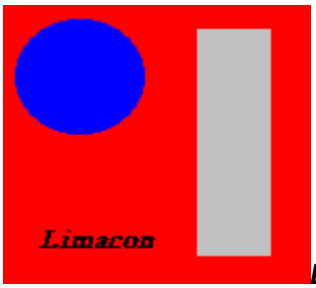


Developers of Administration Applications for Schools

Dear Customer

Thank you for purchasing The Student Sorting Kit 2010. Please note that the CD has been swept for all viruses known up to the time of dispatch.

We are confident you will find this application easy to use. However, if you have any problems at all, contact us at

Email: limacon@btinternet.com Telephone: 020 8881 2775

We trust you will find this application a useful and time saving tool. It was designed in response to requests from teachers and now over 1800 secondary schools in the UK alone are using it. A selection of their feedback comments is given in the file "Feedback and History" supplied with the program.

We would value any comments you may have as to how it could be improved. Feel free to contact us with comments or requests.

Installation Instructions

- Place the CD into your drive
- If your CD is set to "auto-play" the installation will begin
- If the installation routine does not begin automatically then click on **START** and choose **RUN.** Type in the line "**e:\sortkit.exe**" and click **OK** (if your CD drive is not lettered "**e**:" then choose the appropriate letter)
- Answer the questions and read the licence agreement. If you accept the conditions, continue with the installation
- You will be asked to choose where to place the files. We recommend choosing the usual location of your Excel documents. You can do this using the "Browse" button. After you have done this, all the files will be copied to this location. No other changes will be made to the settings of your computer.

Kind regards

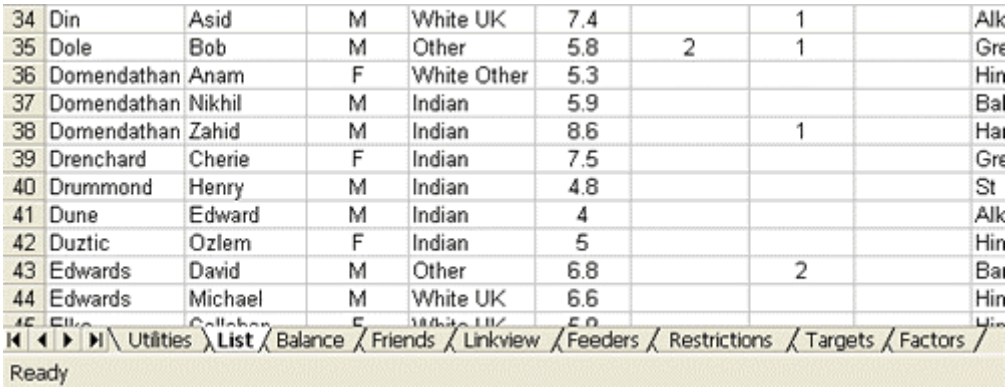
Paul Vant (Limacon)

TABLE OF CONTENTS

Instructions for using the Student Sorting Kit

Open your version of Microsoft Excel. Then open the file "Student Sorting Kit 2010" now residing on your PC's hard drive. Please ensure you choose to ***enable macros*** when asked. Note that the latest versions of Microsoft Office from 1997 to 2003 require security settings to be set to medium to activate this dialogue. Excel 2007 requires you to give permission for macros to run using the "Trust Center". For instructions on how to enable / allow macros to run, see Appendix B and Appendix D.

The application has nine spreadsheets known as *Utilities, List, Balance, Friends, Linkview, Feeders, Restrictions, Targets* and *Factors*. You can switch from one to another by clicking on their names at the bottom of the sheets (see below). If you click on the *Utilities* sheet you will be taken back to the *List* sheet but with a control panel activated from which you can perform your chosen operations. You can disengage this control panel without performing any routines by clicking the command button labelled "Return to Worksheets".



