Web Technologies – Training

Prerequisites

The following section lists the frameworks and technologies

that are required to complete this training document.

- Mozilla Firefox
- Google Chrome
- Basic knowledge of an object oriented programming language such as C# or C++
- Elementary debugging skills using breakpoints and asserts.
- Any IDE.

Notes
- All programs unless explicitly stated are to be tested on Internet Explorer, Safari , Firefox as well as Chrome. A program that only runs within one of the browsers shall be marked as incomplete.
- Do not Copy-paste code from the Internet. Code from the Internet should be studied. You should always roll out your own implementation.
- Please use a separate document to write your answers. The answers should be filed for future reference.

Day 1

The objective of today's activities is to help you get familiar with HTML.

Sessions
- Introduction to SVN.
- Introduction to web architecture (client-server basics).

Research

1. Group the following applications into any of the 3 categories below. Give reasons for your answer.

      An Internet enabled application.

      An Internet application.

     A desktop application.

Yahoo Messenger, Google Mail, Outlook Express, Facebook , Tally, Adobe Photoshop, Microsoft Internet Information Server.

2. What is HTML? List a few important tags in HTML. What is the importance of 'meta' tag, 'link' tag and 'script' tag?

3. What is a DocType and what is its importance? What type of document is an HTML page?

Below is the list of elements you should be familiar with by the end of this exercise. table, hr, head, body, p, span, div, line breaks, a, input, select, form, button, img, link, style, script, meta, title, ul, ol, li, label, canvas.

Programming

1. Create the "Employee Input Form" shown below:

2. Write the Html code to display an image. Add a tooltip to the image, which reads "My favorite bird".
3. Create a link as follows:
   Search on Google When this element is clicked, redirect the user to
   http://google.com

Day 2-3

The objective of this activity is to understand what CSS is and how it can be used to make web applications with good interfaces.

Sessions (mid-day on Day 2)
- Creating a website.
- Creating HTML, CSS, JS files
- Introduction to CSS.
1. Why use CSS?
2. What are the important properties of CSS?
3. How should one go about integrating CSS into their
   web apps?

Research (day 2 till mid-day)

1. What is CSS?

2. What are the different ways of including CSS on your page?

3. What are CSS classes?

4. What are the important CSS style properties?

5.   How to apply a default style to your web page?

Programming

Que 1. Create an HTML page with three divs (oDiv1, oDiv2, oDiv3) as follows:
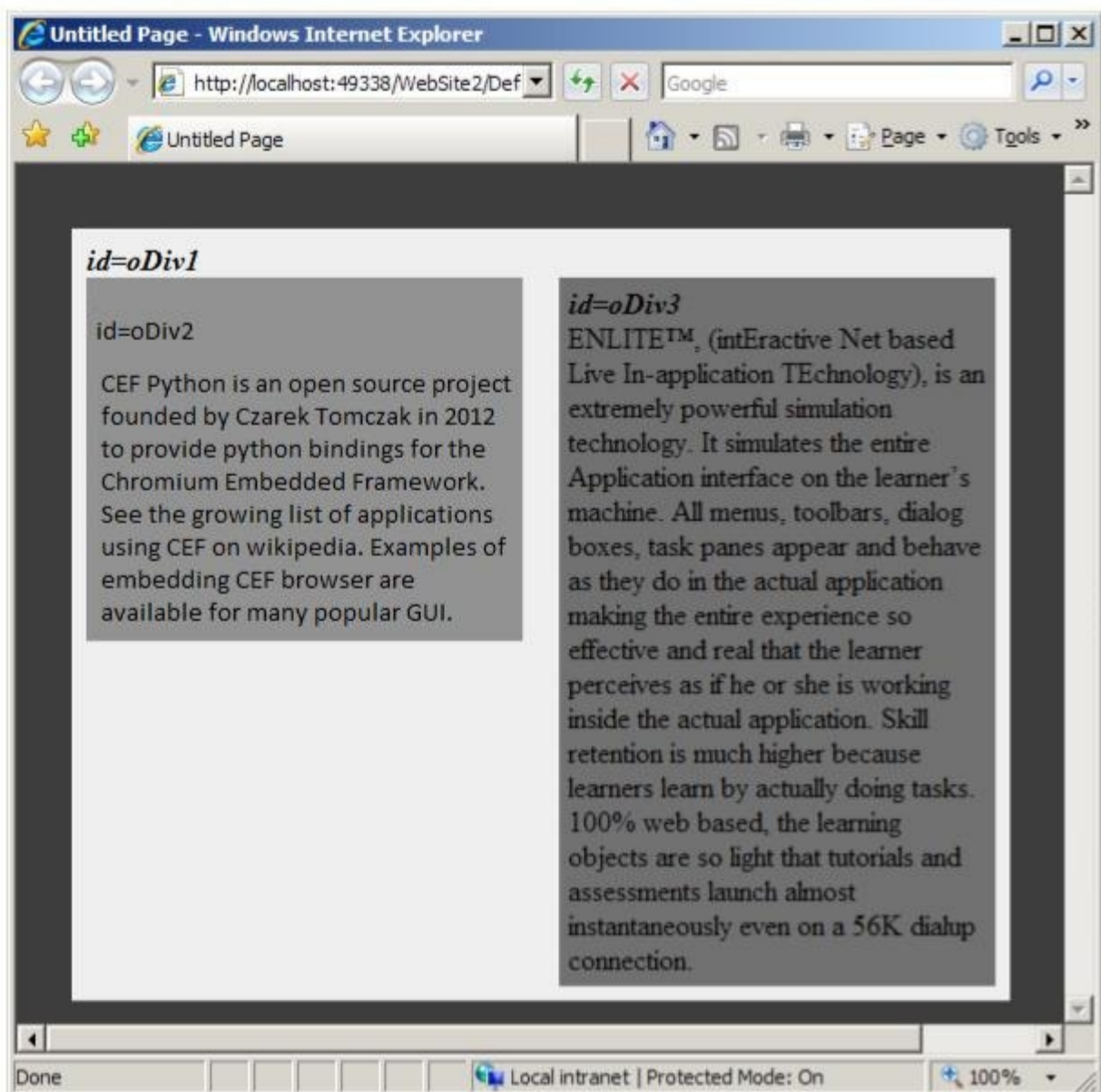
Align oDiv2 and oDiv3 without specifying a pixel-location for them.

