

COMP1022Q  
Introduction to Computing with Excel VBA

# Introduction to Spreadsheets

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# Microsoft Office



- Before we learn about VBA, we have to know about Microsoft Office, which is the main ‘productivity’ software used around the world
- The two main programs in Office are:



**Word** – for writing things



**Excel** – for calculating things and making charts

# Our Hero



- Bill Gates



- Us

- Bill was the main person who started Microsoft
- After a few years of developing and selling Windows, they started building Excel and other programs
- All these became very popular, making him the richest man in the world

# Programs included in Microsoft Office

- If you buy a new laptop you might get this version included for free*



- This is the version installed in most HKUST computers*



Programs and Features	Starter	Office Online	Home and Student <sup>1</sup>	Home and Business	Standard	Professional	Professional Plus
Licensing	OEM	Free	Retail	Retail	Retail <sup>2</sup> and Volume	Retail and Academic	Retail, <sup>2</sup> Academic, and Volume
Word	Starter edition	Basic	Yes	Yes	Yes	Yes	Yes
Excel	Starter edition	Basic	Yes	Yes	Yes	Yes	Yes
PowerPoint	Viewer only	Basic	Yes	Yes	Yes	Yes	Yes
OneNote	No	Basic	Yes	Yes	Yes	Yes	Yes
Outlook	No	No	No	Yes	Yes	Yes	Yes
Publisher	No	No	No	No	Yes	Yes	Yes
Access	No	No	No	No	No	Yes	Yes
InfoPath	No	No	No	No	No	No	Yes
SharePoint Workspace (Groove)	No	No	No	No	No	No	Yes

- You can see that Word and Excel are the only programs included in every version of Microsoft Office
- There are other programs in Office, but it depends which version of Office you have

From: [http://en.wikipedia.org/wiki/Office\\_2010](http://en.wikipedia.org/wiki/Office_2010)

# Where to Find Microsoft Office

- What about HKUST?
  - Office 2010 is installed in all the ITSC Barns
  - Office 2010 is installed in all the CS labs
- What about your own machine?
  - Usually you get Office when you buy a new laptop
  - If not, you can probably buy a cheap student version at the start of the academic year – but this offer is closed now!



The advertisement for Microsoft Office University features a yellow and white background. On the left, there is a box for 'Office University' with a list of included software: Word, Excel, PowerPoint, Outlook, OneNote, Access, and Publisher. A circular badge with a mouse icon and the text 'FREE GIFT' is positioned next to the box. To the right, the Microsoft logo is followed by the text 'Microsoft Office University'. Below this, a paragraph states: 'Microsoft Office University gives you the tools you need to tackle every assignment, presentation, and group project.' Further down, it says 'Software Included:' followed by icons for Word, PowerPoint, Excel, Outlook, OneNote, Access, and Publisher. The price is listed as '32-bit / 64-bit (Eng / T. Chi) Program Price: HK\$ 799'. An 'Order Now' button is located at the bottom right. The text 'For University Students and Staff Only' is in the top right corner.

For University Students and Staff Only

Microsoft® Office University

Microsoft Office University gives you the tools you need to tackle every assignment, presentation, and group project.

Software Included:

Word PowerPoint Excel Outlook OneNote Access Publisher

32-bit / 64-bit (Eng / T. Chi) Program Price: HK\$ 799

Order Now

# Versions of Office

- Every few years an improved version of Office is released
- For example, next semester UST will (probably) move to Office 2013

*... older versions ...*



Microsoft Office 2003



Microsoft Office 2007



Microsoft Office 2010



*... future versions ...*



- When you use the most recent versions you have to be careful when you save files
- If you save some work which has the latest 'new' features, it probably can't be read by someone using an older version of Office

# The Most Common Spreadsheets

- In COMP1022Q we focus on *spreadsheets* – how to use them and how to program them



- Microsoft Excel – *this course*
  - Part of Microsoft Office, costs money
  - Computer based



- Calc
  - Part of OpenOffice, which is free
  - Very similar to Microsoft Excel
  - Computer based, like Excel

