***HTML QUESTIONS AND ANSWERS***

1) What is HTML? Write basic structure of an HTML template.

HTML is called Hypertext Markup Language.HTML is used for webpage designing.All HTML documents must start with a document type declaration: <!DOCTYPE html>.

The HTML document itself begins with <html> and ends with </html>.The visible part of the HTML document is between <body> and </body>.

structure:-

<!DOCTYPE html>.

<html>

<head>

<title></title>

<body>

</head>

</body>

</html>

2) Define HTML elements and tags. Discuss the major differences.

Html tag:- An HTML element usually consists of a start  tag and end tag with the content inserted in between. HTML documents contain tags, but do not contain the elements. The elements are only generated after the parsing step, from these tags. Tags are the starting and ending parts of an HTML element. They begin with < symbol and end with > symbol. Whatever written inside < and > are called tags. HTML tags are almost like keywords where every single tag has unique meaning.

Html elements:- Elements enclose the contents in between the tags. They consist of some kind of structure or expression. It generally consists of a start tag, content and an end tag. HTML elements specifies the general content.

3. Define attributes in HTML with examples?

* All HTML elements can have attributes
* Attributes provide additional information about elements
* Attributes are always specified in the start tag
* Attributes usually come in name/value pairs like: name="value"

a)The <img> tag should also contain the width and height attributes which specifies the width and height of images in pixels.

<img src=”nature.jpeg” width=”500” height=”600”>

b) The tag <a> defines hyperlink. The  attribute href specifies the URL of the page the link goes to:

<a href=”https://www.w3schools.com”>Visit w3schools</a>

c) The tag <img> is used to embed an image in an HTML page. The  attribute src specifies the path to the image to be displayed:

4. What are the HTML tags used to display the data in the tabular form?

HTML table tag is used to display data in tabular form (row \* column). There can be many columns in a row.We can create a table to display data in tabular form, using <table> element, with the help of <tr> , <td>, and <th> elements.In Each table, table row is defined by <tr> tag, table header is defined by <th>, and table data is defined by <td> tags. HTML tables are used to manage the layout of the page e.g. header section, navigation bar, body content, footer section etc.

|  |  |
| --- | --- |
| <table> | It defines a table. |
| <tr> | It defines a row in a table. |
| <th> | It defines a header cell in a table. |
| <td> | It defines a cell in a table. |
| <caption> | It defines the table caption. |
| <colgroup> | It specifies a group of one or more columns in a table for formatting. |
| <col> | It is used with <colgroup> element to specify column properties for each column. |
| <tbody> | It is used to group the body content in a table. |
| <thead> | It is used to group the header content in a table. |
| <tfooter> | It is used to group the footer content in a table. |

5)What is an Anchor tag in HTML when it is used?

The  tag <a> defines a hyperlink, which is used to link from one page to another.The most important attribute of the  element <a> is the href attribute, which indicates the link's destination.

6. What are some of the common lists that can be used when designing a page?

Lists are used to group together related pieces of information so they are clearly associated with each other and easy to read. In modern web development, lists are workhorse elements, frequently used for navigation as well as general content. Lists are good from a structural point of view as they help create a well-structured, more accessible, easy-to-maintain document. They are also useful because they provide specialized elements to which you can attach CSS styles. Finally, semantically correct lists help visitors read your web site, and they simplify maintenance when your pages need to be updated.

There are three list types in HTML:

• unordered list — used to group a set of related items in no particular order

• ordered list — used to group a set of related items in a specific order

• description list — used to display name/value pairs such as terms and definitions

Each list type has a specific purpose and meaning in a web page.

7. Define forms in HTML and create a simple form?

An HTML form is used to collect user input. The user input is most often sent to a server for processing.HTML Forms are required, when you want to collect some data from the site visitor. For example, during user registration you would like to collect information such as name, email address, credit card, etc.A form will take input from the site visitor and then will post it to a back-end application such as CGI, ASP Script or PHP script etc. The back-end application will perform required processing on the passed data based on defined business logic inside the application. There are various form elements available like text fields, textarea fields, drop-down menus, radio buttons, checkboxes, etc. The HTML **<form>** tag is used to create an HTML form and it has following syntax –

<form action = "Script URL" method = "GET|POST">

form elements like input, textarea etc.

</form>

**Simple form :-**

<!DOCTYPE html>

<html>

<body>

<h2>HTML Forms</h2>

<form action="/action\_page.php">

<label for="fname">First name:</label><br>

<input type="text" id="fname" name="fname" value="kiran"><br>

<label for="lname">Last name:</label><br>

<input type="text" id="lname" name="lname" value="lal"><br><br>

<input type="submit" value="Submit">

</form>

</body>

</html>

8. What is semantic HTML. Explain with example.

A semantic element clearly describes its meaning to both the browser and the developer. Examples of semantic elements: <form>, <table>, and <article> - Clearly defines its content.Many web sites contain HTML code like: <div id="nav"> <div class="header"> <div id="footer"> to indicate navigation, header, and footer.In HTML there are some semantic elements that can be used to define different parts of a web page:

* <article>
* <aside>
* <details>
* <figcaption>
* <figure>
* <footer>
* <header>
* <main>
* <mark>
* <nav>
* <section>
* <summary>
* <time>

9. What is a marquee?

An HTML marquee is a scrolling piece of text displayed either horizontally across or vertically down your webpage depending on the settings. This is created by using HTML <marquees> tag.

