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

Versions of Office

. . . older versions . . .

⇩

Microsoft Office 2003

⇩

Microsoft Office 2007

⇩

Microsoft Office 2010

⇩

Microsoft Office 2013

⇩

. . . future versions . . .

- Every few years an improved version of Office is released

- 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

Editions of Office

⇩

- Office has many different editions (different prices and features)

- You can see that Word and Excel are included in every edition

- There are other programs in Office, but it depends which edition of Office you have

	Office RT	Home & Student	Home & Business	Standard	Professional	Professional Plus
Availability	Windows RT	Retail, OEM	Retail, OEM	Volume licensing	Retail, OEM	Volume licensing
Maximum users	1	1	1	As licensed	1	As licensed
Devices per user	1	1	1	As licensed	1	As licensed
Commercial use allowed?	Separate[2]	No	Yes	Yes	Yes	Yes
Word	Yes[1]	Yes	Yes	Yes	Yes	Yes
Excel	Yes[1]	Yes	Yes	Yes	Yes	Yes
PowerPoint	Yes[1]	Yes	Yes	Yes	Yes	Yes
OneNote	Yes[1]	Yes	Yes	Yes	Yes	Yes
Outlook	Pending[3]	No	Yes	Yes	Yes	Yes
Publisher	No	No	No	Yes	Yes	Yes
Access	No	No	No	No	Yes	Yes
InfoPath	No	No	No	No	No	Yes
Lync	No	No	No	No	No	Yes
SharePoint Designer	No	No	No	No	No	No
Project Has multiple editions	No	No	No	No	No	No
Visio Has multiple editions	No	Viewer	Viewer	Viewer	Viewer	Viewer

From: http://en.wikipedia.org/wiki/Office_2013

Where to Find Microsoft Office

- What about HKUST?
  - Office 2013 is installed in all the ITSC Barns
  - Office 2013 is installed in all the CS labs

- What about your own machine?
  - You may get Office when you buy a new laptop
  - If not, you can probably buy a 'cheap' student edition

Office Home & Student 2013

Accomplish more for home and homework

Best for families who want Office on one PC

HK$1,099.00   Buy now

See features | FAQ

Compatible only with Windows 7 or later

How about Office 365?

- Office 365 is a version of Microsoft Office which is highly integrated with Office Web features

- You cannot really buy it, you can only subscribe to the software on the Web

- After subscription you can then install the latest Office programs

- In our course, we do not use any kind of Web features from Office 365

…and Mac?

- Mac has its own Microsoft Office version

- At the moment it is Microsoft Office 2011 for Mac

- Although Mac Office 2011 and Windows Office 2013 look very similar they are not the same

- For example, some lab exercises of the course do not work with the Mac Office

I really only have a Mac

- So what can you do if you only have a Mac?

- You can
  - use the PCs in the computer barns or CS labs
  - use Virtual Barn from ITSC: http://itsc.ust.hk/services/academic-teaching-support/facilities/virtual-barn/
  - install Windows and Office in your Mac using Boot Camp: http://www.apple.com/support/bootcamp/

The Most Common Spreadsheets

- In COMP1022Q we focus on *spreadsheets* – how to use them and how to program them. Some examples:

  - Microsoft Excel – *this course*
    - Part of Microsoft Office, costs money
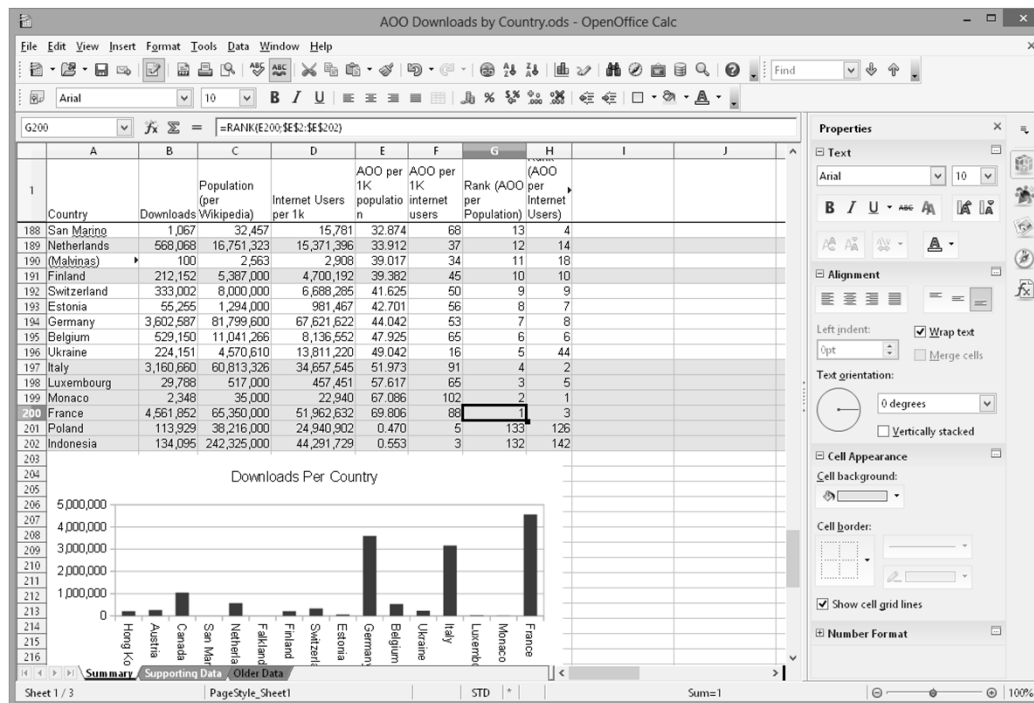   - Computer based
  - Calc
    - Part of OpenOffice, which is free
    - Very similar to Microsoft Excel
    - Computer based, like Excel
  - The Google documents spreadsheet
    - Free
    - Web based (use any browser)

