EXPERIMENT 6

(ANALOGUE CLOCK)

- **Project Team (BATCH B – GROUP 3):**
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Overview: These are webpages constituting the following functionalities:

The front-end will show the Analog Clock (Wall-Clock)

Once completed, the clock shall display a working analogue time in the user's local time zone.

GITHUB LINK FOR THE EXPERIMENT :

https://github.com/yashwik/analog_clock

1) Purpose:

To provide the user with accurate time of the Time Zone they are situated in using an Analog clock display UI.

Displays Date and Time alongside.

2) Information Architecture/Content Structure:

- Content Types:
    i. Analog Clock display using SVG shapes
    ii. Date and Time Display

3) Software/Frameworks/Languages Used:

HTML:

HTML (HyperText Markup Language) is the most basic building block of the Web. It defines the meaning and structure of web content. Other technologies besides HTML are generally used to describe a web page's appearance/presentation (CSS) or functionality/behavior (JavaScript).

Hypertext" refers to links that connect web pages to one another, either within a single website or between websites. Links are a fundamental aspect of the Web. By uploading content to the Internet and linking it to pages created by other people, you become an active participant in the World Wide Web.

HTML uses "markup" to annotate text, images, and other content for display in a Web browser. HTML markup includes special "elements" such as <head>, <title>, <body>, <header>, <footer>, <article>, <section>, <p>, <div>, <span>, <img>, <aside>, <audio>, <canvas>, <datalist>, <details>, <embed>, <nav>, <output>, <progress>, <video>, <ul>, <ol>, <li> and many others.

CSS:

Cascading Style Sheets (CSS) is a stylesheet language used to describe the presentation of a document written in HTML or XML. CSS describes how elements should be rendered on screen, on paper, in speech, or on other media.

CSS helps Web developers create a uniform look across several pages of a Web site. Instead of defining the style of each table and each block of text within a page's HTML, commonly used styles need to be defined only once in a CSS document. Once the style is defined in cascading style sheet, it can be used by any page that references the

CSS file. Plus, CSS makes it easy to change styles across several pages at once.

JavaScript:

JavaScript (JS) is a lightweight, interpreted, or just-in-time compiled programming language with first-class functions. While it is most well-known as the scripting language for Web pages, many non-browser environments also use it.

JavaScript is a prototype-based, multi-paradigm, single-threaded, dynamic language, supporting object-oriented, imperative, and declarative (e.g. functional programming) styles.

Alongside HTML and CSS, JavaScript is one of the core technologies of the World Wide Web. JavaScript enables interactive web pages and is an essential part of web applications.

4) Key Features and Functionalities:

Scalable Vector Graphics (SVG) in HTML :

SVG stands for **S**calable **V**ector **G**raphics and it is a language for describing 2D-graphics and graphical applications in XML and the XML is then rendered by an SVG viewer.

SVG is mostly useful for vector type diagrams like Pie charts, Two-dimensional graphs in an X, Y coordinate system etc.

SVG allows three types of graphic objects: vector graphic shapes such as paths and outlines consisting of straight lines and curves, bitmap images, and text. Graphical objects can be grouped, styled, transformed and composited into previously rendered objects. The feature set includes nested transformations, clipping paths, alpha masks, filter effects and template objects.

CSS property: -webkit-transform-origin

The -webkit-transform-origin property establishes the origin for transforms applied to an element with respect to its border box.

The values may be expressed either as a CSS length unit or as a percentage of the element's size. For example, a value of 50% 50% causes transformations to occur around the element's center. Changing the origin to 100% 0% causes transformation to occur around the top-right corner of the element. The default value is 50% 50%.

CSS property: -webkit-keyframes

A @-webkit-keyframes block contains rule sets called keyframes. A keyframe defines the style that will be applied for that moment within the animation. The animation engine will smoothly interpolate style between the keyframes.

5) Functionality Description:

The Webpage will display an analogue clock with the date and time according to the local time zone of the user.
On opening the webpage, The date and time will be displayed in Helvetica font below a live analogue clock, which conveys to the user, the current date in standard Indian format of Day, Month, Year as well as will give the Time accurately via text and through usage of SVG shapes in HTML, an image themed Analogue clock has been designed.

6) Output:

06 : 04 PM
8 April 2020