development

**Web Design**
- Web design encompasses many different skills and disciplines in the production and maintenance of websites.
- The different areas of web design include web graphic design; interface design; authoring, including standardised code and proprietary software; user experience design; and search engine optimization.
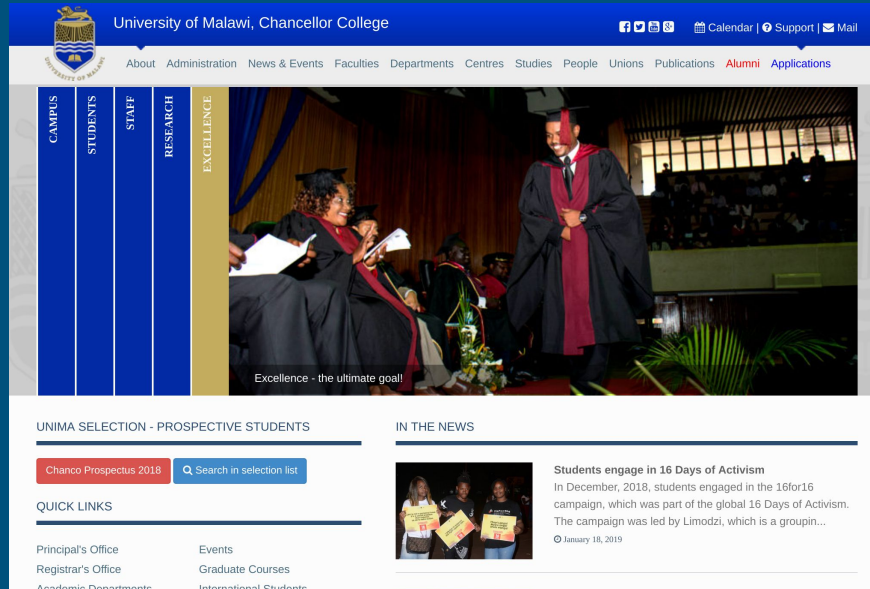- It's a discipline

Web Development
- **Web development** is the work involved in developing a <u>web site</u> for the <u>Internet</u> (<u>World Wide Web</u>) or an <u>intranet</u> (a private network)
- Actual work involved, all the coding and stuff
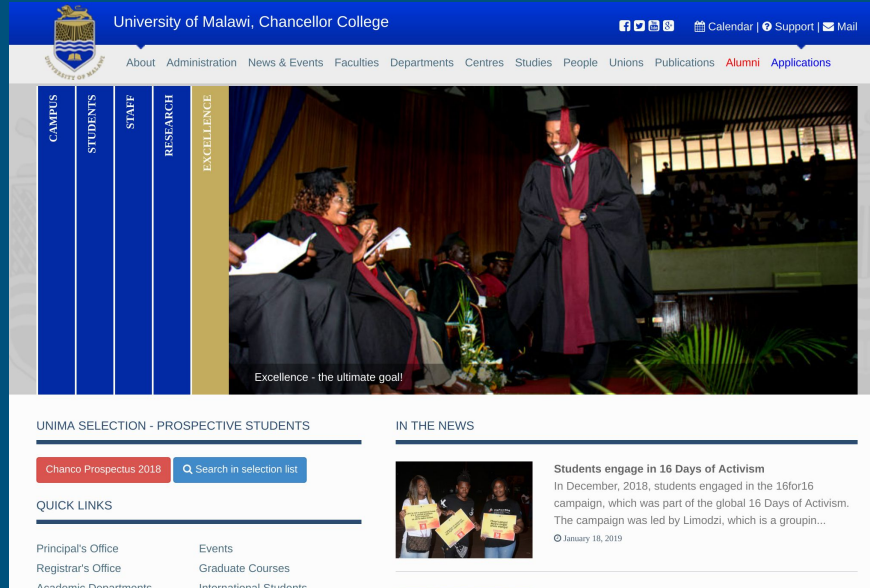
# WEBSITES VS WEB APPS

# WEBSITES VS WEB APPS



Website?

Web App?