Q2. We shall focus on the design of parts of the Justdial Marketplace home page. There is a screen-shot of the same on the following page.

Images for the above will be provided.
- Border for the sub section (Ex. cloud based) will appear on hover.

Day 4

The objective of the current day's task is to learn about common HTML elements, their properties and associated events, and introduction to the JavaScript HTML DOM.

Session

About HTML DOM structure and associated events.

Research

1. What is the difference between a client-side scripting language and a server-side scripting language?
2. What are .js files? How would you include one or more .js files from within your web pages?

Programming

Que 1. Write a program that has the following characteristics -

- Contains two text boxes that allow the user to type in his first-name and surname.
- Contains a button that when clicked displays the complete name of the user in a message box. **Remember that the page should not be submitted to the server.**

Que 2. Create the "Employee Input Form" shown below:

Handle following validation
1. The First Name field should have *focus* by default.
2. Name of Spouse is editable only when Marital Status is set to Married.
3. When the RESET button is pressed all the fields are cleared.
4. When the SAVE button is pressed following validation should be done:
   - If any field is empty, alert the message "Please enter a [field name]" and set focus to the appropriate element.
   - Check that the name and spouse name does not contain any white spaces.
   - If one or more of these fields are incorrectly entered, show an appropriate message and set the focus to the first incorrectly filled-up field.
   - If all the rules are followed, display the message "Thank You"

Day 5-6

The objective of the current day's task is to learn how to manipulate data within the client's browser, using JavaScript.

Research

1. How do you open a popup window in your browser?

    2. How does the Location Object work?

Programming

Que 1. Create an HTML page with an OPEN POPUP and a CLOSE POPUP button.

- When you click on open a popup window is opened in the center of the screen. The new window contains the text "I am child window" in bold. The height of the child window is 400px and the width is 200 pixels. The window should not be resizable and should not have a title bar.

- When you click on close in the parent window, the child window should be closed.