10. What is the use of an iframe tag?

You can define an inline frame with HTML tag **<iframe>**. The <iframe> tag is not somehow related to <frameset> tag, instead, it can appear anywhere in your document. The <iframe> tag defines a rectangular region within the document in which the browser can display a separate document, including scrollbars and borders. An inline frame is used to embed another document within the current HTML document. The **src** attribute is used to specify the URL of the document that occupies the inline frame.

11. What is Cell Spacing and Cell Padding?

Cellpspacing is another important attribute for table tag in HTML. As cellpadding provides space inside the cells. Oppositely cellspacing provides space outside the cells. For example if in a single row you have two cells and you have given 5px cellspacing to table. Both cells will have spacing top, right, bottom and left 5px which will make 10px spacing between two cells as both have 5px spacing on left and right.

Cellpadding is used to define the distance or space inside the cell. If you have some content inside a cell the cell will leave space on each side top, left, right, bottom that’s cellpadding. Cellpadding is an important feature to format and make table cells good. Default value of cellpadding is zero 0 which you can change by adding attribute cellpadding=”5px” in table tag. What is the cell? Cell is actually <td></td> and for headings its <th></th> while <tr></tr> is a table row which contains the cells. So the cellpadding only works to give space inside the cells.

12. What is the difference between DIV and SPAN in HTML?

Both <div> and <span> is used to define parts of a web page. The <span> element shows the inline portion of a document. The <div> elements show a block-level portion of a document.A div is a block-level element and a span is an inline element.The div should be used to wrap sections of a document, while use spans to wrap small portions of text, images, etc.The <div> element is used while creating CSS based layouts in html, whereas <span> element is used to stylize texts.

13. Why is the Embed Tag Used in HTML?

The <embed> tag in HTML is used for embedding external application which is generally multimedia content like audio or video into an HTML document. It is used as a container for embedding plug-ins such as flash animations. This tag is a new tag in HTML 5 and it requires only starting tag.

Syntax:

<embed attributes>

Attributes: The <embed> tag contains four attributes which are discussed below:

height: This attribute contains the attribute value in pixel. It is used to specify the height of the embedded content.

src: It is used to hold the URL. It is used to specify the web address of the embedded content.

width: The width value are set in pixels. It is used to specify the width of embedded content.

type: It contains the media\_type content. It is used to specify the media type of the embedded content.

***CSS QUESTIONS AND ANSWERS***

***1***Define CSS and state the major difference between HTML and CSS?

CSS stands for Cascading Style Sheets and it is used to style web documents. It is used to provide the background color and is also used for styling. It can also be used to style the font and change its size. We can also style many different web pages with the same specifications by the help of CSS. CSS is also recommended by World Wide Web Consortium (W3C). It can also be used along with HTML and Java script to design web pages.

1.HTML is used to define a structure of a web page.CSS is used to style the web pages by using different styling features.

2.It consists of tags inside which text is enclosed.CSS consists of selectors and declaration blocks.

3.HTML doesn’t have further types.CSS can be internal or external depending upon the requirement.

4.We cannot use HTML inside a CSS sheet.We can use CSS inside a HTML document.

5.HTML is not used for presentation and visualization.CSS is used for presentation and visualization.

6.HTML has comparatively less backup and support.CSS has comparatively higher backup and support.

2. How can you integrate CSS on a web page?

CSS can be integrated in threeways:

Inline: Style attribute can be used to have CSS applied HTML elements.

Embedded: The Head element can have a Style element within which the code can be placed.

Linked/ Imported: CSS can be placed in an external file and linked via a link element.

3. What is Embedded Style Sheet? List the advantages.

Embedded style sheets refer to when you embed style sheet information into an HTML document using the <style> element. You do this by embedding the style sheet information within <style></style> tags in the head of your document. Embedded style sheets are suited for documents with unique design requirements. If the styles need to be applied across muliple documents, you should link to an external style sheet instead of using an embedded style sheet.

Advantages:-

Multiple tag types can be created in a single document.

Styles, in complex situations, can be applied by using Selector and Grouping methods.

Extra download is unnecessary.

4. What is a CSS selector? Explain contextual selectors?

CSS selectors are used to find (or select) the HTML elements you want to style. Contextual selectors in CSS allow you to specify different styles for different parts of your document. You can assign styles directly to specific HTML tags, or you can create independent classes and assign them to tags in the HTML.