34	Din	Asid	M	White UK	7.4		1		Alk
35	Dole	Bob	M	Other	5.8	2	1		Gre
36	Domendathan	Anam	F	White Other	5.3				Hin
37	Domendathan	Nikhil	M	Indian	5.9				Bal
38	Domendathan	Zahid	M	Indian	8.6		1		Har
39	Drenchard	Cherie	F	Indian	7.5				Gre
40	Drummond	Henry	M	Indian	4.8				St
41	Dune	Edward	M	Indian	4				Alk
42	Duztic	Ozlem	F	Indian	5				Hin
43	Edwards	David	M	Other	6.8		2		Bar
44	Edwards	Michael	M	White UK	6.6				Hin

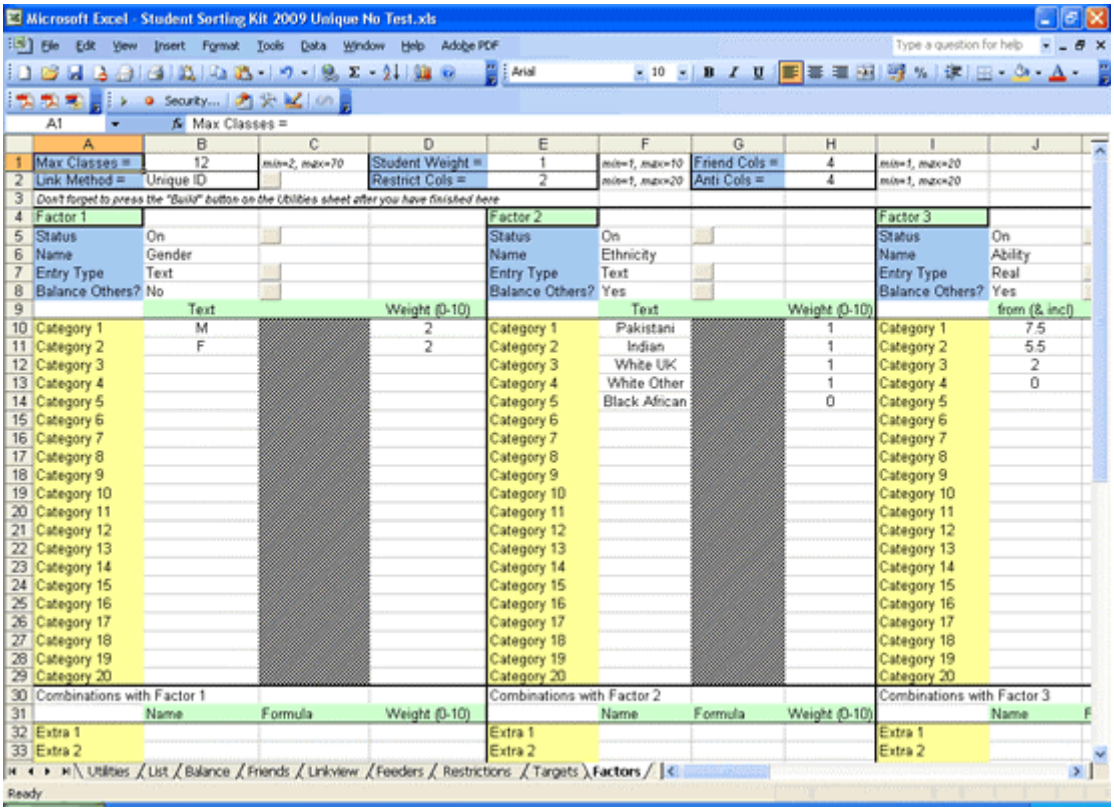
The file will open at the student *List* sheet where you will see the start of a fictitious new intake. These have been supplied so that you can practise using the utility and quickly appreciate its power. If you wish to see all the students and their details, scroll down and across the page.

Important notes

To preserve the full functionality of Excel for you, we have only protected the *Utilities* sheet. However, this means there are certain actions you can take that will prevent the Kit from working properly. **It is vital you do not attempt to manually change the structure of the sheets by deleting or adding entire columns or header rows especially in the case of the *Factors* sheet**. (Your customisation of the List Sheet is achieved by setting up your own Factors – see Page 4.) However, as long as you regularly perform a backup you can always recover by opening a fresh copy of the program and copying and pasting your student data into it.

We strongly recommend you use "Save As" to make another copy of the Kit (saved under a different name) so that, if you need to recover, you can simply transfer your student information into the backup copy. Note that when you use "Save As" to produce a copy, both the spreadsheets and the Student Sorting routines are saved. In Excel 2007 we recommend you use the Excel 97-2003 Workbook format.