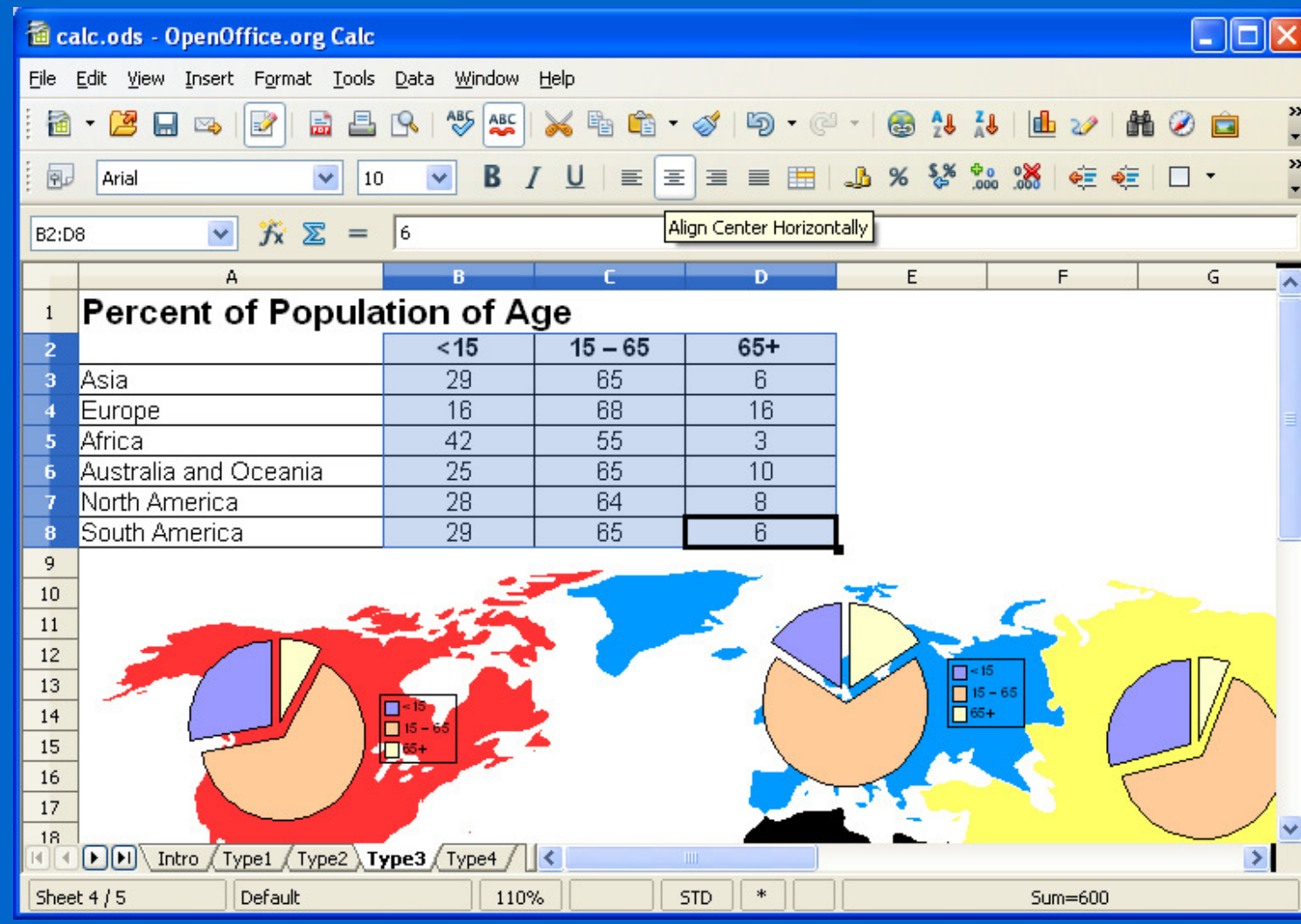


- The Google documents spreadsheet
  - Free
  - Web based (use any browser)



# The OpenOffice Calc Program

- Here is an example of Calc, which can be downloaded as part of OpenOffice from <http://www.openoffice.org>



- It looks extremely similar to Excel...
- This is because the people who make Calc want everyone to use it instead of Excel



# Simple Example of a Google Spreadsheet

[Gmail](#) [Calendar](#) [Documents](#) [Reader](#) [Web](#) [more](#) ▼

Google docs Lamma trip Private to me + 1 more

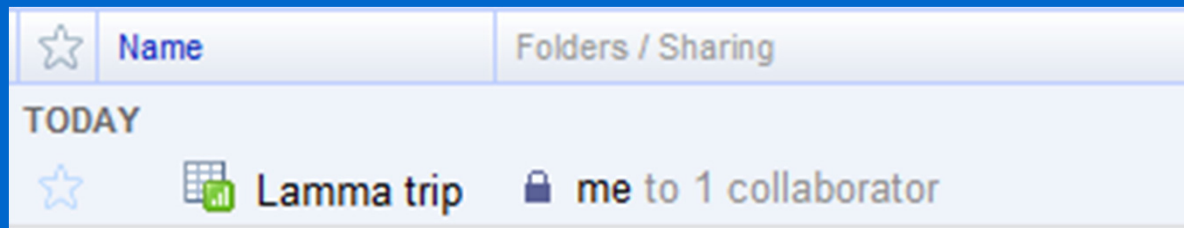
File Edit View Insert Format Form Tools Help