5. What is the RGB stream?

RGB color values are supported in all browsers. An RGB color value is specified with: rgb(red, green, blue).Each parameter (red, green, and blue) defines the intensity of the color as an integer between 0 and255.For example, rgb(0, 0, 255) is rendered as blue, because the blue parameter is set to its highest value (255) and the others are set to 0.

Example:-

<style>

div {

background-color: rgb(0, 191, 255);

color: rgb(255, 255, 255);

}

</style>

6. Explain the CSS Box Model and its different elements.

The CSS box model is essentially a box that wraps around every HTML element. It consists of: margins, borders, padding, and the actual content.

Explanation of the different parts:

Content - The content of the box, where text and images appear

Padding - Clears an area around the content. The padding is transparent

Border - A border that goes around the padding and content

Margin - Clears an area outside the border. The margin is transparent

The box model allows us to add a border around elements, and to define space between elements.

7. What is the property that is used for controlling image-scroll?

8. What is the use of CSS Opacity?

The opacity-level describes the transparency-level, where 1 is not transparent at all, 0.5 is 50% see-through, and 0 is completely transparent. When using the opacity property to add transparency to the background of an element, all of its child elements become transparent as well. This can make the text inside a fully transparent element hard to read.

9. What is RWD?

Responsive web design (RWD) is an approach to web design that makes web pages render well on a variety of devices and window or screen sizes from minimum to maximum display size. Recent work also considers the viewer proximity as part of the viewing context as an extension for RWD. Content, design and performance are necessary across all devices to ensure usability and satisfaction

10. What are the benefits of CSS sprites?

* Reduces the number of http requests

The main reason to use CSS sprites is to cut back on http requests. Every time a new visitor hits your site their browser will request each image from your server. If your home page loads up 35 different images that is 35 separate times the browser has to go back to the server and ask for one more thing.

* Improves SEO

This might seem strange to you but considering that google and other search engines are now ranking sites based on speed, every http request and kb matter. The faster your site performs, the higher search ranking you’ll receive.

* Reduces overall image size

In most cases, combining all of your reusable assets into one file will be smaller than if you sliced them individually. As I stated above, on the Copyblogger site we use an image sprite that has 35 separate images. Combined together the file size is approximately 74kb. Sliced and individually saved, the file size jumps to over 100k.

11. What is the float property of CSS?

The float CSS property places an element on the left or right side of its container, allowing text and inline elements to wrap around it. The element is removed from the normal flow of the page, though still remaining a part of the flow.

12. Explain the difference between visibility: hidden and display: none?

Both of the property is quite useful in CSS. The visibility: “hidden”; property is used to specify whether an element is visible or not in a web document but the hidden elements take up space in the web document. The visibility is a property in CSS that specifies the visibility behavior of an element and display: “none” property is used to specify whether an element is exist or not on the website.

Syntax:

Visibility property:

visibility: visible| hidden | collapse | initial | inherit;

Display property:

display: none | inline | block | inline-block;

So, the difference between display: “none” and visibility: “hidden” right from the name itself we can tell the difference as display: “none”;, completely gets rids of the tag, as it had never exists in the HTML page whereas visibility: “hidden” just makes the tag invisible it will still be on the HTML page occupying space it’s just invisible.

13. What is Block Formatting Context? How does it work?

A block formatting context is a part of a visual CSS rendering of a web page. It's the region in which the layout of block boxes occurs and in which floats interact with other elements.

A block formatting context is an HTML box that satisfies at least one of the following conditions:

* The value of float is not none
* The value of position is neither static nor relative
* The value of display is table-cell, table-caption, inline-block, flex, or inline-flex.
* The value of overflow is not visible.

A block formatting context can be explicitly triggered. So if we want to create a new block formatting context, we just need to add any one of the above mentioned CSS conditions to it.

For example, look at the following HTML:

<div class="container">

Some Content here

</div>

A new block formatting context can be created by adding any one of the necessary CSS conditions like overflow: scroll, overflow: hidden, display: flex, float: left, or display: table to the container.

14. What is the difference between a relative, fixed, absolute and statically positioned element?

The CSS position property defines, as the name says, how the element is positioned on the web page. There are several types of positioning: static, relative, absolute, fixed, sticky, initial, and inherit.

* **Static** - this is the default value, all elements are in order as they appear in the document.
* **Relative** - the element is positioned relative to its normal position.
* **Absolute** - the element is positioned absolutely to its first positioned parent.
* **Fixed** - the element is positioned related to the browser window.

***BOOTSTRAP QUESTIONS AND ANSWERS***

1. Define Bootstrap. List the features.

Bootstrap is a powerful front-end framework for faster and easier web development. It includes HTML and CSS based design templates for common user interface components like Typography, Forms, Buttons, Tables, Navigations, Dropdowns, Alerts, Modals, Tabs, Accordion, Carousel and many others as well as optional JavaScript extensions.