Que 2. Create the following HTML page:
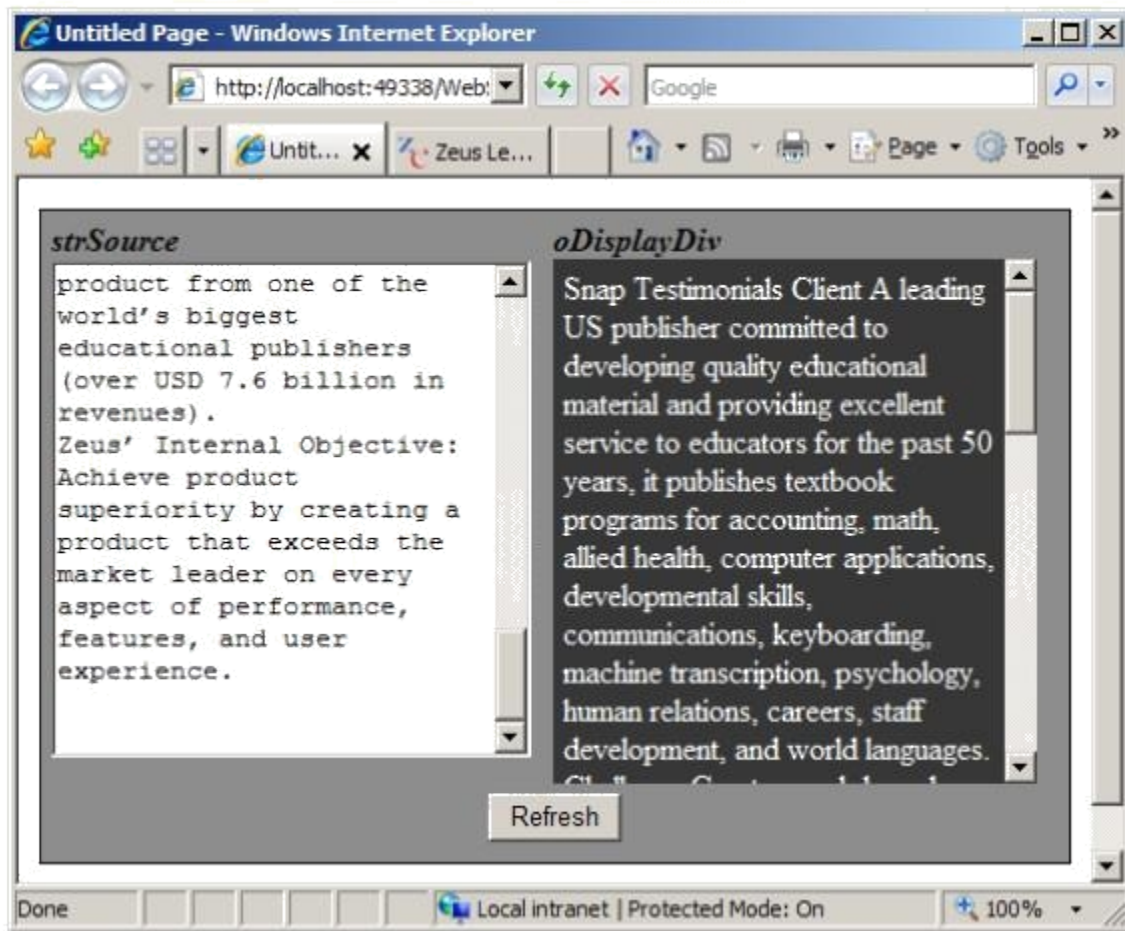
Allow user to type any amount of text in strSource (a text area). When the user clicks the Refresh button, copy the content of strSource into oDisplayDiv. The vertical scrollbar in oDisplayDiv should appear only when the content exceeds the height of oDisplayDiv.

Que 3.Write a program that displays a countdown timer on the user's web browser.
The countdown timer should count down every second from an initial value of 30. The colour of the digits should be black (#000000) and 100 pixels in height. Write 2 sets of code, 1 using setInterval and other using setTimeout.
Modify the above program so that the colour of the digits turns red (#ff0000)
the moment the number of seconds remaining is less than 10.

There will be buttons to start/stop/pause/resume the countdown timer.

Day 7

The objective of the current day's task is to learn how to manipulate data within the client's browser, using JavaScript, basic regular expressions.

Research

Read the programming tasks for the day, given below. Carefully identify ALL the JavaScript functions and properties you will need to use, BEFORE writing any code.

Make a list of the functions and properties you plan to use, with a one-line description. Show this list to the persons you are reporting to before proceeding with the programming. As far as possible, write clean & optimal javascript.

What are Regular Expressions? Why are they used? How can you use regular expressions in JavaScript?

Programming

1. Reuse the "Employee Input Form" you created on Day 4.

2. On clicking the Save button, add the user's details to a javascript array and clear all fields so that you can take the details for another employee. The javascript array stores the details of multiple employees.

3. Reprogram your validation functions from Day-4 to use Regular expressions.

4. Add a View button to the page. When the user clicks this button, display the data from the javascript array in a table on the page as shown in the figure below. Place the table 100 px below the Save button.

