



**ABES**  
Engineering College  
College Code-032

# WEB DESIGNING (KIT401)

B.TECH - Information Technology , IV Semester

**SEMESTER- IV**

SEMESTER- IV													
Sl. No.	Subject Codes	Subject	Periods			Evaluation Scheme				End Semester		Total	Credit
			L	T	P	CT	TA	Total	PS	TE	PE		
1	KAS402/ KOE041- 48	Maths IV/Engg. Science Course	3	1	0	30	20	50		100		150	4
2	KVE401/ KAS401	Universal Human Values/Technical Communication	3	0	0	30	20	50		100		150	3
			2	1	0								
3	KCS401	Operating Systems	3	0	0	30	20	50		100		150	3
4	KCS402	Theory of Automata and Formal Languages	3	1	0	30	20	50		100		150	4
5	<b>KIT401</b>	<b>Web Designing</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>30</b>	<b>20</b>	<b>50</b>		<b>100</b>		<b>150</b>	<b>4</b>
6	KCS451	Operating Systems Lab	0	0	2				25		25	50	1
7	KIT451	Web Designing Lab	0	0	2				25		25	50	1
8	KCS453	Python Language Programming Lab	0	0	2				25		25	50	1
9	KNC402/ KNC401	Python Programming/ Computer System Security	2	0	0	15	10	25		50			0
10		MOOCs (Essential for Hons. Degree)											
		<b>Total</b>										<b>900</b>	<b>21</b>

# AKTU Syllabus

Web Designing (KIT 401)		
Course Outcome ( CO)		Bloom's Knowledge Level (KL)
At the end of course , the student will be able to understand		
CO 1	Understand principle of Web page design and about types of websites	K <sub>3</sub> , K <sub>4</sub>
CO 2	Visualize and Recognize the basic concept of HTML and application in web designing.	K <sub>1</sub> , K <sub>2</sub>
CO 3	Recognize and apply the elements of Creating Style Sheet ( CSS).	K <sub>2</sub> , K <sub>4</sub>
CO 4	Understanding the basic concept of Java Script and its application.	K <sub>2</sub> , K <sub>3</sub>
CO 5	Introduce basics concept of Web Hosting and apply the concept of SEO	K <sub>2</sub> , K <sub>3</sub>
DETAILED SYLLABUS		3-0-0
Unit	Topic	Proposed Lecture
I	<b>Introduction</b> : Basic principles involved in developing a web site, Planning process , Domains and Hosting, Responsive Web Designing , Types of Websites (Static and Dynamic Websites), Web Standards and W3C recommendations, <b>Introduction to HTML</b> : What is HTML , HTML Documents, Basic structure of an HTML document , Creating an HTML document , Mark up Tags , Heading-Paragraphs , Line Breaks	08
II	<b>Elements of HTML</b> : HTML Tags., Working with Text , Working with Lists, Tables and Frames, Working with Hyperlinks, Images and Multimedia, Working with Forms and controls	08
III	<b>Concept of CSS</b> : Creating Style Sheet, CSS Properties , CSS Styling(Background, Text Format, Controlling Fonts) , Working with block elements and objects , Working with Lists and Tables , CSS Id and Class, Box Model(Introduction, Border properties, Padding Properties, Margin properties) CSS Advanced(Grouping, Dimension, Display, Positioning, Floating, Align, Pseudo class, Navigation Bar, Image Sprites, Attribute selector) , CSS Color , Creating page Layout and Site Designs.	08
IV	Introduction to Client Side Scripting , Introduction to Java Script , Javascript Types , Variables in JS, Operators in JS , Conditions Statements , Java Script Loops, JS Popup Boxes , JS Events , JS Arrays, Working with Arrays, JS Objects ,JS Functions , Using Java Script in Real time , Validation of Forms, Related Examples	08
V	<b>Web Hosting</b> : Web Hosting Basics , Types of Hosting Packages, Registering domains , Defining Name Servers , Using Control Panel, Creating Emails in Cpanel , Using FTP Client, Maintaining a Website <b>Concepts of SEO</b> : Basics of SEO, Importance of SEO, Onpage Optimization Basics	08
<b>Text Books:</b>		
1. Steven M. Schafer, "HTML, XHTML, and CSS Bible, 5ed", Wiley India		
2. Ian Pouncey, Richard York, "Beginning CSS: Cascading Style Sheets for Web Design", Wiley India		