Main advantage of Bootstrap:

* It is very easy to use. Anybody having basic knowledge of HTML and CSS can use Bootstrap.
* It facilitates users to develop a responsive website.
* It is compatible with most of browsers like Chrome, Firefox, Internet Explorer, Safari and Opera etc.

Features

* Easy to Use
* Mobile-Friendly
* Customizable Bootstrap
* Simple Integration
* Pre-styled Components
* Responsive Features
* Browser Compatibility
* Great Grid System
* Extensive list of Components
* Bundled Javascript plugins
* Good Documentation
* Base Styling for most HTML Elements

2. Define the key components of Bootstrap

Bootstrap is one of the most popular CSS frameworks that provide free mobile-friendly HTML templates. Bootstrap provides dozens of reusable components below are some important Key components of Bootstrap

* Dropdown menus
* Navigation Bars
* Button Groups
* Labels
* Breadcrumbs
* Alerts & Progress Bars
* Pagination
* Typographic
* Glyphicons
* Jumbotron
* Media object and Wells

3. What do you understand by Bootstrap container and class loader?

In Bootstrap, container is used to set the content's margins dealing with the responsive behaviors of your layout. It contains the row elements and the row elements are the container of columns (known as grid system).The container class is used to create boxed content.

Bootstrap comes with three different containers:

* .container, which sets a max-width at each responsive breakpoint
* .container-fluid, which is width: 100% at all breakpoints
* .container-{breakpoint}, which is width: 100% until the specified breakpoint.

A Bootstrap Class loader is a Machine code which kick starts the operation when the JVM calls it. It is not a java class. Its job is to load the first pure Java Class Loader. Bootstrap Class Loader loads classes from the location rt.jar. Bootstrap Class Loader doesn’t have any parent Class Loaders. It is also called as the Primodial Class Loader.

4. How many types of layouts are there in Bootstrap?

The types of layout available in bootstrap are :

* Fluid-layout: It is also known as the .container-fluid layout. This layout uses proportional values such as measuring unit for a block of content, images or any other item.
* Fixed-layout: It is also known as a .container layout. It provides a responsive fixed width container.

5. Why do we use Jumbotron in Bootstrap?

A jumbotron indicates a big box for calling extra attention to some special content or information. A jumbotron is displayed as a grey box with rounded corners. It also enlarges the font sizes of the text inside it.

6. When will you use <code>tag and <pre>tag?

The HTML <pre> tag is used for indicating preformatted text. Text in a <pre> element is displayed in a fixed-width font, and the text preserves both spaces and line breaks. The text will be displayed exactly as written in the HTML source code. The code tag surrounds the code being marked up. A common usage of the <code> is to display HTML code within a web page. To display HTML code, you need to use the correct HTML entities to ensure the HTML code is actually displayed (and not rendered) by the browser. The <**code**> **tag** is used to insert variables, fragments of program **code**, etc. into an HTML document. In the browser, the **code** is displayed in a mono spaced font of the smaller size. The <**code**> **tag** alone represents a single **code** line or **code** phrase.

7. What are responsive utility classes in Bootstrap? Give examples.

Bootstrap provides some handful helper classes, for faster mobile-friendly development. These can be used for showing and hiding content by device via media query, combined with large, small, and medium devices.

<div class = "container" style = "padding: 40px;">

<div class = "row visible-on">

<div class = "col-xs-6 col-sm-3" style = "background-color: #dedef8;

box-shadow: inset 1px -1px 1px #444, inset -1px 1px 1px #444;">

<span class = "hidden-xs">Extra small</span>

<span class = "visible-xs">✔ Visible on x-small</span>

</div>

8. Explain bootstrap alerts and thumbnails?

Bootstrap Alert:-Bootstrap provides an easy way to create predefined alert messages:

* Success! This alert box indicates a successful or positive action.
* Info! This alert box indicates a neutral informative change or action.
* Warning! This alert box indicates a warning that might need attention.
* Danger! This alert box indicates a dangerous or potentially negative action.

Bootstrap thumbnails:-

Bootstrap's thumbnails are used to show linked images in grids with very minimum required markup. A thumbnail is created using class .thumbnail within the element <a>.

9. What is Bootstrap breadcrumb?

Breadcrumbs are a great way to show hierarchy-based information for a site. In the case of blogs, breadcrumbs can show the dates of publishing, categories, or tags. They indicate the current page's location within a navigational hierarchy.A breadcrumb in Bootstrap is simply an unordered list with a class of .breadcrumb.

10. What is pagination in bootstrap and how are they classified?

Pagination is the handling of an unordered list by bootstrap. To handle pagination bootstrap provides following classes

.pagination: To get pagination on your page you have to add this class

.disabled, .active: Customize links by .disabled for unclickable links and .active to indicate the current page

.pagination-Ig, .pagination-sm: Use these classes to get different size item

11. What is Normalize in Bootstrap?

Bootstrap is a front-end framework that includes lots of CSS and JavaScript components, a grid system, typography, and many other robust features to help you get started coding a website more quickly. It also already includes Normalize.css in addition to its other code. Bootstrap does have normalize. css included, so it would be redundant to include it elsewhere. Bootstrap 4 (Beta) uses Reboot, which builds on Normalize, which would also make including it elsewhere redundant.

