

Part A

1. Program to Design LOG IN Form in Html.

HTML - Hypertext Markup Language. It is standard markup or tag-based language used to design and display documents in a web browser.

Forms

- The most common way for user to communicate information from a web browser to the web server is through a form.
- HTML provides tags to generate the commonly used objects on a screen form. These objects are called controls and widgets.
- All control tags are inline. Most controls are used to gather information from user in the form of either text or button selections.
- Each control can have value simply given through user input. The values of all of controls in form are called form data.
- Every form requires Submit button, when user clicks it the form data is encoded and sent to the web server for processing.

The <form> tag

- All of the components of a form appear in the content of <form> tag which is block tag, it can have several attributes, only one of which action is required.
- The action attribute specifies the URL of application on web server that is to be called when the user clicks the Submit button.
- The method attribute specifies one of two - get or post method which is used to pass the form data to server. (get is default)
- The get carries request parameter appended in URL called as query string and post carries request parameters in message body (which makes it secured).

2. Program for Creating animation of “Bouncing Cloud” using HTML and CSS

- **CSS** is a style sheet language used for describing the look and formatting of a document written in a markup language.
- It is designed to enable the separation of document content from document presentation.
- A style sheet consists of a list of rules. Each rule or rule-set consists of one or more selectors, and a declaration block.
- Style sheets allow you to impose a standard style on a whole document, or even a whole collection of documents.
- HTML style sheets are called cascading style sheets because they can be defined at three different levels to specify the style of a document. Lower level style sheets can override higher level style sheets

3. Program to demonstrate a keyframe animation.

- An animation is nothing more than a visualization of change.
- It is the process of creating a scene through the rapid display of pictures and motions.
- The start and end states are the reference points so that we can compare what has changed during an animation.
- Interpolation means the intermediate states are generated between the start and end states over a period of time.

Steps to begin Animation

- The first step is to set the animation property for the element
- The second step is to define the keyframes that specify exactly what gets animated.
- We must specify CSS styles inside the @keyframes rule, so that the animation will gradually change from the current style to the new style at certain times.
- @keyframes declaration is followed by the name of our animation. On the inside, it contains style rules (aka the actual keyframes) whose selectors are either percentage values or the keywords from and to . These values will get applied when the rule becomes active.
- The name we give to our @keyframes rule acts as an identifier, the animation property uses to know where the keyframes are.

4. Program to demonstrate a Font style, font weight, and font size properties using CSS.

Font Size

The font-size property sets the size of a font.

CSS Syntax

```
font-size:medium|xx-small|x-small|small|large|x-large|xx-large|smaller|larger;
```

Font Weight

The font-weight property sets how thick or thin characters in text should be displayed.

CSS Syntax

```
font-weight:normal|bold|bolder|lighter|number|initial|inherit;
```

Font Style

The font-style property specifies the font style for a text

CSS Syntax

```
font-style: normal|italic|oblique|initial|inherit;
```

5. Program to demonstrate multiple animations.

Properties

- animation-name: declares the name of the @keyframes at-rule to manipulate.
- animation-duration: the length of time it takes for an animation to complete one cycle.
- animation-timing-function: establishes preset acceleration curves such as ease or linear.
- animation-delay: the time between the element being loaded and the start of the animation sequence.
- animation-direction: sets the direction of the animation after the cycle.
- animation-iteration-count: the number of times the animation should be performed.
- animation-fill-mode: sets which values are applied before/after the animation.

Declaring Multiple Animations:

- To declare multiple animations in the same animation property, simply comma separate each of your animations in the shorthand declaration.

```
#multiStyle {  
  animation : first 2s infinite,  
              second 1s infinite,  
              third 5s infinite;  
}
```

6. Program to use table tag to format web page. Also create the Time Table of your class using table tag.

Table

- Table is a matrix of rows and columns, in which intersection of row and column is called cell. The cells in top row often contain column labels.
- Table provides a highly reliable way of presenting many kinds of information.
- Table is specified as content of block tag <table>. Common attribute is border.
- There are two lines in tables, line around the outside of the whole table is called border and lines that separate the cells are called rules.
- A <caption> tag is used to give title to a table.
- The cells of table are specified one row at a time. Each row is specified with a row tag <tr>.
- Within each row, row label is specified by table heading tag <th>
- Each data cell of a row is specified with the table data tag <td>

Rowspan and Colspan attributes

- Multiple-level labels can be specified with the rowspan and colspan attribute.
- The colspan attribute specification in a table header or table data tag tells the browser to make the cell as wide as specified number of rows below in the table.

The align attribute

- The placement of content within a table cell can be specified with align attribute.
- The align attribute has possible values left, right and center.

7. Program to Demonstrate Longhand properties in CSS.

Longhand properties → specifying the properties separately

Example:

```
div {  
    animation-name: bobble;  
    animation-duration: 2s;  
    animation-timing-function: ease-in;  
    animation-iteration-count: infinite;  
}
```

- Using longhand properties, we can set different transition properties separately one by one.

example:

```
#hexagon  
{  
    transition-property: transform;  
    transition-duration: 0.1s;  
}
```

8. Program to Demonstrate shorthand properties in CSS.

Shorthand properties are CSS properties that let you set the values of multiple other CSS properties simultaneously. Using a shorthand property, you can write more concise (and often more readable) style sheets, saving time and energy.

The CSS specification defines shorthand properties to group the definition of common properties acting on the same theme. For instance, the CSS background property is a shorthand property that's able to define the values of background-color, background-image, background-repeat, and background-position. Similarly, the most common font-related properties can be defined using the shorthand font, and the different margins around a box can be defined using the margin shorthand.

Consider a background with the following properties

```
background-color: #000;  
background-image: url(images/bg.gif);  
background-repeat: no-repeat;  
background-position: left top;
```

These four declarations can be shortened to just one:

```
background: #000 url(images/bg.gif) no-repeat left top;
```


9. Program to Demonstrate animation in reverse direction or alternate cycles.

The animation-direction property defines whether an animation should be played forwards, backwards or in alternate cycles.

Syntax

```
animation-direction: normal|reverse|alternate|alternate-  
reverse|initial|inherit;
```

Value	Description
normal	Default value. The animation is played as normal (forwards)
reverse	The animation is played in reverse direction (backwards)
alternate	The animation is played forwards first, then backwards
alternate-reverse	The animation is played backwards first, then forwards
initial	Sets this property to its default value
inherit	Inherits this property from its parent element.

10. Write JavaScript Program to show light ON/OFF Demo

- JavaScript is interpreted programming language with object-oriented capabilities.
- It is the language for the web and can update and change both HTML & CSS.
- It is lightweight and most commonly used to make interactive and dynamic web pages.
- JavaScript can be divided into three parts: core, client side & server side
 - Core: It includes operators, expressions, statements & subprograms.
 - Client side: collection of objects that support browser control & user interaction.
 - Server side: collection of objects that are useful or web servers.
- JavaScript can be embedded directly or indirectly in XHTML document.
- Scripts can appear directly as content of <script> tag. The type attribute should be set to “text/javascript”
- Script can also appear as external file using the src attribute whose value is name of file.
`<script type = “text/javascript” src=“file.js”></script>`