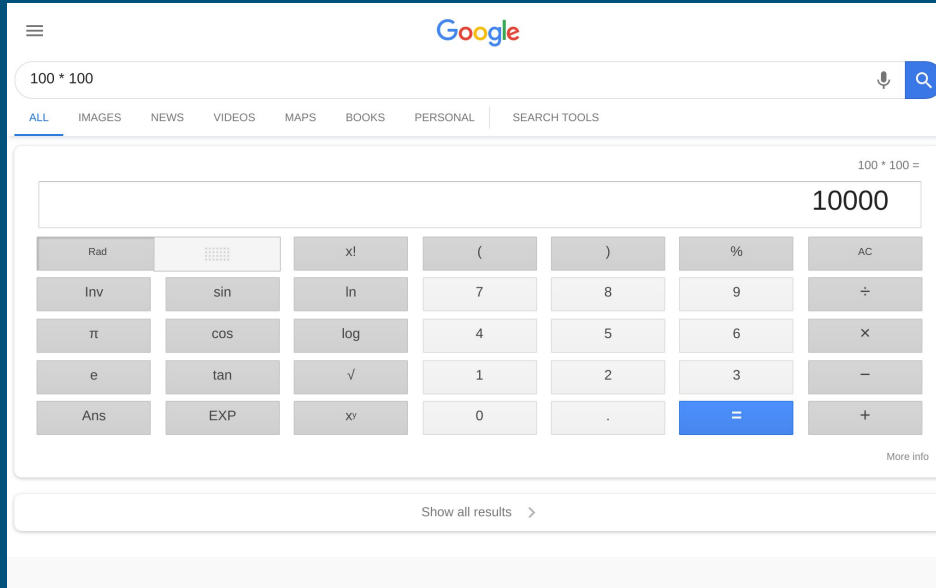# WEBSITES VS WEB APPS



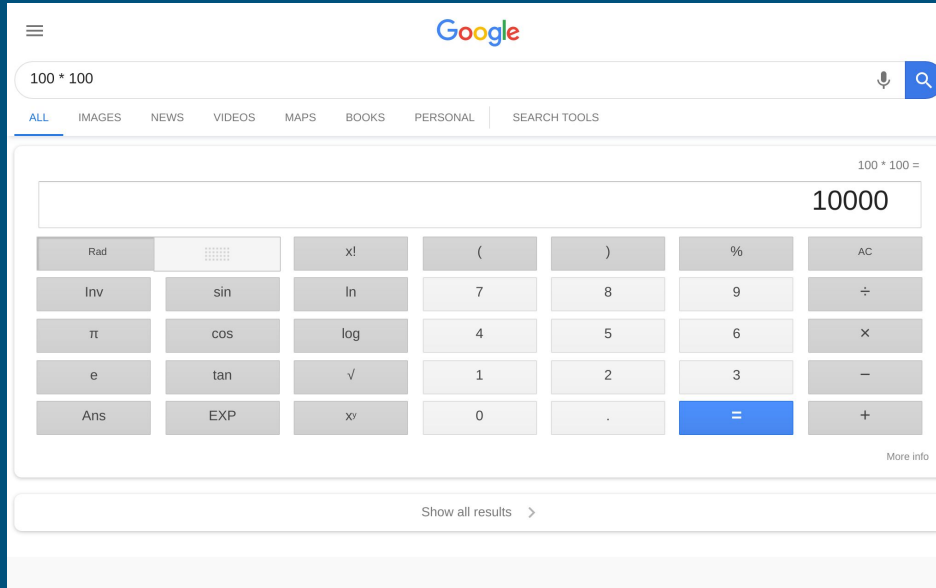Website?                                                        Web App?