First Name	Last Name	Gender	Other Details
Shefali	Chellani	Female	I like .net!
Dhananjay	Prajapati	Male	I like java!
Pravin	Desai	Male	I like SQL
Abhishek	Mathur	Male	I like Flash
Sagar	Ghadge	Male	I like Javascript
Ujwala	Redkar	Female	I like C#

5. Alternate records should be in alternate colors as shown.
6. The table should have a fixed height. A scroll bar should appear only when needed.
7. When View button is clicked and there are no records in the array, the 1st row should show the message "No records found".

DAY 8

Today you will learn about JSON, JavaScript and JavaScript classes.

Session

1. JSON

2. Mutable v/s Immutable

3. Pass by value / Pass by reference

4. Usage of global vars.

5. What is "this"?

6. JavaScript optimization.

7. JavaScript classes and prototypes.

Programming

1. Create a JavaScript class within a separate JavaScript file that implements the following functionality.

a. Create a class that acts as a Base64 encoder/decoder. Additional information on the Base64 format is available at
http://en.wikipedia.org/wiki/Base64

b. The class should expose the following methods or encoding and decoding data.

i. encode(strSourceID, strDestID);

ii. decode(strSourceID, strDestID);

Day 9-10

Today you will learn about Jquery, CSS3 and Ajax

Research
- What is jquery?
- List and explain different jquery selectors.
- List and explain some of the new properties available in CSS3.
- How can we achieve animation using CSS3?
- What is Request/Response?
- What is Ajax?
- How will you handle success, failure of Ajax response?
- What are the statuses of serve response?

Programming

1. Name Place Animal Thing - Drag and Drop Activity with basics of JSON notation and Jquery. A drag and drop activity emulating the classical Name-Place-Animal-Thing game is to be developed. It should consist of several drag items, which are to be classified into Name, Place, Animal or Thing, by dragging and dropping them into their respective Drop Slots.
2. Read a json file and fill a form accordingly. Show "loading…" text in the browser when user hit request and hide it when you get response. If request failed show text "Server Error …".

Day 11-12

Today you will learn about AngularJs.

Research

- What is MV* in Javascript?
- What is AngularJs?
- Why AngularJs?
- What is Module, Controller , Directives in AngularJs?
- Read AngularJs API. (https://docs.angularjs.org/api)
- https://www.codeschool.com/courses/shaping-up-with-angular-js?
- Html5 localstorage ?
- Bootstrap.css ?

Programming

1. Create a customer form with all required validations.
2. User should be able to edit/Delete customer.
3. Pagination functionality should be implemented.
4. To store customer information use localstorage.
5. Listing Page should be responsive.
6. Use Angular service to get/update customer information.

Customer Details

Mobile Number

+91 | Add / Search Customer Mobile Number

Name

First Name | Last Name

E - Mail

Enter Email Id

Alternate Contact Number

+91 | Enter alternate contact number

Date of Birth

Gender

○ Male   ○ Female   ○ Others

Residential Address

Pincode

Enter your 6 digit pincode

Address

Enter Address details

City

Enter District

State

Enter State

Country

India (This service is only within India)

Add Customer

| Mobile No.	Customer	Location	1-20 of 19 ‹ ›
8888888882	Just Dial	thrthrthrth rthrthrh India	
9543565656	MS Dhoni	Maharashtra India	
	Mohit Mitra	India	
7303504662	Mohit Mitra	India	
7777777777	Nijil Narayan	-	
8555555555	Nilesh Pandey	dfbdfbfb fdbdfbdfb India	
9878978978	Prateeek Yadav	Mhaarashtera India	
7737773744	Taksh Dubey	Uttar Pradesh India	

Day 13-14

Research
- How to implement custom directives?
- What is Routes in AngularJS?
- How to use Angular Factory and Service?

Programming

1. Write a program to implement custom auto-suggest when you start typing in a input text box. Autosuggestion should be displayed after 3 char in the input box. Keyboard navigation should work like google autosuggest.
2. Create directive for mobile number input box.
3. Create following pages using angular routes
   - Create Customer Page.
   - Edit Customer Page.
   - Customer Listing Page.

Product Name Try to use brand name along with the product name / Scan the product barcode

test

Test
T1»T2»Testing2

My Name is Khan
Adventure & Outdoor»Camping & Hiking»Fire spray

Test UOM 12
T1»Test_new_1