12. How navbar works in Bootstrap and how can you create one?

A navigation bar is a navigation header that is placed at the top of the page. With Bootstrap, a navigation bar can extend or collapse, depending on the screen size.

How it works:-

A standard navigation bar is created with <nav class="navbar navbar-default">.

Navbars require a wrapping .navbar with .navbar-expand{-sm|-md|-lg|-xl} for responsive collapsing and color scheme classes.

Navbars and their contents are fluid by default. Use optional containers to limit their horizontal width.

Use our spacing and flex utility classes for controlling spacing and alignment within navbars.

Navbars are responsive by default, but you can easily modify them to change that. Responsive behavior depends on our Collapse JavaScript plugin.

Navbars are hidden by default when printing. Force them to be printed by adding .d-print to the .navbar. See the display utility class.

Ensure accessibility by using a <nav> element or, if using a more generic element such as a <div>, add a role="navigation" to every navbar to explicitly identify it as a landmark region for users of assistive technologies.

13. What is the grid system and grid classes in Bootstrap?

Bootstrap's grid system is responsive, and the columns will re-arrange depending on the screen size. The Bootstrap Grid System is used for layout, specifically Responsive Layouts. The Grid is made up of groupings of Rows & Columns inside 1 or more Containers. The Bootstrap Grid can be used alone, without the Bootstrap JavaScript and other CSS Components.

The Bootstrap grid system has four classes:

xs (for phones - screens less than 768px wide)

sm (for tablets - screens equal to or greater than 768px wide)

md (for small laptops - screens equal to or greater than 992px wide)

lg (for laptops and desktops - screens equal to or greater than 1200px wide)

***JAVASCRIPT QUESTIONS AND ANSWERS***

1. Define Java script. Enumerate the differences between Java and JavaScript?

JavaScript is a client-side scripting language, which means the source code is processed by the client's web browser rather than on the web server. This means JavaScript functions can run after a webpage has loaded without communicating with the server.

* Java is an object-oriented programming language.
* Java was developed at Sun Microsystems in 1995.
* Java code can be run in any virtual machine in addition to a web browser.
* Java is a standalone language.
* Java programs require more memory.
* Java is strongly typed and requires all variables to have a declared type.
* Java objects are class-based.

**JavaScript**

* JavaScript is an object-based scripting language.
* JavaScript was developed by Netscape in 1995.
* JavaScript code is written for the web browser.
* JavaScript code is maintained inside a web page.
* JavaScript is lightweight.
* JavaScript is weakly typed and doesn’t require definitions for all variables.
* JavaScript objects are prototype-based.

2. What are JavaScript Data Types?

JavaScript provides different data types to hold different types of values. There are two types of data types in JavaScript.

* Primitive data type
* Non-primitive (reference) data type

JavaScript is a dynamic type language, means you don't need to specify type of the variable because it is dynamically used by JavaScript engine. You need to use var here to specify the data type. It can hold any type of values such as numbers, strings etc.

3.What is 'this' keyword in JavaScript?

‘this’ keyword refers to an object, that object which is executing the current bit of javascript code.In other words, every javascript function while executing has a reference to its current execution context, called this. Execution context means here is how the function is called.To understand this keyword, only we need to know how, when and from where the function is called, does not matter how and where function is declared or defined.

4. What are all types of Pop-up boxes available in JavaScript?

In Javascript, popup boxes are used to display the message or notification to the user. There are three types of pop up boxes in JavaScript namely Alert Box, Confirm Box and Prompt Box.

Alert Box: It is used when a warning message is needed to be produced. When the alert box is displayed to the user, the user needs to press ok and proceed.

Syntax:- alert("your Alert here")

Prompt Box: It is a type of pop up box which is used to get the user input for further use. After entering the required details user have to click ok to proceed next stage else by pressing the cancel button user returning the null value.

Syntax:-prompt("your Prompt here")

Confirm Box It is a type of pop up box which is used to get the authorization or permission from the user. The user has to press the ok or cancel button to proceed.

Syntax:-confirm("your query here")

5. What is the difference between === operator and == operator?

"==" operator is known as type coercion operator and anytime if both values are same and compared using ==operator, type coercion happens. On the other hand === is known as strictly equality operator. It's much similar Java's equality operator (==), which gives compilation error if you compare two variables, whose types are not compatible to each other. In fact, you should always use "===" operator for comparing variables or just for any comparison. == is called as comparison operator whereas It is also called as comparison operator. = does not return true or false, == Return true only if the two operands are equal while === returns true only if both values and data types are the same for the two variables.

