COMPSCE 111 / 111G

Mastering Cyberspace:
An introduction to practical computing

Spreadsheets
Exercise - Simple IF

- Given the wind speed as shown in the table below, write the formula that would appear in cell C2. Note that a Gale Warning is issued when the wind speed exceeds 63 km/hr.

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Date</td>
<td>Wind Speed</td>
<td>Warning Issued</td>
</tr>
<tr>
<td>2</td>
<td>1/01/2007</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>2/01/2007</td>
<td>57</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>3/01/2007</td>
<td>89</td>
<td>Gale Warning</td>
</tr>
<tr>
<td>5</td>
<td>4/01/2007</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>5/01/2007</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>6/01/2007</td>
<td>84</td>
<td>Gale Warning</td>
</tr>
<tr>
<td>8</td>
<td>7/01/2007</td>
<td>87</td>
<td>Gale Warning</td>
</tr>
<tr>
<td>9</td>
<td>8/01/2007</td>
<td>8</td>
<td></td>
</tr>
</tbody>
</table>

=IF(B2 > 63, "Gale Warning", "")
Exercise - IF

IF less than 50 percent of tickets available at a venue were sold, then the venue is too large. To produce the result in cell F7, what formula should you use in this cell?

=IF(C7/B7 < 0.5, "Yes", "No")
Example – IF with a Boolean Function

- **Ticket Sales**
  - Check if more than 90% of the tickets were sold, or if less than 50% of the tickets were sold. In either case, a new venue is required next time.

<table>
<thead>
<tr>
<th>Event</th>
<th>Tickets Available</th>
<th>Tickets Sold</th>
<th>Remaining</th>
<th>Sales</th>
<th>Venue too large?</th>
<th>New venue?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cycling</td>
<td>4000</td>
<td>2000</td>
<td>2000</td>
<td>$20,000.00</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Weightlifting</td>
<td>2000</td>
<td>750</td>
<td>1250</td>
<td>$7,500.00</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Triathlon</td>
<td>1000</td>
<td>100</td>
<td>900</td>
<td>$1,000.00</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Football</td>
<td>3000</td>
<td>3000</td>
<td>0</td>
<td>$30,000.00</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Badminton</td>
<td>5000</td>
<td>4500</td>
<td>500</td>
<td>$45,000.00</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

=IF(OR(C9/B9>0.9, C9/B9<0.5), "Yes", "No")
Example

- Use a VLOOKUP to find the description for a recorded wind speed

```
=VLOOKUP(value, table, description, range)

=VLOOKUP(B26, $E$25:$G$37, 3, TRUE)
```
Exercise: ThinkGeek T-Shirts

- Obey Gravity: It's the Law!
- 2 + 2 = 5 (for extremely large values of 2)
- Geek Inside
- Arrrrrrgh...
- Skull and Crossbones
- I'm blogging this.
- $> man woman
- $> Segmentation fault (core dumped)
- <BODY>
- </BODY>

http://www.thinkgeek.com/
Exercise

What formulae should be used in cells D15, E15, F15 and F26?

D15:  
=VLOOKUP(A15,$E$3:$F$9,2,FALSE)

E15:  
=VLOOKUP(B15,$A$3:$B$8,2,FALSE)

F15:  
=C15 * E15

F26:  
=SUM(F15:F21)
Exercise

- What formula would be used in cell C7?
  - Use a HLOOKUP

=HLOOKUP(B7, $B$2:$H$3, 2, FALSE)