



SANDIP FOUNDATION'S
SANDIP INSTITUTE OF

TECHNOLOGY & RESEARCH CENTRE, NASHIK

(An autonomous institute permanently affiliated to Savitribai Phule Pune University, Pune)

ASSIGNMENT SHEET

Course Code : 2815213A

Course Name : Web Design Using HTML and CSS

Class : S.Y. B.tech

Branch : Computer Engineering

Permanent Registration Number :

1	1	2	0	2	3	4	8	8
---	---	---	---	---	---	---	---	---

Q.No.	Cr.-1	Cr.-2	Cr.-3	Cr.-4

Q.No.

ASSIGNMENT NO.1 (PART I)

- Q1. What are the basic principles involved in developing a website?
Explain how each principle contribute to effective web-design.

Basic Principles Involved in developing a Website

1. Purpose and Goal Setting

- Define the Purpose

Identify the websites objective (eg. e-commerce, education, portfolio, blog).

Align design and content with the goal (eg. selling products or sharing knowledge)

- Set Measurable Goals

- Define Key Performance Indicators (KPIs) like traffic, conversions or user engagement.

2. Understand the Target Audience

- Demographics: Age, gender, profession, geographic location and cultural background

- User Behaviour: Focus on user preference, such as browsing habits and devices.

- User Needs: Identify problems the website will solve for the audience.

Q.No.

3. Simplicity In Design

- Minimalism: Avoid overloading users with information or complex designs.
- Clarity: Ensure content is easy to read and understand.
Use simple language and short paragraphs.
- Visual Hierarchy:
Highlight important elements using size, color and position.

4. Navigation and Accessibility

- Easy Navigation: Design intuitive menus and clear links to guide users.
Ensure the navigation bar is visible and accessible on all devices.
- User Accessibility: Make the website inclusive for users with disabilities.
eg: screen readers.
- Follow WCAG (Web Content Accessibility Guidelines) for accessibility.

5. Responsiveness

SANDIP INSTITUTE OF TECHNOLOGY & RESEARCH CENTRE

- Mobile-Friendly Design: Ensure the site adjusts seamlessly to different screen sizes (mobile, tablet, desktop).
- Touchscreen Compatibility:
Design elements that are easy to interact with on touch devices.

6. Content is King

- Relevant and valuable content: Provide content that is useful, engaging, and relevant to your audience.
- SEO Optimisation: Use keywords, metatags and description to improve search engine rankings.
- Consistency: Update content regularly and maintain consistent tone and style.

7. Call to Action (CTA)

• Purposeful CTA

Guide users to take specific actions (eg. "Signup", "Buy Now").

• Placement:

Place CTAs strategically where they are easy to notice and click.

8. Security and Privacy

• Secure Connection: Use HTTPS for secure communication.

• Data Protection: Implement proper measures to protect user data.

• Privacy Compliance: Adhere to global regulations like GDPR and CGPA.

Q2. What are five golden rules of web-designing? Describe each and every rule and its significance in ensuring user-friendly web experience.

1. KEEP IT SIMPLE

• Avoid Clutter: Use a clean and organised design with minimal distraction.

• Minimalism: Use fewer elements but ensure they are functional and serve a purpose.

• Readable Content: Use simple fonts, clear headings, and concise text to make the content easy to read.

• White Spaces: Incorporate whitespace effectively to separate sections and enhance visual clarity.

Example: Google's homepage exemplifies simplicity by focusing solely on the search bar.

2. Consistency:

• Design Uniformly: Maintain a consistent design style across the website.

• Brand Identity: Ensure the design reflects brand's identity, such as logo placement, tone and imagery.

• Page Layouts: Use a common template for all pages to avoid confusing users.

• Navigation: Keep navigation menus consistent on all pages for intuitive use.

Q.No. Example: Amazon maintains a consistent layout across product pages making navigation seamless.

3. Easy Navigation:

- User friendly Menus: Create clear and intuitive navigation menus that help users find what they need quickly.
- Logical Structure: Organise pages and links in a way that makes sense hierarchically (eg. dropdown menus).
- Search Functionality: Include a search bar to help users locate specific information or products easily.
- Interactive Feedback: Use visual cues like hover effects to guide users through the navigation.

Example: Websites like Wikipedia use clear navigation structure with table of content and search features.

4. Focus on User Centric Design:

- Understand Your Audience: Design with the users preference, behaviour and needs in mind.
- Responsive Design: Ensure the website is accessible on all devices.
- Accessibility: Follow WCAG (Web Content Accessibility Guidelines) to make the websites usable for people with disabilities.

Example: Use alt text for images, provide keyboard navigation and maintain sufficient colour contrast.

5. Visual Appeal and Aesthetics:

- Color scheme: Use complementary colors that align with the brand and create an emotional connection.
- Typography: Use legible fonts with proper spacing and size. Stick to 2-3 font families across the site.
- Images and Multimedia: Use high quality visuals and videos relevant to the content.
- Balance: Ensure all elements are well-balanced for an aesthetically pleasing design.

Example: Websites like Apple focus on sleek, visually engaging designs with high quality imagery and clean layouts.

Q3. Explain term "Design Concept" in web-design. How does the design concept influence the overall look and feel of website.

A design concept is the fundamental idea or vision that guides the creation and execution of a website's design. It encompasses the overall look, feel and functionality of the websites while ensuring alignment with the brands goals and target audience. A strong design concept ensures that all elements of the websites work cohesively to provide a seamless user experience.

Definition: A clear and strategic framework that outlines how website's visual and functional elements will work together to achieve its goals.