6. Explain what is pop () and push()method in JavaScript?

The push() method adds new items to the end of an array, and returns the new length. Note: The new item(s) will be added at the end of the array. This method changes the length of the array. To add items at the beginning of an array, use the unshift() method.. The pop method removes the last element from an array and returns that value to the caller. pop is intentionally generic; this method can be called or applied to objects resembling arrays.

7. Explain try and catch concept in java string using examples.

The try statement allows you to define a block of code to be tested for errors while it is being executed. The catch statement allows you to define a block of code to be executed, if an error occurs in the try block.

Syntax:-

try {

// Block of code to try

}

catch(Exception e) {

// Block of code to handle errors

}

Example:-

public class Main {

public static void main(String[ ] args) {

try {

int[] myNumbers = {1, 2, 3};

System.out.println(myNumbers[10]);

} catch (Exception e) {

System.out.println("Something went wrong.");

}

}

}

8. Explain error and exception handling with examples.

Error : An Error “indicates serious problems that a reasonable application should not try to catch.” Both Errors and Exceptions are the subclasses of java.lang. Throwable class. Errors are the conditions which cannot get recovered by any handling techniques. It surely cause termination of the program abnormally. Errors belong to unchecked type and mostly occur at runtime. Some of the examples of errors are Out of memory error or a System crash error.

class StackOverflow {

public static void test(int i)

{

if (i == 0)

return;

else {

test(i++);

}

}

}

public class ErrorEg {

public static void main(String[] args)

{

StackOverflow.test(5);

}

}

Exceptions : An Exception “indicates conditions that a reasonable application might want to catch.”

Exceptions are the conditions that occur at runtime and may cause the termination of program. But they are recoverable using try, catch and throw keywords. Exceptions are divided into two catagories : checked and unchecked exceptions. Checked exceptions like IOException known to the compiler at compile time while unchecked exceptions like ArrayIndexOutOfBoundException known to the compiler at runtime. It is mostly caused by the program written by the programmer.

public class ExceptionEg {

public static void main(String[] args)

{

int a = 5, b = 0

try {

int c = a / b;

}

catch (ArithmeticException e) {

e.printStackTrace();

}

}

}

9. Write a program to reverse a string.

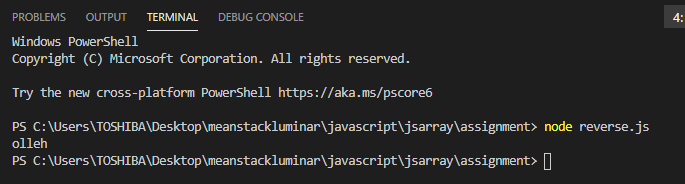
var input="hello";//input string

inputSplit=input.split("");//split the string

inputReverse=inputSplit.reverse("");//reverse the string that is splitted o l l e h

inputJoin=inputReverse.join("");//join the output

console.log(inputJoin);



10. Write a JavaScript program to find the Armstrong numbers of 3 digits.

var num=371;

var sum=0;

while (num!=0) {

let digit=num%10;

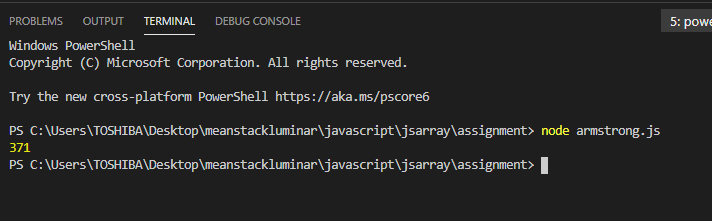
digit=digit\*digit\*digit;

sum+=digit;

num=Math.floor(num/10);

}

console.log(sum);



11. Write a JavaScript program to construct the following pattern, using a nested for loop?

var x,y,star;

for(x=1; x <=6; x++)

{

for (y=1; y < x; y++)

{

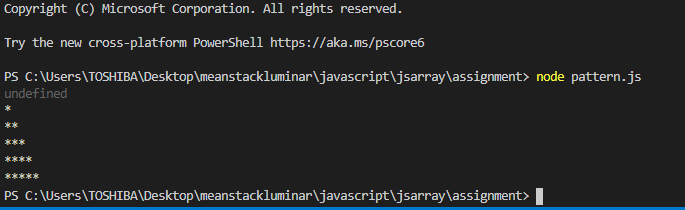
star=star+("\*");

}

console.log(star);

star='';

}



12. Write a JavaScript program which compute, the average marks 5students students of your choice Then, this average is used to determine the corresponding grade.

var students = [['meenu', 80], ['jerin', 77], ['anu', 88], ['maya', 95], ['kripa', 68]];

var Avgmarks = 0;

for (var i=0; i < students.length; i++) {

Avgmarks += students[i][1];

var avg = (Avgmarks/students.length);

}

console.log("Average grade: " + (Avgmarks)/students.length);

if (avg < 60){

console.log("Grade : F");

}

else if (avg < 70) {

console.log("Grade : D");

}

else if (avg < 80)

{

console.log("Grade : C");