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

Google docs   Lamma trip   🔒 Private to me + 1 more

File   Edit   View   Insert   Format   Form   Tools   Help

🖨 ↶ ↷ 📷▾ 🖌 | $ % 123▾ | 10pt▾ | **B** A̶b̶c̶ **A**▾ ▦▾ ▦▾ | ≡▾ ▦ ⇥ Σ ▾ ▥

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**	Fast ferry to Sok Kwu Wan	Central pier Outlying Islands Ferry Pier No. 4 (may have changed)	1120-1150	?	25 mins for fast ferry
4		Look around Sok Kwu Wan	Sok Kwu Wan	1150-1230		
5		Lunch at Sok Kwu Wan	Sok Kwu Wan	1230-1315	30	
6		40 mins walk to Lo So Shing beach (shallow), see 'kamikaze caves' on the way	Concrete path	1315-1355		
7		Swim at Lo Su Shing beach	Lo Su Shing beach	1355-1600		Beach - http://en.wikipedia.org /wiki/Beaches_of_Hong_Kong#33._ _Lamma_Island
8		90 mins walk to Yung Shue Wan, via pagoda, buy from bean curd lady	Concrete path	1600-1730		
9		Look around shops	Yung Shue Wan	1730-1800		
10		Supper (could be BBQ at hotel, or at BBQ pits)	Yung Shue Wan	1800-1900	40	
11		Stay at Dollarful Holiday Resort	Sha Po Old Village, near Yung Shue Wan	1900-2100	200	http://www.88db.com.hk/hk/views /postDetails.aspx?PostID=65742
12	**Day 2**	Breakfast at Yung Shue Wan	Yung Shue Wan	0900-1000	30	
13		Ferry from Yung Shue Wan to Central	Yung Shue Wan	1045/1145/1245	?	25 mins for fast ferry
14						
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:
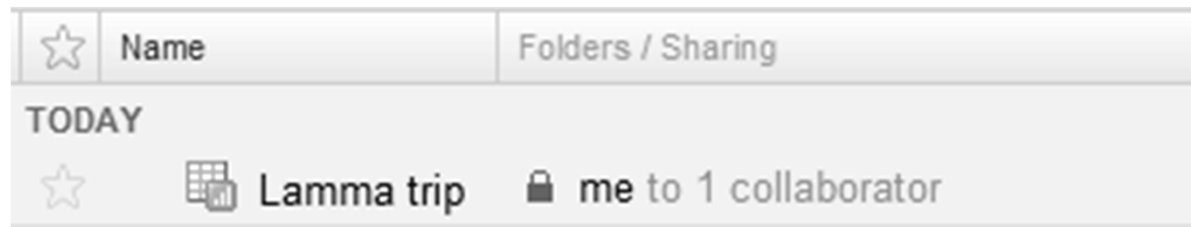
- It can also do advanced spreadsheet programming

- 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 to be 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

VBA programming
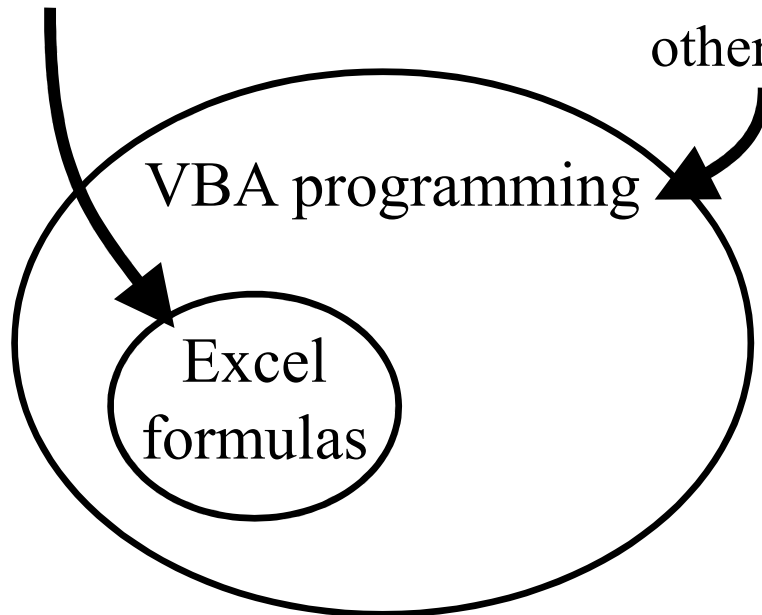
Excel formulas

- 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