## AKTU Lab Syllabus

### Web Designing Lab (KIT451)

1. To create a simple html file to demonstrate the use of different tags.
  2. To create an html file to link to different html page which contains images, tables, and also link within a page.
  3. To create an html page with different types of frames such as floating frame, navigation frame & mixed frame.
  4. To create a registration form as mentioned below.  
    Procedure: Create an html page named as "registration.html"
    - a) set background colors
    - b) use table for alignment
    - c) provide font colors & size
  5. To create an html file by applying the different styles using inline, external & internal style sheets.
  6. To write a Javascript program to define a user defined function for sorting the values in an array.
  7. To create an html page to explain the use of various predefined functions in a string and math object in java script.
  8. To create an html page to explain the use of various predefined functions in a array & Date object in Javascript.
  9. To create an html page to demonstrate exception handling in javascript
  10. To display the calendar using javascript code by getting the year from the user.
  11. To create a html registration form and to validate the form using javascript code.
  12. To create a html file. To open new window from the current window using javascript.
- 
13. To create an html page to change the background color for every click of a button using javascript.
  14. To create an html page with 2 combo box populated with month & year, to display the calendar for the selected month & year from combo box using javascript.
  15. To create a html page to display a new image & text when the mouse comes over the existing content in the page.

# UNIT-1

## **Introduction :**

- Basic principles involved in developing a web site
- Planning process Domains and Hosting
- Responsive Web Designing
- Types of Websites (Static and Dynamic Websites)
- Web Standards and W3C recommendations

## **Introduction to HTML:**

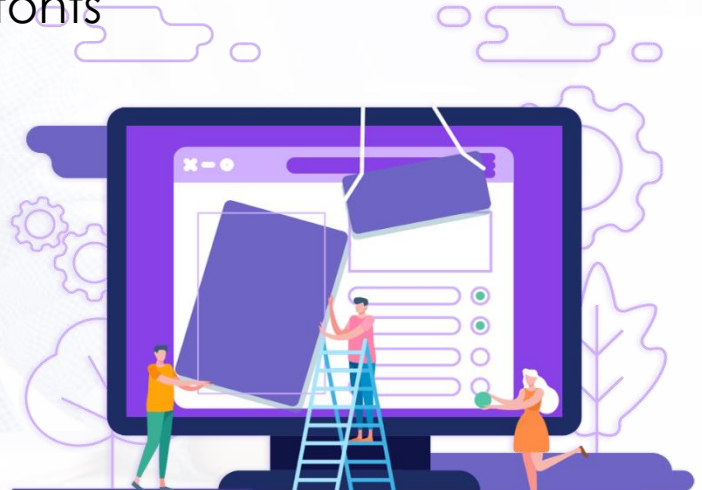
- What is HTML
- HTML Documents
- Basic structure of an HTML document
- Creating an HTML document
- Mark up Tags
- Heading-Paragraphs
- Line Breaks

The background of the slide is a dark blue overlay on a photograph. The photograph shows a man in a dark suit, white shirt, and dark tie, wearing glasses. He is standing and pointing his right hand towards a whiteboard on the left side of the frame. The whiteboard has some faint, illegible writing on it. In the foreground, the silhouettes of several people are visible, looking towards the man and the whiteboard. The overall scene appears to be a professional presentation or lecture.

# Introduction

# Web Design

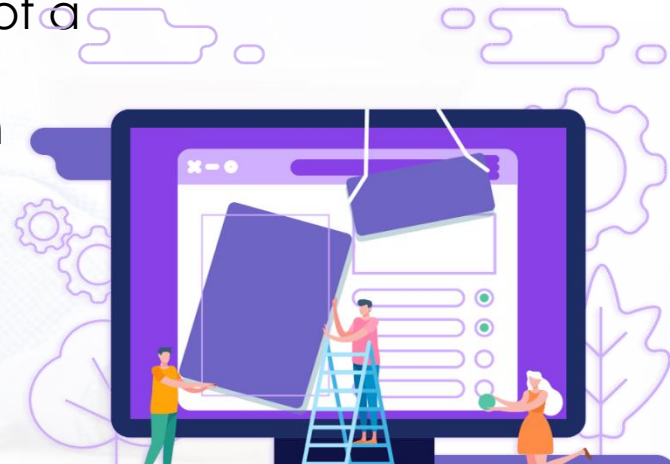
- Web design is the process of planning, conceptualizing, and arranging content online.
- Web design is the process of planning and building the elements of the website, from structure and layout to images, colors, fonts and graphics.





