BSc (Hons) in Information Technology
Year 1, Semester II, 2018
IT1100 – Internet and Web Technologies
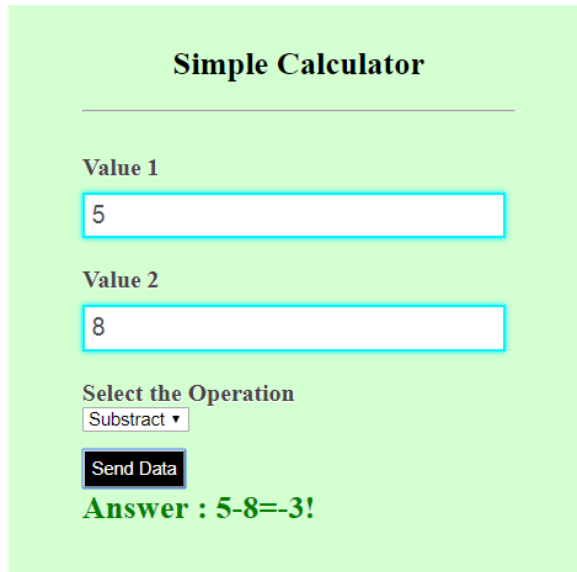
Lab Exercise 10 – Asynchronous Communication Using Ajax

Simple Online Calculator

In this lab session, we will look on how to create a simple calculator. To post data asynchronously we will be using Ajax.

1. First create request form to get user inputs as below.

```html
<div class="main">
<h2>Simple Calculator</h2>
<hr>
<form id="form" method="post">
<div id="namediv"><label>Value 1</label>
<input type="text" name="value1" id="value1" /><br></div>
<div id="emaildiv"><label>Value 2</label>
<input type="text" name="value2" id="value2" /></div>
<label>Select the Operation</label><br><select name="ope" id="ope">
<option value="add">Add</option>
<option value="sub">Substract</option>
</select>
</form>
<button id="btn">Calculate</button>
<div id="response"></div>
</div>
```

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2. As you can see there are two input fields value1 and value2, dropdown to select the operation and #response div to display output. Add multiplication and division to the drop down as well.

3. Then make the AJAX call to send data using POST method. Use the given Style sheet and link to jquery.min.js library as well.

```
<link href="stylesheet.css" rel="stylesheet"/>
<script src="http://ajax.googleapis.com/ajax/libs/jquery/1.11.1/jquery.min.js"></script>
<script>
$(document).ready(function(){
$("#btn").click(function(){
var xval = $("#value1").val();
var yval = $("#value2").val();
var ope=$("#ope").val();
if(xval=='' && yval=='')
{
alert("Please fill out the form");
}
else if(xval=='' && yval!=''){alert('Value1 field is required')}
else if(yval=='' && xval!=''){alert('Value2 field is required')}
else{
$.post("ajax_response.php",
{
x:xval,
y:yval,
operation:ope
},function(result,status){ // Required Callback Function
document.getElementById('response').innerHTML = result;
});
}
});
});
</script>
</head>
```

4. Here there is a simple JavaScript validation to get valid inputs. You should check the input to be a integer as well

```
if(xval=='' && yval=='')
{
alert("Please fill out the form");
}
else if(xval=='' && yval!=''){alert('Value1 field is required')}
else if(yval=='' && xval!=''){alert('Value2 field is required')}
```

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5. Let create ajax_response.php, which retrieve all data and do the calculations as below. Implement cases to do multiplication and division.

```php
<?php
if($_POST["x"])
{
 $x = $_POST["x"];
 $y = $_POST["y"];
$operation=$_POST["operation"];

switch ($operation) {
    case 'add':
        $z=$x+$y;
        $res=$x ."+". $y."=";
        break;
    case 'sub':
        $z=$x-$y;
        $res=$x ."-". $y."=";
        break;
    default:
        # code...
        break;
}
echo "Answer : ".$res. $z ."!";
}
```

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