COMPSCI 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.**

	A	B	C
1	Date	Wind Speed	Warning Issued
2	1/01/2007	3	
3	2/01/2007	57	
4	3/01/2007	89	Gale Warning
5	4/01/2007	60	
6	5/01/2007	5	
7	6/01/2007	84	Gale Warning
8	7/01/2007	87	Gale Warning
9	8/01/2007	8	

=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?

	A	B	C	D	E	F
1		Ticket Sales				
2						
3	Price	$10.00				
4						
5	Event	Tickets Available	Tickets Sold	Remaining	Sales	Venue too large?
6	Cycling	4000	2000	2000	$20,000.00	No
7	Weightlifting	2000	750	1250	$7,500.00	Yes
8	Triathlon	1000	100	900	$1,000.00	Yes
9	Football	3000	3000	0	$30,000.00	No
10	Badminton	5000	4500	500	$45,000.00	No
11		15000	10350	4650	$103,500.00	

```
=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.

	A	B	C	D	E	F	G
1		Ticket Sales					
2							
3	Price	$10.00					
4							
5	Event	Tickets Available	Tickets Sold	Remaining	Sales	Venue too large?	New venue?
6	Cycling	4000	2000	2000	$20,000.00	No	No
7	Weightlifting	2000	750	1250	$7,500.00	Yes	Yes
8	Triathlon	1000	100	900	$1,000.00	Yes	Yes
9	Football	3000	3000	0	$30,000.00	No	Yes
10	Badminton	5000	4500	500	$45,000.00	No	No
11		15000	10350	4650	$103,500.00		

=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**

	A	B	C	D	E	F	G
23					**Beaufort Scale**		
24					Speed (km/hr)	Beaufort number	Description
25	**Day**	**Wind Spd**	**Description**		0	0	Calm
26	Mon	27	Moderate breeze		1	1	Light air
27	Tues	5	Light air		7	2	Light breeze
28	Wed	0	Calm		12	3	Gentle breeze
29	Thurs	15	Gentle breeze		20	4	Moderate breeze
30	Fri	20	Moderate breeze		30	5	Fresh breeze
31	Sat	40	Strong breeze		40	6	Strong breeze
32	Sun	78	Strong gale		51	7	Near gale
33					63	8	Gale
34					76	9	Strong gale
35					88	10	Storm
36					103	11	Violent storm
37					118	12	Hurricane

=VLOOKUP(value, table, column, range)

=VLOOKUP(B26, $E$25:$G$37, 3, TRUE)

Exercise: ThinkGeek T-Shirts

http://www.thinkgeek.com/

Exercise

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

	A	B	C	D	E	F
1	T-Shirt Sizes				T-Shirt Prints	
2	Size	Price			Code	Description
3	S	$ 10.99			1001	2 + 2 = 5
4	M	$ 11.99			1010	geek inside
5	L	$ 12.99			1011	<BODY>
6	XL	$ 13.99			1100	man woman
7	XXL	$ 14.99			1101	obey gravity
8	XXXL	$ 15.99			1110	I'm blogging this
9					1111	Arrrrrggh…
10						
11						
12						
13				Invoice		
14	Code	Size	Number	Description	Price	Cost
15	1010	M	1	geek inside	$ 11.99	$ 11.99
16	1010	L	1	geek inside	$ 12.99	$ 12.99
17	1011	S	3	<BODY>	$ 10.99	$ 32.97
18	1110	XL	1	I'm blogging this	$ 13.99	$ 13.99
19	1001	XL	1	2 + 2 = 5	$ 13.99	$ 13.99
20	1101	M	2	obey gravity	$ 11.99	$ 23.98
21	1111	M	1	Arrrrrggh…	$ 11.99	$ 11.99
22						
23						
24						
25						
26					Total	$ 121.90

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

	A	B	C	D	E	F	G	H
1		Movie Prices						
2	**Day**	Mon	Tues	Wed	Thurs	Fri	Sat	Sun
3	**Price**	$11.00	$11.00	$11.00	$15.00	$15.00	$15.00	$15.00
4								
5	Movie Tickets							
6	**Name**	**Day**	**Cost**					
7	John	Tues	$11.00					
8	Jane	Thurs	$15.00					
9	Tom	Sat	$15.00					

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