Programming Simple Arithmetic Calculations: Possibly using a Formula
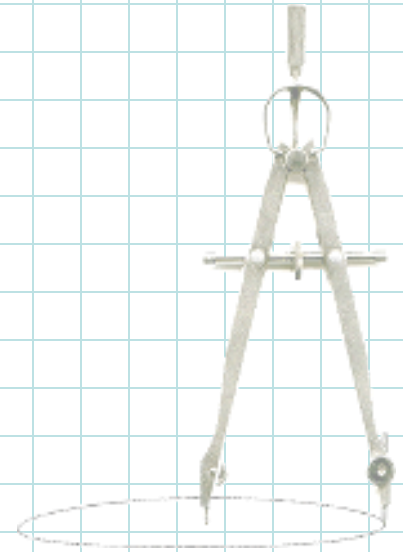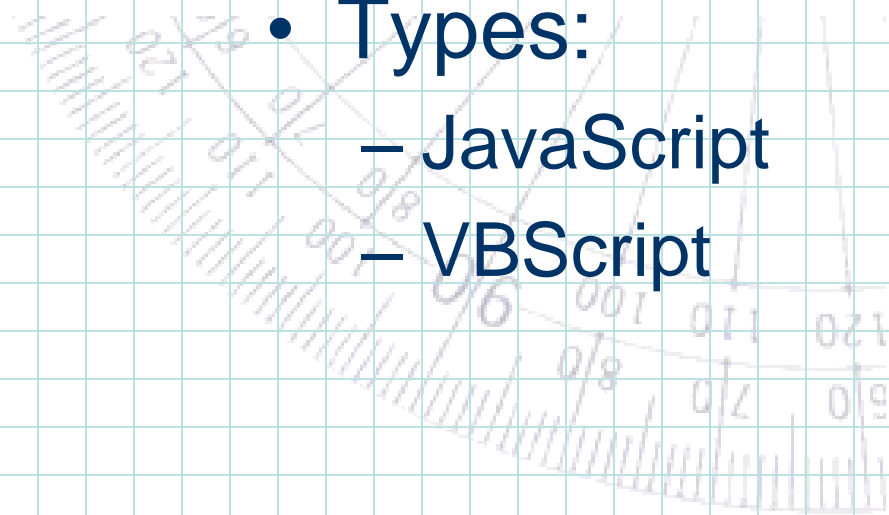
Website Production

Scripts

- Programming instructions added to webpage `<HEAD>`

- Interpreted (executed, or followed) by browser

- Types:
  - JavaScript
  - VBScript

Ex. Script for Adding Two Numbers from a form and outputting to form

```html
<html>
<head>
<script language="JavaScript">
 function AddNumbers() {
    // Get data off form textboxes and into variables
    var x = document.AddForm1.Value1.value;
    var y = document.AddForm1.Value2.value;
    // Convert values from text format to numerical format
    x = eval(x);   y = eval(y)
    // Calculation using formula for adding x and y
    ans = x + y;
    // Put ans into text box on form
    document.AddForm1.Answer.value = ans;
}
</script>
</head>
<body>
<form name="AddForm1">
    <input type="text" name="Value1" size="3"> +
    <input type="text" name="Value2" size="3"> =
    <input type="text" name="Answer" size="3">
    <input type="button" onClick="AddNumbers()" value="Answer!">
</form>
</body>
</html>
```

Try add2num.html in examples. Enter two numbers to be added. Click on Answer! button which starts the AddNumbers function that inputs the numbers from the form, converts them to numeric format,, adds them and puts the result back on the form

How to Code a Script for Calculating a Value Using a Formula

- There are more examples of using a formula to calculate a value in the Examples folder. In coding a new example, consider how many input values are needed to do the calculation of the one output value. Then develop a form with one text box for each input value and one for the output value, and one button to start the calculation, and code it in html.

- Then create the JavaScript function code. Pattern getting the input values off the form's textboxes and into variables like the example in the previous slide. The values are in text format. Convert the values to numeric format, if they are numbers, using eval().Then code the formula as an assignment statement using the input variables and an output variable. Then pattern putting the value that is the output value of the calculation, into the output textbox on the form.

- You'll need to test the code too. Try the program with some data to see if it does the input, output and calculation correctly. If not, revise the code and test again.

- Look at other files in Examples