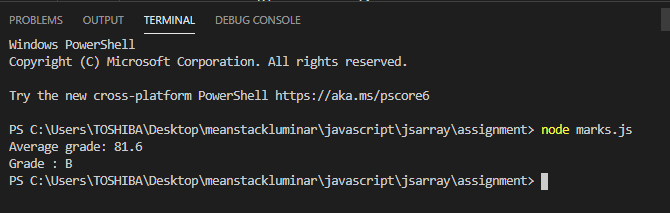
} else if (avg < 90) {

console.log("Grade : B");

} else if (avg < 100) {

console.log("Grade : A");

}



**13. Webpage design:-Instagram Login**

**Html code**

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1.0">

<meta http-equiv="X-UA-Compatible" content="ie=edge">

<title>Instagram login Form</title>

<link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0/css/bootstrap.min.css" integrity="sha384-Gn5384xqQ1aoWXA+058RXPxPg6fy4IWvTNh0E263XmFcJlSAwiGgFAW/dAiS6JXm" crossorigin="anonymous">

<link rel="stylesheet" href="style.css">

<!-- Font awesome link -->

<link rel="stylesheet" href="https://use.fontawesome.com/releases/v5.6.3/css/all.css" >

</head>

<body>

<script src="https://code.jquery.com/jquery-3.2.1.slim.min.js" integrity="sha384-KJ3o2DKtIkvYIK3UENzmM7KCkRr/rE9/Qpg6aAZGJwFDMVNA/GpGFF93hXpG5KkN" crossorigin="anonymous"></script>

<script src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.12.9/umd/popper.min.js" integrity="sha384-ApNbgh9B+Y1QKtv3Rn7W3mgPxhU9K/ScQsAP7hUibX39j7fakFPskvXusvfa0b4Q" crossorigin="anonymous"></script>

<script src="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0/js/bootstrap.min.js" integrity="sha384-JZR6Spejh4U02d8jOt6vLEHfe/JQGiRRSQQxSfFWpi1MquVdAyjUar5+76PVCmYl" crossorigin="anonymous"></script>

<div id="wrapper">

<div class="container">

<div> <img src="C:\Users\TOSHIBA\Desktop\meanstackluminar\htmlsection\images\capture.png" class="phone">

</div>

<div class="phone-app-demo"></div>

<div class="form-data">

<form action="">

<div class="logo">

<h1>Instagram.</h1>

</div>

<input type="text" placeholder="Phone number, username, or email">

<input type="text" placeholder="Password">

<button class="form-btn" type="submit">Log in</button>

<span class="has-separator">Or</span>

<a href="#" class="facebook-login">

<i class="fab fa-facebook"></i> Log in with Facebook

</a>

<a class="password-reset" href="#">Forgot password?</a>

</form>

<div class="sign-up">

Don't have an account? <a href="#">Sign up</a>

</div>

<div class="get-the-app">

<span>Get the app</span>

<div class="badge">

<img src="https://www.instagram.com/static/images/appstore-install-badges/badge\_android\_english-en.png/e9cd846dc748.png" alt="android App">

<img src="https://www.instagram.com/static/images/appstore-install-badges/badge\_ios\_english-en.png/180ae7a0bcf7.png" alt="ios app">

</div>

</div>

</div>

</div>

<footer>

<div class="container">

<nav class="footer-nav">

<ul>

<li><a href="#">About</a></li>

<li><a href="#">Blog</a></li>

<li><a href="#">Jobs</a></li>

<li><a href="#">Help</a></li>

<li><a href="#">API</a></li>

<li><a href="#">Privacy</a></li>

<li><a href="#">Terms</a></li>

<li><a href="#">Top Accounts</a></li>

<li><a href="#">Hashtags</a></li>

<li><a href="#">Locations</a></li>

<li><a href="#">Beauty</a></li>

<li><a href="#">Dance & Performance</a></li>

<li><a href="#">Fitness</a></li>

<li><a href="#">Food & Drinks</a></li>

<li><a href="#">Home & Garden</a></li>

<li><a href="#">Music</a></li>

<li><a href="#">Visual Arts</a></li>

</ul>

</nav>

<div class="copyright">

&copy; 2021 Instagram from Facebook

</div>

</div>

</footer>

</div>

</body>

</html>

**Css code**

@import url('https://fonts.googleapis.com/css?family=Pacifico&display=swap');

/\*Html rakup styling\*/

\*,

\*::before,

\*::after{

margin: 0;

padding: 0;

box-sizing: inherit;

}

html

{

font-size: 10px;

box-sizing: border-box;

}

/\*Smartphone image\*/

img

{

width: 100%;

height: 100%;

max-width: 100%;

}

.phone

{

position: absolute;

right: 450px;

width: 300px;

height: 620px;

top: 5px;

margin-right: 200px;

padding-top: 80px;

}

/\*link styling\*/

a

{

text-decoration: none;