# Web Design

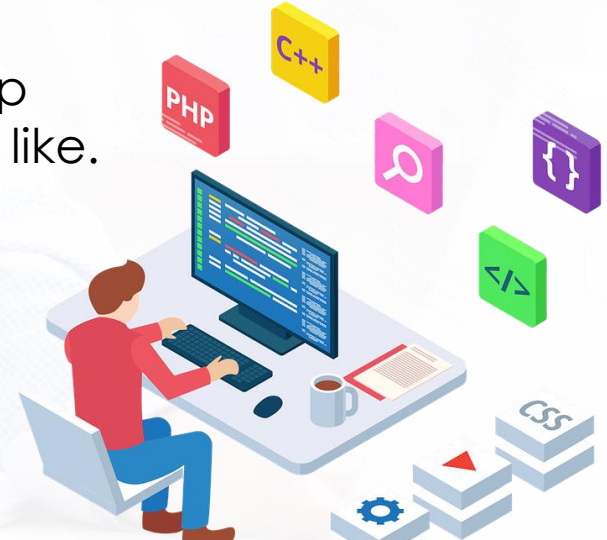
- Designing a website goes beyond aesthetics to include the website's overall functionality
- It includes web apps, mobile apps, and user interface design.
- It has numerous components that work together to create the finished experience of a website, including graphic design, user experience design, interface design, search engine optimization (SEO) and content creation





# Web Designer

- IT professional who is responsible for designing the layout, visual appearance and the usability of a website.
- A good web designer needs to have both creative graphic skills and technical skills.
- take the ideas and turn them into a mockup that shows what the future website will look like.



# Web Developer

- Also called engineers or coders
- take the mockup that web designer made and translate it into a coding language so it can be displayed on the web.
- They make websites functional, which often means custom-coding widgets and other tools.



# User Experience Developer

- A **user experience developer**, also known as a UX developer, is the one who makes your website user-friendly.
- They have technical skills as well as design skills and put them to work creating websites that attract and keep visitors.



# Why is Website Design Matter

- First impressions really matter.
- Prospective customers who search the web for a brand and find nothing might think they are gone out of business.
- Make every relationship that begins on The website a great one by getting the web design right.



# A Good Web Design

- A well-designed website is a website that perfectly creates the experience the visitor is looking for.
- Web design that works is web design that converts.
- Conversions can be anything, like signing up for a newsletter, making a purchase, opening an account or accessing more content on the website.



# A Good Web Design

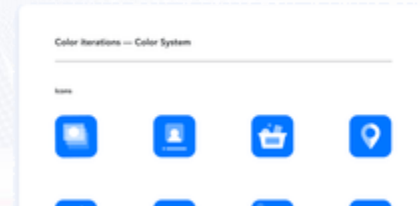
Effective web design brings a few different elements together to promote conversions. These include:

- Compelling use of negative space
- Clearly presented choices for the user
- Obvious, clear calls to action
- Limited distractions and a well thought out user journey
- Responsive design
- Appropriately sized fonts that follow a hierarchy
- Relevant, high-quality content and images that hook your readers' attention
- A balance between the amount of text and images on each page

# A Good Web Design

Other building blocks of an effective web design are:

- Buttons
- Fonts
- Color palette





# What to Avoid?

- Distracting images and backgrounds
- Non-responsive design
- Unclear links and buttons
- Generic or irrelevant stock photos and filler text without valuable information



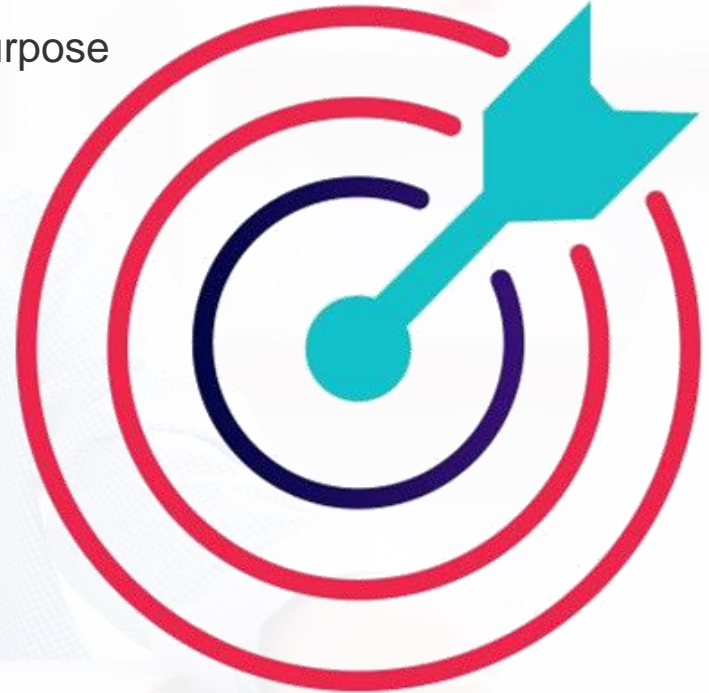
A blurred background image of a man in a dark suit, white shirt, and dark tie, wearing glasses. He is standing and gesturing with his right hand towards a group of people seated in a meeting room. The room has a whiteboard with some writing on the left and a large window or screen on the right. The overall tone is professional and corporate.

