**1) What is bootstrap? Advantages and disadvantages?**

ANS: It is an HTML, CSS, JavaScript framework that you can use as basis for creating a web sites or web applications.

**Common CSS:**

* Print media CSS : visible-print-block, visible-print-inline, hidden-print
* Typography: Font, line-height, and color for body text, headings, and more.
* Tables: .table component with basic values, each used across all table variations.
* Forms : Focus,
* Buttons: btn,btn-default , btn-success, btn-info, btn-warning. For each of Bootstrap's buttons, define text, background and border color.
* Responsive utilities : Media queries breakpoints

**Components:**

* Glyphicons : Icons
* Navs : .nav, .nav-tabs are mostly used tabs
* Navbar : navbar , navbar-default used for responsive menu
* Breadcrumbs : using .breadcrumb class
* Paginations : using .pagination class
* Alerts: Define alert colors, border radius, and padding.
* Progress bar :
* Pager
* Labels
* Jumbotron
* Thumbnails
* Media items
* List groups
* Panels
* Responsive embed
* Wells : Border-radius is example

**JavaScript Components:**

* Dropdowns
* Tooltips
* Popovers
* Modals
* Carousel
* Component animations (for JS)

Normalize CSS

Mobile first approach

**ADVANTAGES:**

* works in all modern browsers
* "mobile first" approach in [version 3](http://getbootstrap.com/css/)
* normalizes many little CSS annoyances
* lightweight
* customizable
* encourages use of LESS CSS ([http://lesscss.org](http://lesscss.org/))
* integrated with jQuery (some might consider this a negative)
* comes with some jQuery plugins
* some jQuery plugins now offer Bootstrap theming

**What’s new in BOOTSTRAP 3 and removed in 3.0?**

Glyphicons, Jumbotron, .col-xs-\*, Responsive utility classes (.visible-lg .hidden-lg), Offsets, Push, Pull, Input height sizes, Form controls, Button group sizes, Responsive images, Modal, Thumbnail image, Alert links, Panels, List groups, Contextual table rows (.success .danger .warning .active .info).

Fluid row, Controls wrapper, Form actions, .form-search

**CSS 3**

**CSS Introduction:**

* CSS stands for Cascading Style Sheets
* CSS is used to define styles for your web pages, including the design, layout and variations in display for different devices and screen sizes.
* CSS saves a lot of work. It can control the layout of multiple web pages all at once
* External style sheets are stored in CSS files

**CSS Syntax:**

* Selector {property: value ;}
* Selectors: ID, CLASS, All html elements are selectors, Pseudo elements
* Pseudo elements: a:link{default vale}, a:hover{cursor on hover}, a:visited{page alrady visisted}, a:active{present page} ETC……

**CSS Properties:**

* font-family:verdina;
* font-size:20px;
* font-weight:lighter/normal/bold/bolder/100/200/300;
* font-style:italic/normal;
* color:#fff;
* width:20px;
* height:40px;
* min-width:200px;
* max-width:400px;
* max-height:400px;
* min-height:20px;
* line-height:40px;
* border:1px solid #e4e4e4;
* border-top-color:#ee4e4;
* border-style:solid, dashed, dotted, double, groove, none, outset, ridge;
* border-width:thin, medium, thick, length;
* background-color:#e4e4e4;
* background-image:url(/path of the image);
* background:url(/path of the image) no-repeat 20px fixed ;
* bqackground-repeat:no-repeat/repeat/repeat-x/repeat-y;
* background-attachement:fixed/scroll;
* background-position:20px 20px;
* float:left;
* float:right;
* float:none;
* clear:none/both/left/right;
* text-align:center/left/right;
* list-style-type:none/disc/ circle/ square/lower-roman/upper-roman/lower-alpha/upper-alpha/;
* list-style-image:url(path\_to\_image.gif, jpg or png);
* display:none;
* display:block;
* display:inline;
* display:inline-block;
* text-decoration:none/underline/overline/line through/blink;
* text-indent:10px;
* margin:top right bottom left;
* padding:top right bottom left;
* margin:0 auto; (o means top and bottom, auto means left and right and it will display center )
* letter-spacing:5px
* word-spacing:5px
* position:static,absolute,relative,fixed;
* top,left,right,bottom
* zindex:
* visibility:hidden,visible;

**CSS3 Properties:**

* border-radius:10px ; It will give rounded corners to element.
* -webkit-border-radius:10px;-moz-border-radius:10px;-o-border-radius:10px; It will suppost for all chrome brosers as well mozilla browsers
* using PIE.htc border-radius will support for IE6-8
* background-repeat:no-repeat,repeat; background-size:x y; Mutltiple image using comma, background-position:right,top;
* background:linear-gradient;
* text-shadow: 10px 20px 30px red; it used for applying shadow to the text. (h-shadow v-shadow blur-radius color;)
* box-shadow:10px 20px 30px green; it used for appplying shadow to the particular element. (h-shadow v-shadow blur-radius color;)
* border-image:path of the image; it used for applying image to the border.
* transform: CSS3 transforms allow you to translate, rotate, scale, and skew elements.
* transition:width 2s;CSS3 transitions allows you to change property values smoothly (from one value to another), over a given duration.
* Animation : animation-name:class; animation-duration:class 4s, @keyfreames class{from{} to{}}
* @font-face{} : used for display custom font in web page.
* Sprite : sprite is a collection of images put into a single image.

**Media queries breakpoints:**

* 320px to 479px 🡪 Mobile Devices
* @media only screen and (min-width: 320px) and (orientation: portrait) { }
* 480px to 639 🡪Tablet 480px to 639px
* 640px to 767 🡪Tablet 640px to 767px
* 768px to 939px 🡪Tablet 768px to 950px
* 768px to 1024 🡪 Tablet landscape

**LESS and SASS are CSS preprocessors.**

It also saves a significant amount of time by allowing you to reuse pre-defined properties, rather than writing them over and over again.

Common features:

1) Nesting

2) Import another styles (@import 'reset';)

3) Variables

4) Mixins

5) Extend/Inheritance (You can call other class in new class ex: @extend .message;)

6) Operators (math operators like)

It has small minor difference listed below.

|  |  |
| --- | --- |
| LESS | SASS |
| Leaner CSS | Syntactically Awesome Stylesheets |
| Sass is coded in Ruby and processed in server-side | Less is a JavaScript library and processed client-side |
| Math: Less doesn’t allows you to work with “unknown” units | Math: Sass allows you to work with “unknown” units |
| LESS Inheritance not allows selectors to inherit the properties of other selectors. | Sass expands on the concept of inheritance with *selector inheritance*, which groups selectors with identical values. |
| Variables  @mainLessColor: #ff0087;  p {color: @mainLessColor;} | Variables  $mainSassColor: #ff0087;  p {color: $mainSassColor;} |
|  |  |