# WEBSITES VS WEB APPS
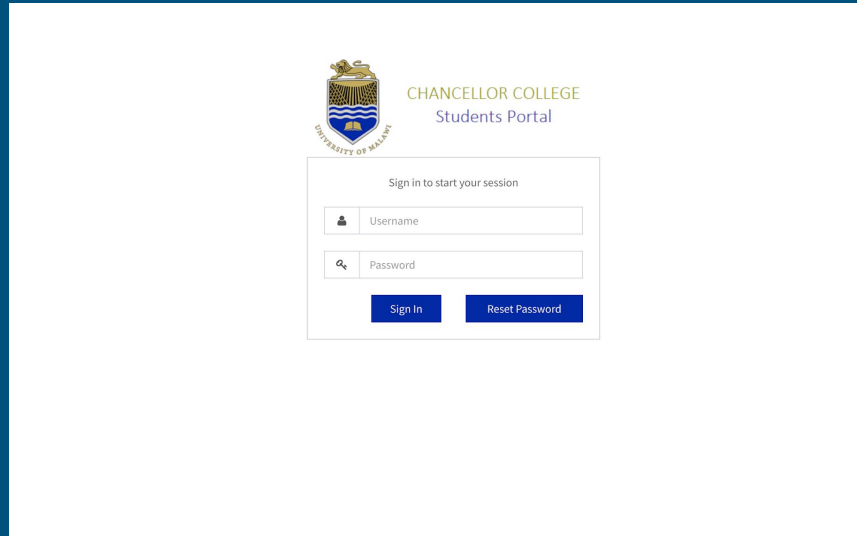


Website

Web App

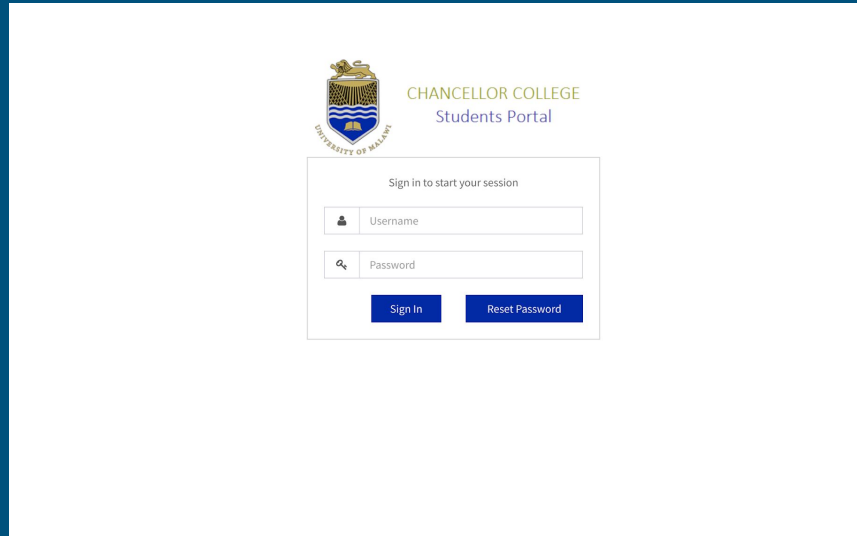# WEBSITES VS WEB APPS



Website

Web App

# WEBSITES VS WEB APPS



Website

Web App

# WEBSITES VS WEB APPS



Website?

Web App?

# WEBSITE VS WEB APP

Strictly speaking...

Websites
- A website is a collection of related web resources, such as web pages, multimedia content, which are typically identified with a common domain name, and published on at least one web server
- defined by their content and information.

Web apps
- a **web application** or **web app** is a client–server computer program which the client runs in a web browser. (Examples???)
- defined by interactions with the user and are typically action driven.

# What's the deal here

We want to design interactive web products!!

# But hey...

How do we make such web products????

# But First

How does it all work???

# How does the web work????



CLIENT (You)

Program used to view
web page

# How does the web work????



CLIENT (You)

Program used to view
web page

SERVER (cc.ac.mw)

Stores and serves a
website

# How does the web work????

Request: GET cc.ac.mw

CLIENT (You)

Program used to view web page

SERVER (cc.ac.mw)

Stores and serves a website

# How does the web work????



Request: GET cc.ac.mw

Response: cc.ac.mw webpage files

CLIENT (You)

Program used to view a webpage

SERVER (cc.ac.mw)

Stores and serves a website

# Web Page Files

**HTML**

```
<body>
    <div>
        <p>So this is INF 221? Noice!!</p>
    </div>
</body>
```

**CSS**

```
<style>
    body {
        background: #dbdbdb;
        color: #ffffff;
        font-family: "Comic Sans"
    }
</style>    |
```

**JS**

```
<script>
    var className = 'INF 221'
    console.log(className)
</script>
```

**Assets**

WOW.

many edits

so Internet meme

much wiki

very readers

how to article?

such neutral

# Client Side Scripting
# &
# Server Side Scripting

# Differences between Client-side and Server-side Scripting

**Client-side Environment**
- The client-side environment used to run scripts is usually a browser. The processing takes place on the end users computer. The source code is transferred from the web server to the users computer over the internet and run directly in the browser.

**Server-side Environment**
- Runs a scripting language is a web server. A user's request is fulfilled by running a script directly on the web server to generate dynamic HTML pages. This HTML is then sent to the client browser. It is usually used to provide interactive web sites that interface to databases or other data stores on the server.
- The primary advantage to server-side scripting is the ability to highly customize the response based on the user's requirements, access rights, or queries into data stores.

We only focus on client end development in INF 221

# Web Page Layers and Structures

# Web Page Layers

1. Content (HTML)
   - This is the base layer, which any visitor using any kind of browser should be able to view.
2. Presentation (CSS)
   -  Focus on making the site look better
3. Behavior (JavaScript)
   - layer of interactivity and dynamic *behavior*
   - make the site easier to use in browsers equipped with JavaScript.

# Next Class: Introduction to HTML & CSS

What about class logistics though??

# The Dos

Dynamic website
Minimum requirements fulfilled
Original design and implementation
Use Git

**Take initiative!!!!**

# The Dont's

Sleep
Use anything like Drupal, Wordpress or Squarespace
Outsource your development. Have minions.
Use a previous project (or a significant portion of a previous project)
Evil

# Schedule

| | |
|---|---|
| Week 1: | We Slept |
| Week 2: | Introduction, Kickoff, Ideation |
| Week 3: | more html & css, JS intro, Assignment 1 Submission |
| Week 4: | Javascript, code! code! code! code! |
| Week 5: | More code!! Assignment 2 submission (22nd March) |
| Week 6: | Intro to JS frameworks, Intro React, RESTful APIs |
| Week 7: | More React, Web Design concepts |
| Week 8: | Mid Semester Break (more code code???) |
| Week 9: | Individual Project delivery |
| Week 10 - week 14 | Group projects, presentations, Theory Test, |
| Week 16 - Week 19 | Grace week, End of semester Examinations |
| Week 20... | Sleep |

# Judging

**Functionality**        technical components of your core features
**Usability**        ease-of-use of the website
**Aesthetics**        look-and-feel of the website
**Concept Execution**        applicability of the solution to the problem

# Where to get help

# Learning Resources

W3 Schools                       https://www.w3schools.com/
Mozilla developer network        https://developer.mozilla.org
WHATGP                           https://html.spec.whatwg.org
Web Platform                     https://webplatform.github.io


Prescribed Reading
 Ducket, J (2011). *HTML and CSS: Design and Build Websites*.
 Indianapolis, USA

# Other Resources

Stack Overflow
GitHub