# Principle of Web Designing

# Principle of web designing

## Purpose

- Good web design always caters to the needs of the user
- Each page of website needs to have a clear purpose
- The core purposes common to all websites;
  - Describing Expertise
  - Building Your Reputation
  - Generating Leads
  - Sales and After Care

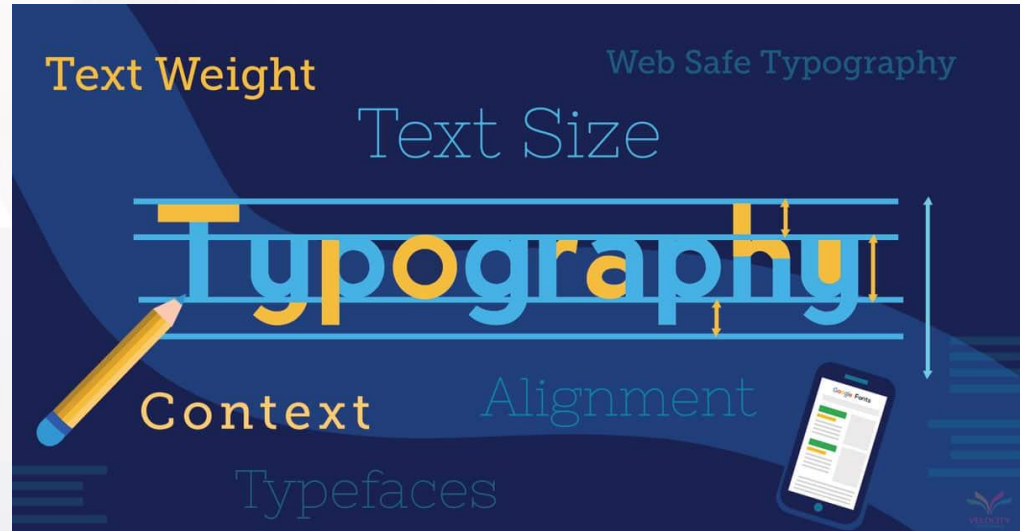




# Principle of web designing

## Typefaces

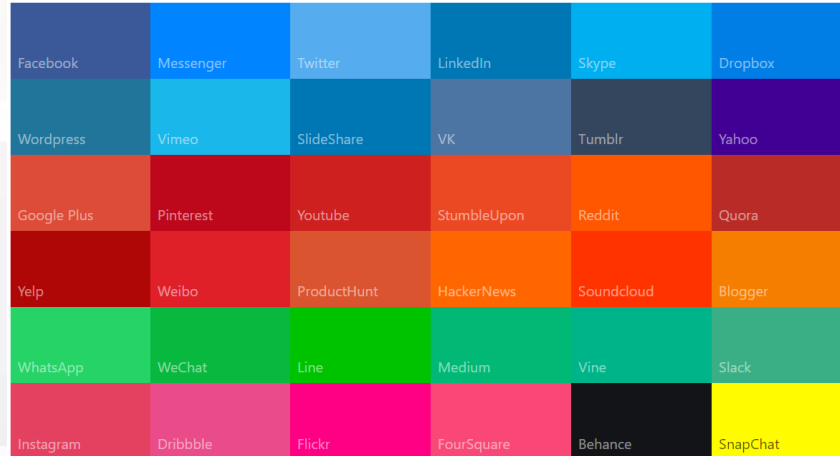
- Typography commands attention and works as the visual interpretation of the brand voice
- Typefaces should be legible and only use a maximum of 3 different fonts on the website.



# Principle of web designing

## Colours

- Colour has the power to communicate messages and evoke emotional responses
- Try to keep the colour selection limited to less than 5 colours
- Complementary colours work very well, creating balance and harmony
- Pleasing colour combinations increase customer engagement and make the user feel good.

