

CodeActually

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Charting with Form Input

Let's make a chart anyone can use by inputting their own data into a form. We will just execute this with one measure, but you could set up the form to take in additional categories, just as we did above. Let's start with your existing file from the simple charting exercise, but give it a new name, something like chart2.html.

Make Your Own Chart

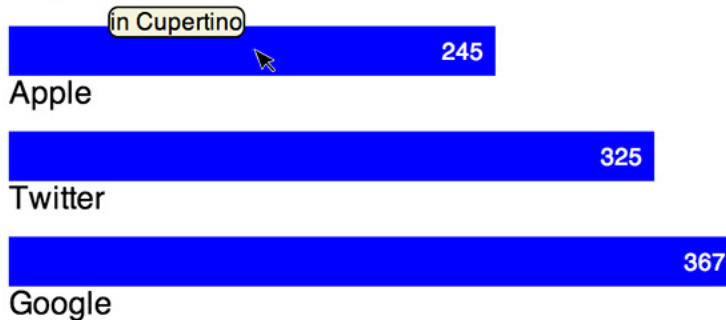
Category:

Item1:	<input type="text" value="Apple"/>	Amount:	<input type="text" value="245"/>	Tip:	<input type="text" value="in Cupertino"/>
Item2:	<input type="text" value="Twitter"/>	Amount:	<input type="text" value="325"/>	Tip:	<input type="text" value="in San Francisco"/>
Item3:	<input type="text" value="Google"/>	Amount:	<input type="text" value="367"/>	Tip:	<input type="text" value="Bay Area"/>

Comments:

Not actual data. Fake data used for presentation purposes only.

Revenue



Comments: Not actual data. Fake data used for presentation purposes only.

Instead of your dropdown form, replace with this code to accept input from the user for each chart item. This will create a category to identify the measure to which you

are looking and accept input for each item, amount and tip. It also accepts one final textarea as a comment.

```
<form name="form1" id="form1" action=" " />

<p>Category: <input type="text" id="cat1" /></p>

<p>Item1: <input type="text" id="item1" /> Amount: <input
type="number" id="amount1" /> Tip: <input type="text"
id="tip1" /> </p>
<p>Item2: <input type="text" id="item2" /> Amount: <input
type="number" id="amount2" /> Tip: <input type="text"
id="tip2" /></p>
<p>Item3: <input type="text" id="item3" /> Amount: <input
type="number" id="amount3" /> Tip: <input type="text"
id="tip3" /></p>

Comments: <p><textarea cols="50" rows="4" id="comments"
/></textarea></p>

<input type="submit" value="Submit"> <input type="reset">
</form>
```

Validation

Notice we have used the type="number" attribute for the amounts. This requires the input to be numeric. The user will get an error if they input something other than a number. This is an HTML 5 solution, and it only accepts integers, not decimals. If this is required, a more advanced strategy is necessary. There are more advanced validation strategies using JavaScript, but this should suffice for this exercise.

You may have also noticed that some numbers are too small or too large to be meaningful on this chart. These are issues we would have to address if we were making a fully deployable application. You may have to change the relationship between amount and pixels or you might have to set validation limits on input.

In your .bars class in the stylesheet, add width: 0, so the program knows where to start in drawing the box with the CSS effect. It should now look like this.

```
.bars {
    background-color: blue;
    height: 25px;
    margin: 10px 0 0 0;
    width: 0;
```

```

        -webkit-transition:width 1s ease-in;
        -moz-transition:width 1s ease-in;
        -o-transition:width 1s ease-in;
        transition:width 1s ease-in;
    }

```

Your script section will now take input from this form, instead of the JSON. Remove all the items in the existing `<script>` tag and replace with this code. This creates a variable for the category and comments as read from the form. Then it uses the loop to read through the items form to modify the innerHTML for each. Notice the similarities in the loop we created from reading the JSON data versus the form input data.

```
document.forms["form1"]["amount" + (i+1)].value
```

