PACKETPREP - CSS NOTES:

- CSS stands for Cascading Style Sheets.
- It is used to stylize the web page.
- CSS3 is the latest version.
- It describes how the HTML elements should be displayed.
- Syntax for CSS:
  selector {
        property: value;

  }

- A selector can be an HTML tag name or Class name or Id name;
- We can declare CSS for HTML in 3 ways.
  - ➢ Inline
  - ➢ Internal
  - ➢ External
- Inline CSS is used to style the individual HTML elements. To add inline CSS to an HTML element we need to use style attribute where we can declare CSS for the element.
  Ex: <h1 style="color:blue">Heading</h1>
- Internal CSS is used to style multiple HTML elements at the same time. We can add Internal CSS using <style> tag in the <head> section of our HTML.
  Ex: <!DOCTYPE html>
     <html>
       <head>
          <style>
             h1{
                 color:blue;
             }
          </style>
       </head>
       <body>
          <h1>Heading</h1>
       </body>
     </html>
- External stylesheet is used to add style to multiple web pages of a website at the same time. We can add external stylesheet using <link> tag.

```
Ex: <!DOCTYPE html>
    <html>
      <head>
            <link rel="stylesheet" href="style.css">

      </head>

      <body>

            <h1>Heading</h1>

      </body>

    </html>
```
  ➢ style.css (external stylesheet)
    h1{
          color:blue;
    }
- Extension used to save the stylesheet is " **.css** "
- /*--------comment-----------*/ is used to add comments to the stylesheet. It is used for readability of the code. Browser ignores the comments and it won't display in the website.

Basic CSS Properties:
- Following are the basic css properties:
  ➢ color
  ➢ background-color
  ➢ border
  ➢ margin
  ➢ padding
  ➢ height
  ➢ width
  ➢ text-ailgn
  ➢ font-size, font-family

CSS Color:
- There are five ways to define color to an HTML element
  ➢ Using Color Name
  ➢ Using RGB
  ➢ Using HEX
  ➢ Using RGBA
  ➢ Using HSLA
- Color property is used to change the color of text of an HTML element.
- "background-color" is used to change the background color of an element.
- We can define CSS color using HEX values.

Ex: h1{

    color: #ff6347;

}

- Background properties are used to display background elements for the HTML element.
- List of background properties:
  - ➢ background-color
  - ➢ background-image
  - ➢ background-position
  - ➢ background-repeat
  - ➢ background-size
  - ➢ background-attachment
  - ➢ background-clip
  - ➢ background (Shorthand property)
- **background-color** is used to change the background color of the HTML element.
- **Background-image** property is used to place an image behind the HTML element. Image can be added as a background using **_"url()"._**

  Ex: p{

      background-image: url("https://behance.com/images/child.jpg");

  }
- Background-position is used to adjust the image-position. By default, image positioned is at top left corner.

  Background-position values:
  - ➢ left top
  - ➢ left center
  - ➢ left bottom
  - ➢ right top
  - ➢ right center
  - ➢ right bottom
  - ➢ center top
  - ➢ center center
  - ➢ center bottom

  Ex: p{

      background-image: url("https://behance.com/images/child.jpg");
      background-postion: center center;

  }

- **Background-repeat** property used along with background-image to display the image horizontally or vertically.

By default, background-image repeats the image both horizontally and vertically.

To repeat the image in horizontal direction, **repeat-x** value defined to background-repeat property. Similarly, to repeat the image in vertical direction **repeat-y** is used.

Ex: p{
      background-image: url("https://behance.com/images/child.jpg");
      background-repeat: repeat-x;
      background-repeat: repeat-y;
      background-repeat: no-repeat;
  }

no-repeat is used when we need to show the bg-image only once.
Ex: : p{
      background-image: url("https://behance.com/images/child.jpg");
      background-repeat: no-repeat;
  }
- Background-size is used to set the size of an image.
  Background-size values:
  - ➢ auto
  - ➢ cover
  - ➢ contain
  - ➢ width height

auto sets the default image size.

Cover stretches the image to fit into the element container.

Contain fits the image around the element.

Width and height resizes the image.

- Background is the shorthand property is used to declare all background properties.
  Ex: p{
    background: blue url("https://pixabay.com/photos/tree-sunset-clouds-sky-silhouette-736885/") no-repeat center center;
  }
  - ➢ Order to define background property
    background: background-color background-image background-repeat background-size;

- **" CSS Box Model** is a module of CSS that defines the rectangular boxes—including their padding and margin—that are generated for elements and laid out according to the visual formatting model. " – definition from MDN Web Docs.
- **CSS Box Model consists of four things:**
  - Content
  - Padding
  - Border
  - Margin
- Content is nothing but an HTML element.

- Borders are used to style the HTML element's border.
- Border is the shorthand property to define the border.
  Ex: a {

  border: 5px solid #00000;

  }
  Order to define border:
  border: border-width border-style border-color
- border-width defines border width of an HTML element.
- border-style defines how the border should looks like.
  border-style values:
  - none
  - hidden
  - dashed
  - solid
  - dotted
  - double
- border-color is used to specify color to the border.
- Border can apply in four directions: left, right, top, bottom

- CSS Margin is used to create space around the border of an element.
- Margin have four values:
  - Top
  - Bottom
  - Left
  - Right
- We can declare margin in 3 ways
  p{

  margin:10px;

margin: 10px 10px 10px;
        margin: 10px 10px;
    }
    Margin:10px creates a space of 10px in four directions.
    Margin: 10px 10px 10px creates space in top right&left bottom direction.
    Margin: 10px 10px creates space in top&bottom left&right direction.
- Auto and % also used to define margins.

CSS Padding:
- CSS padding is used to create space around the element inside the border.
- padding has four values:
  - Top
  - Bottom
  - Left
  - Right
- We can declare padding in 3 ways
    p{
        margin:10px;
        margin: 10px 10px 10px;
        margin: 10px 10px;
    }
    padding :10px creates a space of 10px in four directions.
    padding : 10px 10px 10px creates space in top right&left bottom direction.
    padding: 10px 10px creates space in top&bottom left&right direction.
- Auto and % also used to define padding.

CSS Font:
- Following are the properties of CSS fonts:
  - Font-family
  - Font-style
  - Font-weight
  - Font-size
  - Font-variant
- Font-family specifies which kind of font is used to the text.
- Font-style is used to specify the style of the text
- Following are the generally used font-styles.
  - Normal
  - Italic

- ➢ Oblique
- Font-weight is used to show the the font in bold or normal style.
- Font-size sets the size for the text.
- Font shorthand property is used to declare all font property values using single font property.

    Font: italic small-caps bold Arial, Sans-serif;

CSS Position:

- There are 5 CSS positions we can use to place the elements according to our requirements:
  - ➢ Static
  - ➢ Sticky
  - ➢ Fixed
  - ➢ Relative
  - ➢ Absolute
- Static is the default property used by HTML elements when they declared.
- Fixed is used to position the elements relative to browser window.
- Sticky is used to stick the elements at a particular place.
- Relative is used to place the elements relative to its normal position. You can change its position by taking reference to its normal position.
- Absolute property used to position the element relative to its parent element.
- Initial and inherit are also CSS position properties where initial is used as default position for an element and inherit takes the position from its parent element.

CSS Units:

- px, em, rem, and % are the general CSS units used to define CSS properties.
- rem and em are equivalent to 16px.
- rem inherits the HTML root font size i.e., it's not dependent on it's parent element size. But em is dependent on it's parent element. So, if parent element have the font-size of 18px and child element have the font size of 1em, the child inherits the font-size of its parent element i.e., 1em = 18px;