Formula:

	A	B	C	D	E	F
1	LAMMA ISLAND TRIP					
2		Event	Location(s)	Time	Cost per person	Related links/ notes
3	Day 1		Central pier			
4		Fast ferry to Sok Kwu Wan	Outlying Islands Ferry Pier No. 4 (may have changed)	1120-1150	?	25 mins for fast ferry
5		Look around Sok Kwu Wan	Sok Kwu Wan	1150-1230		
6		Lunch at Sok Kwu Wan	Sok Kwu Wan	1230-1315	30	
7		40 mins walk to Lo So Shing beach (shallow), see 'kamikaze caves' on the way	Concrete path	1315-1355		
8		Swim at Lo Su Shing beach	Lo Su Shing beach	1355-1600		Beach - <a href="http://en.wikipedia.org/wiki/Beaches_of_Hong_Kong#33._Lamma_Island">http://en.wikipedia.org/wiki/Beaches_of_Hong_Kong#33._Lamma_Island</a>
9		90 mins walk to Yung Shue Wan, via pagoda, buy from bean curd lady	Concrete path	1600-1730		
10		Look around shops	Yung Shue Wan	1730-1800		
11		Supper (could be BBQ at hotel, or at BBQ pits)	Yung Shue Wan	1800-1900	40	
12	Day 2	Stay at Dollarful Holiday Resort	Sha Po Old Village, near Yung Shue Wan	1900-2100	200	<a href="http://www.88db.com.hk/hk/views/postDetails.aspx?PostID=65742">http://www.88db.com.hk/hk/views/postDetails.aspx?PostID=65742</a>
13		Breakfast at Yung Shue Wan	Yung Shue Wan	0900-1000	30	
14		Ferry from Yung Shue Wan to Central	Yung Shue Wan	1045/1145/1245	?	25 mins for fast ferry
15		Possibility: on second day, swim at beach near Yung Shue Wan, eat lunch at Yung Shue Wan, take later ferry				
16		Possibility: eat at Pak Kok Tsuen (any restaurants?) instead of Sok Kwu Wan				
17				Total cost per person	300	

# Google Documents Spreadsheet

- It looks similar to Excel, does the same basic things
- The big advantage over Excel is that it is very easy to share a document with other people over the Internet:



- It can also do advanced spreadsheet programming
- However, it does not use the VBA language used by Excel
- Instead, Google developed their own programming language, which is quite different to VBA

# This Course

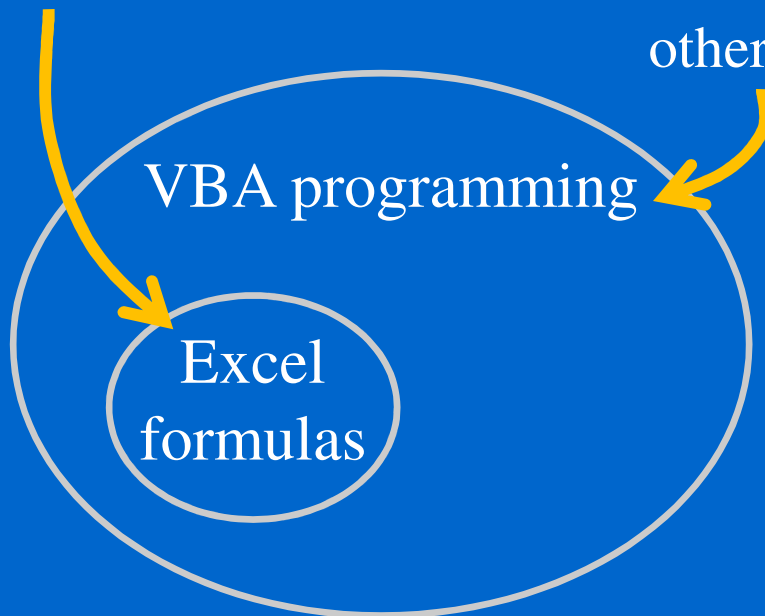


- In this course we focus on Microsoft Excel
- It is the most commonly used spreadsheet program around the world
- It is the ‘standard’ for spreadsheets
- We will look at how to use Excel both with and without VBA programming
- Because Excel is useful for lots of labs/projects/jobs etc, you will probably find this is one of the most useful courses you will take

# Doing Things in Excel



- Many things can be done using Excel formulas (no need to do any programming)
- Some things can't be done using Excel formulas, you have to program them using VBA
- Everything you can do with Excel formulas can be done with VBA programming, and a lot of other things as well



- However, writing Excel formulas is usually less trouble than writing VBA code
- So if you know something can be done using Excel formulas, you would usually do that, and not consider any VBA programming