Purpose:

- ① To provide a unified direction for design decisions.
- ② To communicate the brand identity effectively.
- ③ To create a consistent user experience across the website.

Importance of a Design Concept:

- ① **Ensure Consistency:** Aligns all design elements, such as colors, fonts, layouts with the brands message.
- ② **Improve User Experience:**
Helps user navigate the site intuitively.
- ③ **Strengthens Brand Identity:** Creates a memorable and recognizable online presence.
- ④ **Enhances Communication:** Ensures the websites conveys the intended message clearly and effectively.

* **Elements of a Design Concept.**

- I. **Visual Identity:** Includes the websites colors, typography, logo, imagery that reflect the brand's personality.
- II. **Functional Structure:** Focuses on the layout, navigation and interactive elements that enhances usability.
- III. **Content Strategy:** Defines how information is organised and presented to users.

Q.No. including text, visuals and multimedia.

User-Centered Design: Addresses the needs, behaviours and preferences of target audience.

Q4. Why is it important to create a website? Discuss its relevance for businesses, individuals and organisations in digital age.

Creating a website is essential in today's digital age because it serves as a central hub for information, communication and transactions.

Whether for businesses, individuals or organisations, a website provides credibility, viability and accessibility. Its Relevance

* For Businesses:-

1. Global Reach and Visibility: A website allows businesses to expand beyond geographical limitations, making it easier to reach customers worldwide.
2. Brand Credibility and Trust: Consumers often research online before making a purchase. A professional website enhances trust and legitimacy.
3. E-Commerce Opportunities: Businesses can sell products/services online, providing 24/7 accessibility to consumers.

* FOR INDIVIDUALS:

1. Personal Branding: A website helps showcase portfolio, resumes, and blogs, making it easier to build an online for job seekers, freelancers and influencers.
2. Professional Growth: Entrepreneurs, consultants and creatives can use websites to establish authority in their field.
3. Monetization and Side Hustles: Individuals can earn through blogging, affiliate marketing or online courses.

* FOR ORGANISATIONS:

1. Awareness: Websites help in spreading awareness about causes, initiatives and missions.
2. Donor and Volunteers Engagement: A website allows for easy donations, volunteer sign-ups and event promotion.

Information Sharing: Educational institutions, research organisations and government bodies use websites to share knowledge, policies and updates.

Q5. What are web standards and why are they important for web design? How do they contribute to compatibility and accessibility across different platforms?

Web standards are set of rules and guidelines that ensure websites and web applications are developed consistently and function reliably across different devices, browsers and platforms. They are established and maintained by international organisations like the World Wide Web Consortium (W3C) to promote a unified approach to web-development.

Importance of Web-Design

- i. Ensures Consistency: Aligns all design elements, such as colours, fonts, layouts with the brand's message.
- ii. Improves user Experience
Helps users navigate the site intuitively.
- iii. Strengthens Brand Identity
Creates a memorable and recognizable online presence.
- iv. Enhances Communication:
Ensures the website conveys the intended message clearly and effectively.

* Accessibility

Governed by WCAG (Web Content Accessibility Guidelines) to ensure web content is accessible to users with disabilities.

Levels: A, AA, AAA with AA being the most commonly adopted standards.

Q.No.

PART 2

Q1. What is HTML? Describe the basic structure of HTML document with suitable example

HTML is the Standard Language used to create and structure web pages. It defines the content of a webpage using tags and elements that instruct web browsers on how to display text, images, links etc

Basic structure of an HTML Document

- ① `<!DOCTYPE html>` Declares the document type and HTML version.
- ② `<html>` The root element that contains all the HTML document
- ③ `<head>` Holds metadata such as the title, character encoding and links to stylesheets
- ④ `<title>` defines the title of webpages
- ⑤ `<body>` contains all visible content like texts, images, links and forms

eg: `<!DOCTYPE html>`

`<html>` SANDIP INSTITUTE OF TECHNOLOGY & RESEARCH CENTRE

`<head>`

`<title>` The basic building blocks of HTML `</title>`

`</head>`

`<body>`

`<h2>` The Building Blocks `</h2>`

`<p>` This is paragraph tag `</p>`

`</body>`

`</html>`

32 List and Explain five important HTML tags with examples?

① `<h1>` to `<h6>` → Heading tags

Defines headings in a webpage

eg: `<h1> Main heading </h1>`

`<h2> Subheading </h2>`

`<h3> Section title </h3>`

② `<p>` Paragraph Tag

Defines a block of text as paragraph

ex `<p> This is paragraph </p>`

③ `<a>` → Anchor Tag - Hyperlinks

Create links to other pages, websites or sections within the same page

eg: ` Visit example `

④ `` → Image Tag

Embeds an image in a webpage

eg: ``

⑤ `<Table>` Table Tag

Creates structured table or data

eg: `<table border = "1" >`

`<tr >`

`<th> Name </th>`

`<th> Age </th>`

`</tr >`

`</table >`

Q.No.	Cr.-1	Cr.-2	Cr.-3	Cr.-4

Q.No.

Q3. What are attributes in HTML? Explain their purpose with example.
Attributes in HTML are additional properties that provides extra information about an element

① href → defines the URL for a hyperlink

eg ``

② src → specifies the file path of an image

eg → ``

③ alt → Provides a text description for an image

ex: ``

④ Style: Add CSS directly to an element

eg: `<p style = "color: pink" </p>`

⑤ target - specifies how a link should open

ex: ``

* PURPOSE OF ATTRIBUTES

① Modify the behaviour or appearance of an element

② Provide additional information

③ Improve accessibility and SEO.

④ Enable interaction with JS and CSS.