Microsoft Excel Functions
Hands-On Workshop
Spring 2006

Workshop Objectives
1. Use simple statistical functions:
   • min, max, median, mode, average, count, counta
2. Use simple date & time functions:
   • today, now

The DonationProgram.xls Worksheet
We’ll learn these functions

If time permits, we’ll learn to use a Lookup function that will put the levels from the table on the right, into cells E3 to E10
Statistical Functions

Let’s insert the SUM function!
1. Click on cell D11
2. Click on AUTOSUM button (Looks like: ∑)
3. Press ENTER key to accept the function

The SUM function is added to cell D11
• You see only the RESULT of the function in the cell.
• To see the function itself:
  – Click on cell D11
  – Function is displayed in the FORMULA BAR
    OR…
Another way to see the function:
Go to the Formula View:
• Hold the Ctrl Key down
• Press this key:
• Do that again to go back to other view.

Let’s Analyze the Function:
• Every function starts with an equals sign.
• The NAME of the function follows the =.
• The cells to be summed are in parentheses.
• : means ‘to’.

Let’s Analyze the Function:

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A RANGE: the list of cells to be included in a function

- The computer SUMS cells D3 to D10 inclusive
- To sum cells that are not contiguous, use a comma to separate cell references, e.g., to sum only D1, D6 and D10:
  \[=\text{SUM(D1,D6,D10)}\]

The RANGE of cells to be summed.

The Other Functions We’ll Use Here

1. **min** gives the lowest value in a range
2. **median** gives the middle value in a range
3. **max** gives the highest value in a range
4. **average** gives the statistical mean of a range of values
5. **count** gives a tally of numeric entries in a range

Click on D12 and type \[=\text{min(d3:d10)}\]

The result of the MIN function
Try the MEDIAN function!

```
Click on D13 and type =median(d3:d10)
```

Press ENTER key when done

The result of the MEDIAN function

Try the MAX function!

```
median function
```

```
max function
```

```
Press ENTER key when done
```
Click on D14 and type \(=\text{max}(d3:d10)\)

The result of the MAX function

Try the AVERAGE function!

Click on D15 and type \(=\text{average}(d3:d10)\)

Press ENTER key when done
The result of the AVERAGE function

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Last Name</td>
<td>First Name</td>
<td>Donation Date</td>
</tr>
<tr>
<td>2</td>
<td>Allen</td>
<td>Rod</td>
<td>8/1/2005</td>
</tr>
<tr>
<td>3</td>
<td>Benton</td>
<td>Lee</td>
<td>9/2/2005</td>
</tr>
<tr>
<td>4</td>
<td>Aparon</td>
<td>Mike</td>
<td>8/1/2005</td>
</tr>
<tr>
<td>5</td>
<td>Edwards</td>
<td>Lisa</td>
<td>7/31/2005</td>
</tr>
<tr>
<td>6</td>
<td>Hills</td>
<td>Lee</td>
<td>8/1/2005</td>
</tr>
<tr>
<td>7</td>
<td>Hewitt</td>
<td>Anne</td>
<td>8/1/2005</td>
</tr>
<tr>
<td>8</td>
<td>Uchma</td>
<td>Joaquin</td>
<td>7/31/2005</td>
</tr>
<tr>
<td>9</td>
<td>Wilson</td>
<td>Kim</td>
<td>2/1/2006</td>
</tr>
</tbody>
</table>

11 Total Amount Donated: $720.00
12 Minimum Donation: $10.00
13 Median Donation: $75.00
14 Maximum Donation: $200.00
15 Average Donation: $80.00
16 Number of Donors: 8

Try the COUNT function!

Click on D16 and type \(=\text{count(d3:d10)}\)

Press ENTER key when done

The result of the COUNT function

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The MODE function
- **mode** displays the most frequently occurring value in a range of cells
  - You’ll see the error message **#N/A** if there is no mode (no value occurs more than once).
  - Try it in cell D17; you should get the #N/A error.
  - See what happens when you type 30 in D8 (this means there will be two occurrences of $30.00).

The COUNTA function
- **counta** displays the tally of alphanumeric entries in a range of cells (use when values may include text OR numbers)
  - **count** won’t work if the values include text, so use counta in those situations

- Uses: tally or headcount of students, expense items, or any list that has text

Date/Time Functions

Common Functions
- **now** displays the current date
  1. Click on F1
  2. Type =now()
  3. Press ENTER key
- **today** displays the current date and time
  =today()
Upcoming Workshops:

- Making Charts in Excel
- PowerUser Workshop: Gradebooks, lookup functions, and 3D references
- Check the bulletin: http://news.kcc.hawaii.edu/
- Check the CELTT website for handouts & additional material: www.hawaii.edu/kccceltt

Thanks for Joining Us!