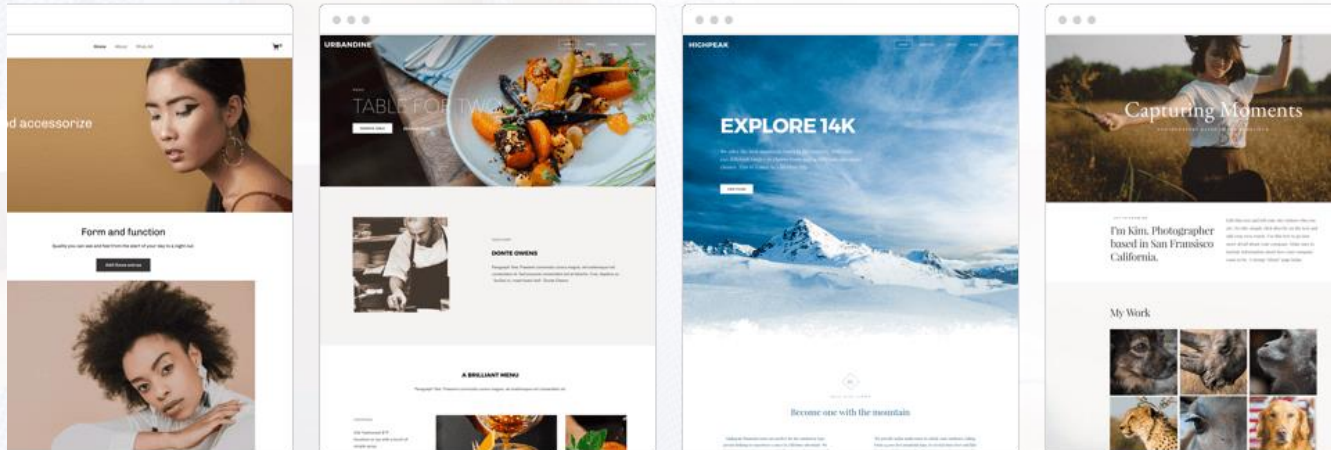


Facebook	Messenger	Twitter	LinkedIn	Skype	Dropbox
Wordpress	Vimeo	SlideShare	VK	Tumblr	Yahoo
Google Plus	Pinterest	Youtube	StumbleUpon	Reddit	Quora
Yelp	Weibo	ProductHunt	HackerNews	Soundcloud	Blogger
WhatsApp	WeChat	Line	Medium	Vine	Slack
Instagram	Dribbble	Flickr	FourSquare	Behance	SnapChat

# Principle of web designing

## Images

- Imagery is every visual aspect used within communications
- This includes still photography, illustration, video and all forms of graphics
- All imagery should be expressive and capture the spirit of the company and act as the embodiment of their brand personality





# Principle of web designing

## Navigation

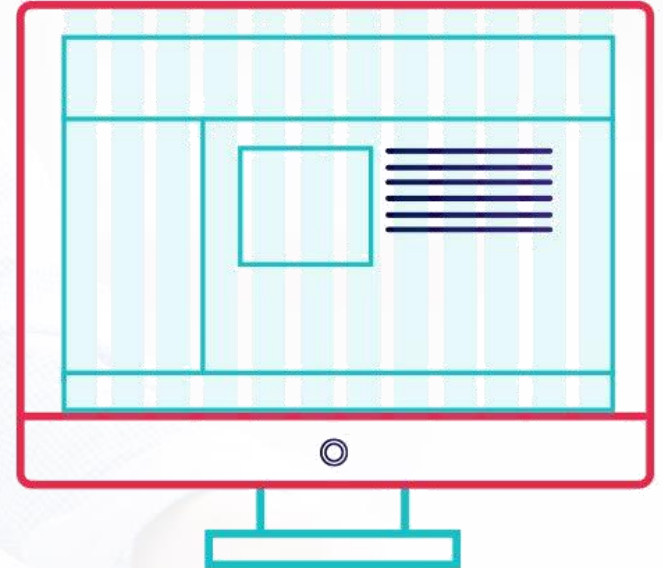
- Navigation is the wayfinding system used on websites where visitors interact and find what they are looking for
- Website navigation is key to retaining visitors
- Keeping navigation simple, intuitive and consistent on every page is key



# Principle of web designing

## Grid based layouts

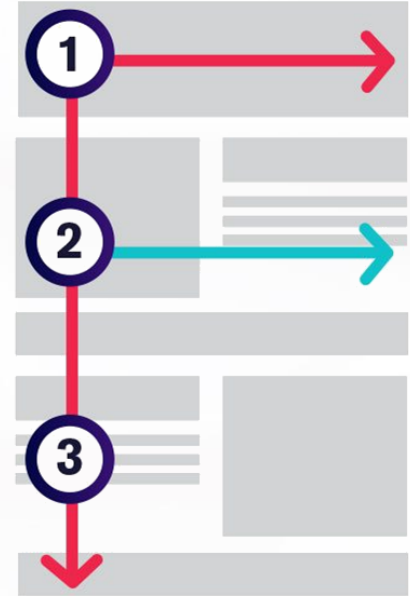
- Grids help to structure the design and keep the content organized
- The grid helps to align elements on the page and keep it clean
- The grid-based layout arranges content into a clean rigid grid structure with columns, sections that line up and feel balanced and impose order and results in an aesthetically pleasing website.