}

/\*Logo styling\*/

h1

{

font-family: 'Pacifico', cursive;

font-size: 40px;

}

/\*body background color\*/

body

{

background-color: #fafafa;

}

/\*Wrapper is like a container of body\*/

#wrapper

{

width: 100%;

height: 100vh;

display: flex;

flex-direction: column;

justify-content: space-between;

padding-top: 2rem;

}

.container

{

width: 100%;

max-width: 93.5rem;

margin: 3rem auto 0;

}

#wrapper > .container

{

display: flex;

padding: 0 8rem;

}

/\*smartphone image\*/

.phone-app-demo

{

height: 61.8rem;

background: url('https://uditsolutions.in/babamachine/wp-content/uploads/2019/08/phone.png') center no-repeat;

flex: 1;

}

/\*form styling\*/

.form-data

{

width: 100%;

max-width: 35rem;

margin-top: 3rem;

}

.form-data form

{

background-color: #fff;

border: 2px solid #eee;

display: flex;

flex-direction: column;

padding: 2rem 4rem;

text-align: center;

}

/\*logo again styling\*/

.logo h1

{

/\*width: 17.5rem;\*/

margin-bottom: 2.5rem;

}

/\*form input styling\*/

.form-data form input

{

padding: .8rem;

margin-bottom: .5rem;

border: 2px solid #eee;

border-radius: .4rem;

}

.form-btn

{

margin: 1rem 0 1.5rem;

height: 3rem;

background-color: #3897f0;

font-size: 1.4rem;

color: #fff;

font-weight: bold;

border: none;

border-radius: .4rem;

cursor: pointer;

}

/\*OR font styling\*/

.has-separator

{

font-size: 1.3rem;

color: #999999;

text-transform: uppercase;

position: relative;

margin-bottom: 2.5rem;

}

.has-separator::before,

.has-separator::after{

content: '';

position: absolute;

background-color: #eee;

width: 40%;

height: 1.5px;

top: 50%;

transform: translateY(-50%);

}

.has-separator::before

{

left: 0;

}

.has-separator::after

{

right: 0;

}

/\*FACEBOOK ligin text styling\*/

.facebook-login

{

font-size: 1.4rem;

font-weight: bold;

color: #385185;

margin-bottom: 2.5rem;

}

.facebook-login

{

font-size: 1.4rem;

font-weight: bold;

color: #385185;

margin-bottom: 2.5rem;

}

.facebook-login i

{

font-size: 2rem;

margin-right: .7rem;

}

/\*password reset styling\*/

.password-reset

{

font-size: 1.2rem;

color: #003569;

}

/\*signup text styling\*/

.sign-up

{

text-align: center;

font-size: 1.4rem;

color: #262626;

padding: 2rem 0;

background-color: #fff;

border: 2px solid #eee;

margin: 1rem 0;

}

.sign-up

{

text-align: center;

font-size: 1.4rem;

color: #262626;

padding: 2rem 0;

background-color: #fff;

border: 2px solid #eee;

margin: 1rem 0;

}

.sign-up a

{

color: #3897f0;

font-weight: bold;

}

/\*Play stor and App store image styling\*/

.get-the-app

{

font-size: 1.4rem;

text-align: center;

}

.get-the-app span

{

display: block;

margin: 2rem 0;

color: #262626;

}

.badge

{

width: 100%;

display: flex;

justify-content: center;

}

.badge img

{

max-width: 14rem;

cursor: pointer;

}

.badge img:first-child

{

margin-right: 1rem;

}

/\*Footer link styling\*/

footer

{

padding: 5rem 0;

}

footer .container

{

display: flex;

justify-content: space-between;

font-weight: bold;

text-transform: uppercase;

font-size: 1.3rem;

flex-wrap: wrap;

margin-top: 0;

}

.footer-nav ul

{

display: flex;

flex-wrap: wrap;

list-style: none;

}

.footer-nav ul li

{

margin-right: 1.6rem;

}

.footer-nav ul li a

{

margin-left: 20px;

color: grey;

}

.copyright

{

margin-left: 270px;

color: #999999;

}

/\*responsive styling\*/

@media (max-width: 900px)

{

.phone-app-demo{

display: none;

}

.form-data

{

margin: 0 auto;

}

#wrapper > .container

{

padding: 0;

}

footer .container

{

padding: 0 2rem;

padding-right: 30px;

justify-content: center;

}

.footer-nav ul

{

justify-content: center;

}

.footer-nav ul li

{

margin-bottom: 2rem;

margin-right: 20px;

}

}

@media (max-width: 450px)

{

#wrapper

{

padding-top: 0;

}

.form-data form

{

background-color: transparent;

border: none;

padding: 0 2rem;

}

.sign-up

{

background-color: transparent;

border: none;

margin: 4rem 0;

}

footer

{

padding-bottom: 2rem;

}

}

**Answer:-**

C:/Users/TOSHIBA/Desktop/meanstackluminar/javascript/jsarray/assignment/instagram.html