The area that looks like the code above is what reads the data from the form and inputs it to the chart.

```

<script>
document.getElementById("form1").onsubmit=function() {

var category = document.forms["form1"]["cat1"];
var categoryValue = category.value;

var comments = document.forms["form1"]["comments"];
var commentsValue = comments.value;

document.getElementById("cat").innerHTML = "<strong>" +
categoryValue + "</strong>";
document.getElementById("comment").innerHTML =
commentsValue;
for (var i=0; i<3; i++) {
    document.getElementById("name" + (i+1)).innerHTML=
document.forms["form1"]["item" + (i+1)].value;
    document.getElementById("bartext" + (i+1)).innerHTML=
"<p class='number'>" + document.forms["form1"]["amount" +
(i+1)].value + "</p>";
    document.getElementById("bar" + (i+1)).style.width =
document.forms["form1"]["amount" + (i+1)].value + 'px';
    document.getElementById("hidden_div" +
(i+1)).innerHTML= "<p class='tooltip'>" +
document.forms["form1"]["tip" + (i+1)].value + "</p>";
}
document.getElementById("bar" + (i+1)).title =
document.forms["form1"]["tip" + (i+1)].value;

```

```

$( document ).ready(function() {
$("[title]").tooltip({offset: [10, -30]});
});

return false; // do not submit/refresh the page

} // end submit
</script>

```

Try it out in the browser. Make any other changes necessary to your CSS to get the chart to look the way you want. Now anyone can use your code to create their own bar chart. Things seem to look a little better by initializing the paragraph margin to 0.

```

p {
margin: 0;
}

```

Some last tips

Maybe you want a column chart, instead of a bar chart. This makes the coding a little more complex, to get the bars placed in a vertical fashion, but it can be done. You'll have to start with figuring out how to style your bars and then switch the width measures to height, since that's what will hold the amount. Each bar will need absolute positioning within a relative positioned main div. The main div will also need a `overflow: auto`;

```

#bar1, #bar2, #bar3
{
position: absolute;
bottom: 15px;
left: 0;
}

```

You'll need to absolutely position these divs next to each other and provide a way for the column heading to display.

```
#name1 {  
  position: absolute;  
  bottom: 0;  
  left: 0;  
}
```

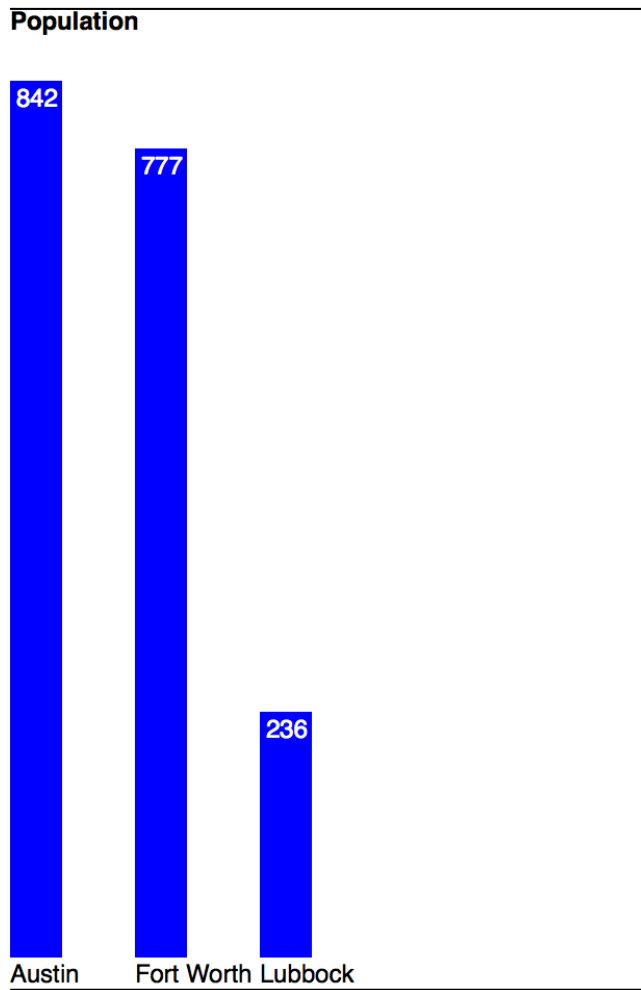
Do the same for #name2 and #name3, but position them further over from the left.

```
#main  
{  
  position: relative;  
  border-top: 1px solid black;  
  border-bottom: 1px solid black;  
  overflow: auto;  
  padding: 10px;  
  height: 450px;  
}
```

You need to establish the height of the main div, either directly or by using the largest measure.

And, I actually divided the amount by 2, so the bars wouldn't take up as much room on the page. You can do this or leave it with the actual number. Feel free to make any necessary adjustments for your own purposes.

A Tale of Three Cities



As we move on to the <canvas> element, you will see new ways to display and control shapes on a page.