# Principle of web designing

## “F” Pattern design

- people scan computer screens in an “F” pattern
- Eye-tracking studies have found that most of what people see is in the top and left areas of the screen.
- The F shaped layout mimics our natural pattern of reading in the West (left to right and top to bottom).
- An effectively designed website will work with a reader's natural pattern of scanning the page.



# Principle of web designing

## Load time

- Waiting for a website to load will lose visitors
- page load time can be more effective by optimizing image sizes (size and scale), combining code into a central CSS or JavaScript file (this reduces HTTP requests) and minify HTML, CSS, JavaScript (compressed to speed up their load time).



# Principle of web designing

## Mobile friendly

- More people are using their phones or other devices to browse the web
- It is important to consider building website with a responsive layout where website can adjust to different screens.



# Principle of web designing

## Visual Hierarchy

- Visual hierarchy is the arrangement of elements in order of importance
- This is done either by size, colour, imagery, contrast, typography, whitespace, texture and style.
- One of the most important functions of visual hierarchy is to establish a focal point; this shows visitors where the most important information is.



# Website

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- A website can be defined as a collection of several webpages that are all related to each other and can be accessed by visiting a homepage, by using a browser like Internet Explorer, Mozilla, Google Chrome, or Opera.
- identified with a common domain name
- published on web server
- accessed using Internet address known as Uniform Resource Locator
- a website can be a personal website, a commercial website, a government website or a non-profit organization website.



# Types of Website on Web

- Internet forums :
  - message board where people can hold conversation by posting messages
- Blog :
  - kind of web site that is updated regularly, with content about almost anything
  - blog is a Content Management System (CMS), an easy way of publishing articles on the internet

# Types of Website on Web

- E-Commerce or Electronics Commerce :
  - methodology of modern business which addresses the need of business organizations, vendors and customers to reduce cost and improve the quality of goods and services while increasing the speed of delivery
- Online portfolio
  - collection of images, multimedia, emails, blog entries, and hyperlinks managed online

# Classification

A website can be  
of two types:

```
graph TD; A[A website can be of two types:] --- B[Static Website]; A --- C[Dynamic Website];
```

Static Website

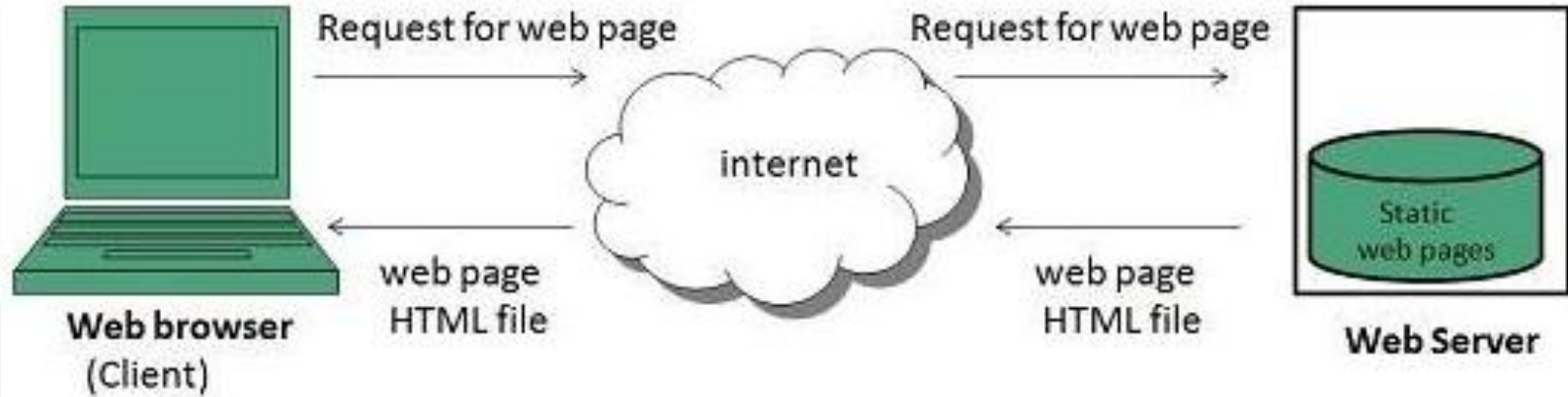
Dynamic Website

# Static Website

- Static website is the basic type of website that is easy to create.
- Its web pages are coded in HTML.
- The codes are fixed for each page so the information contained in the page does not change and looks like a printed page.



# Static Website



# Advantages



Quick to develop

Cheap to develop

Cheap to host

Flexible

# Disadvantages



Requires web development expertise to update site

Site not as useful for the user

Content can get stagnant

Scalability



# Website Generators

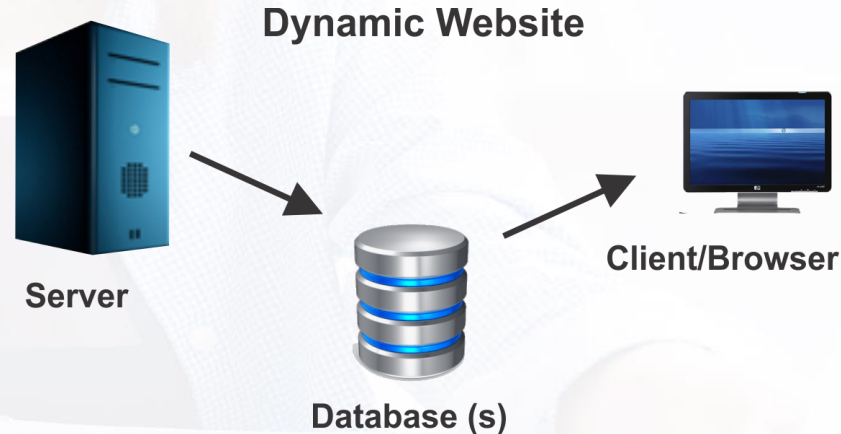
- Jekyll
- Hexo
- Hugo
- Octopress
- Pelican
- Brunch
- Roots
- Cactus

A woman with long brown hair and glasses is sitting at a desk, reading a book. She is wearing a blue and white checkered shirt. In the background, a laptop is open on the desk. The image is faded and serves as a background for the text.

# **Dynamic Website**

# Dynamic Website

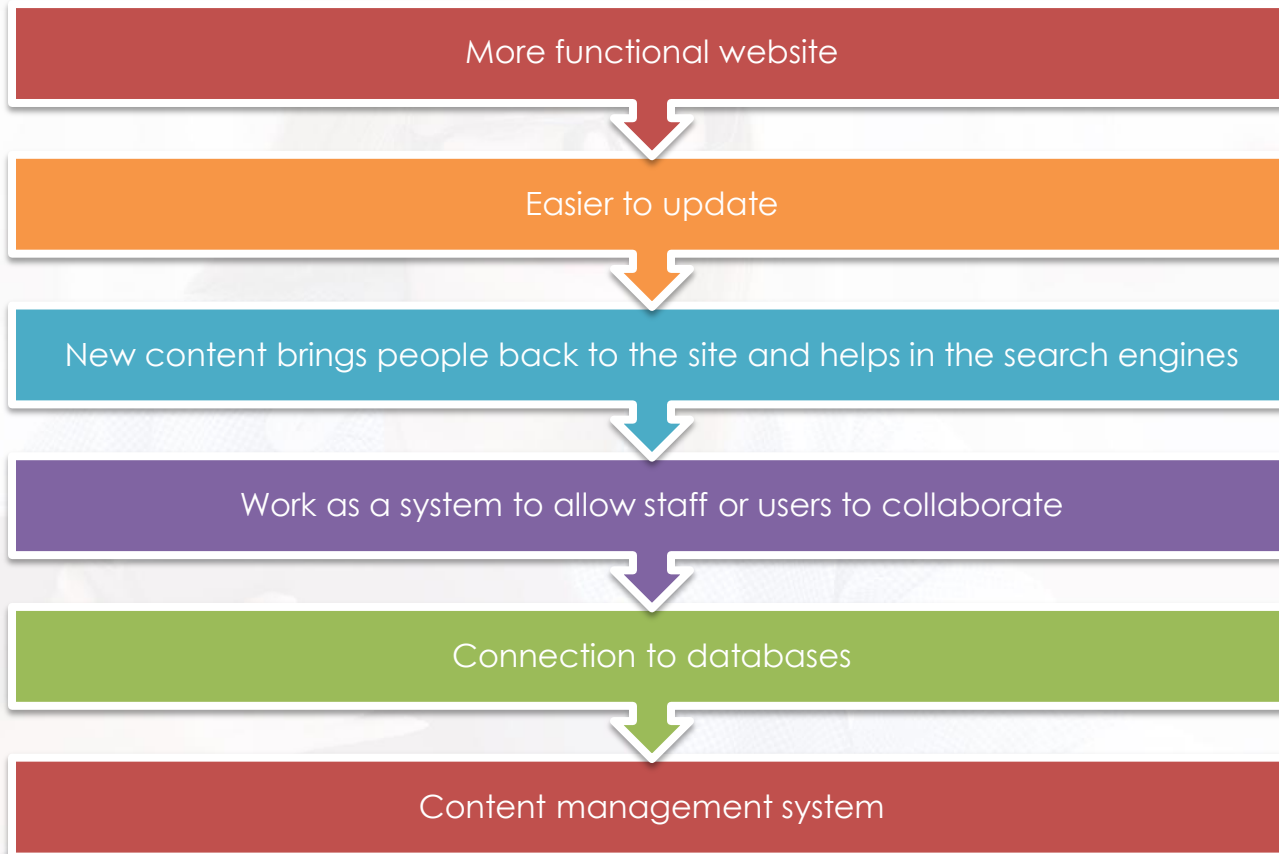
- Dynamic website is a collection of dynamic web pages whose content changes dynamically
- It accesses content from a database or Content Management System (CMS)
- Uses client-side scripting or server-side scripting, or both to generate dynamic content



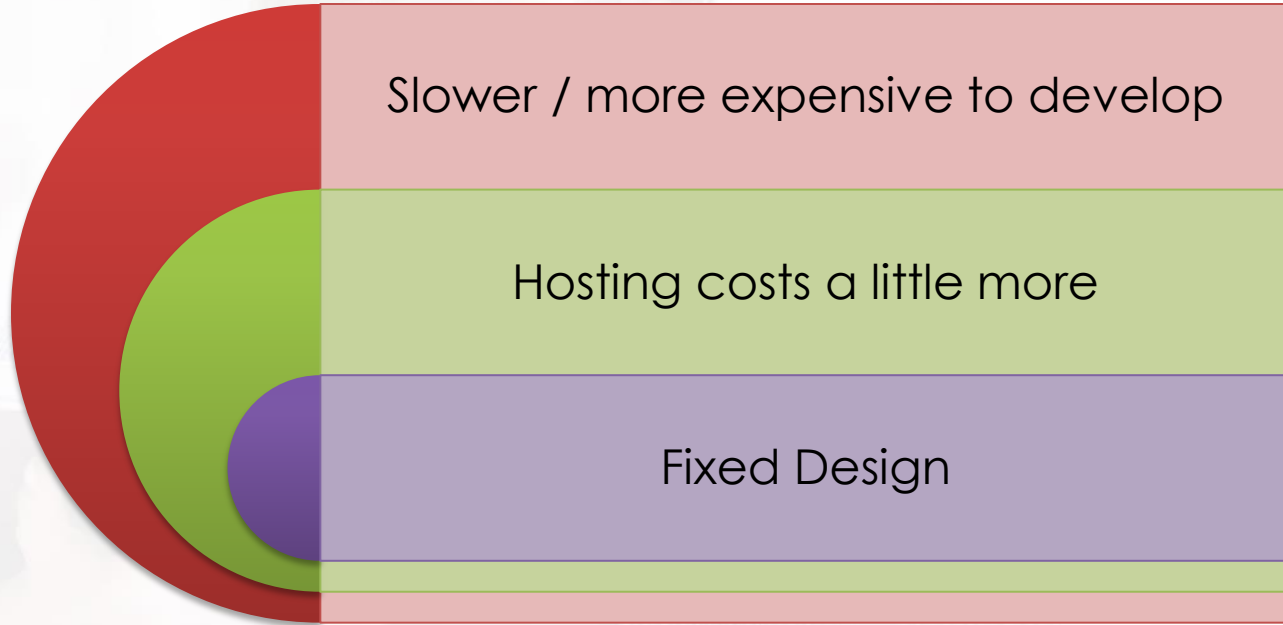
# Dynamic Website

- Uses client-side scripting or server-side scripting, or both to generate dynamic content
- **Client side scripting:**
  - Generates content at the client computer on the basis of user input.
  - The web browser downloads the web page from the server and processes the code within the page to render information to the user.
- **In server side scripting:**
  - The software runs on the server and processing is completed in the server then plain pages are sent to the user.

# Advantages



# Disadvantages



# Difference

## Static Website

- Prebuilt content is same every time the page is loaded.
- It uses the HTML code for developing a website.
- It sends exactly the same response for every request.
- The content only changes when someone publishes and updates the file (sends it to the web server).
- Flexibility is the main advantage of static website.

## Dynamic Website

- Content is generated quickly and changes regularly.
- It uses the server side languages such as PHP, SERVLET, JSP, and ASP.NET etc. for developing a website.
- It may generate different HTML for each of the request.
- The page contains "server-side" code it allows the server to generate the unique content when the page is loaded.
- Content Management System (CMS) is the main advantage of dynamic website.

A woman with long brown hair and glasses, wearing a blue blazer, is holding a tablet. The background is a blurred office setting. The text "Thank You" is written in a large, black, cursive font across the center of the image.

Thank You