The Factors sheet



This is the page you use to build your own customised version of the sorting application. Do not change the structure of this page by deleting entire rows or columns. The following information details all the options you have and how to input your choices:

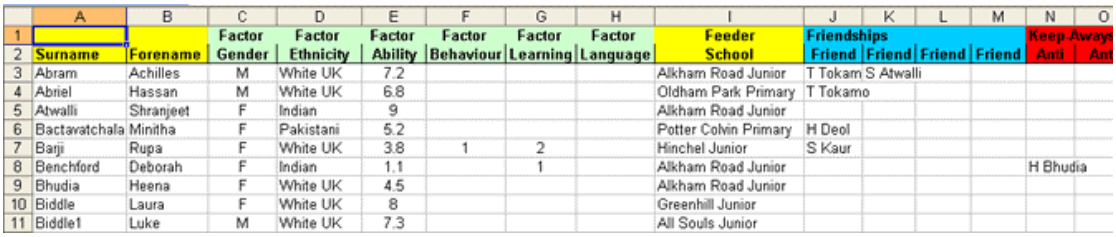
General Options		
Option	Meaning & Restrictions	How to Change
Max Classes =	*The maximum number of classes you wish to create in any particular sort (minimum of 2)*	*Type the number in cell B1*
Link Method =	*The method you want to use to link students (Initial SPACE Surname or Unique ID). Further details on P.5*	*Click the grey button * in cell C2*
Student Weight =	***Always leave this as 1**. You can increase it at a later stage if your class sizes need better balancing*	*Type the number in cell E1*
Restrict Cols =	*The number of Restriction Elements you require (e.g. if your sort is affected by Language Choice, you will need at least 1 restriction element)*	*Type the number in cell E2*
Friend Cols =	*The number of Friend columns you wish to have on the List sheet*	*Type the number in cell H1*
Anti Cols =	*The number of Anti (Keep-Away) columns you wish to have on the List sheet*	*Type the number in cell H2*

** If you find that the grey buttons do not function as described here, it is very likely you are in "Design Mode". Click the setsquare and ruler button (*  *usually found with the Visual Basic Editor) to exit Design Mode.*

Choosing the Link Method

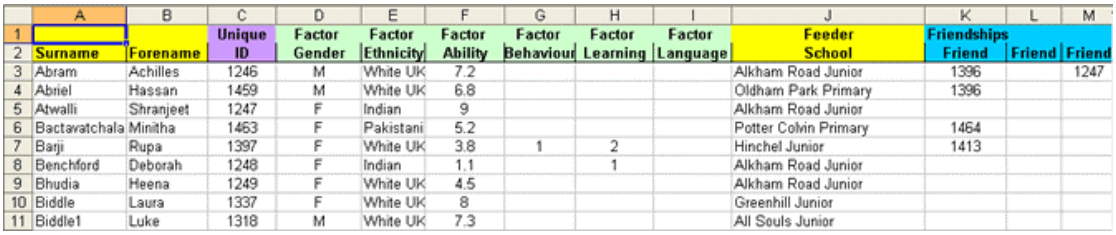
You have a choice of two methods of indicating associations (friendships and keep-aways) between students. They are

1. "Intial SPACE Surname" - To indicate that Tobechi Tokamo is a friend of Achilles Abram, you type "T Tokamo" in one of Achilles' ***Friend*** cells.



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1			Factor	Factor	Factor	Factor	Factor	Factor	Feeder	Friendships				Keep Aways	
2	Surname	Forename	Gender	Ethnicity	Ability	Behaviour	Learning	Language	School	Friend	Friend	Friend	Friend	Anti	Ant
3	Abram	Achilles	M	White UK	7.2				Alkham Road Junior	T Tokam	S Atwalli				
4	Abriel	Hassan	M	White UK	6.8				Oldham Park Primary	T Tokamo					
5	Atwalli	Shranjeet	F	Indian	9				Alkham Road Junior						
6	Bactavatchala	Minitha	F	Pakistani	5.2				Potter Colvin Primary	H Deol					
7	Barji	Rupa	F	White UK	3.8	1	2		Hinchel Junior	S Kaur					
8	Benchford	Deborah	F	Indian	1.1		1		Alkham Road Junior					H Bhudia	
9	Bhudia	Heena	F	White UK	4.5				Alkham Road Junior						
10	Biddle	Laura	F	White UK	8				Greenhill Junior						
11	Biddle1	Luke	M	White UK	7.3				All Souls Junior						

2. "Unique ID" - If Tobechi Tokamo has a Unique ID of "152" then you can make him a friend of Achilles Abram by typing "152" in one of Achilles' ***Friend*** cells



	A	B	C	D	E	F	G	H	I	J	K	L	M
1			Unique	Factor	Factor	Factor	Factor	Factor	Factor	Feeder	Friendships		
2	Surname	Forename	ID	Gender	Ethnicity	Ability	Behaviour	Learning	Language	School	Friend	Friend	Friend
3	Abram	Achilles	1246	M	White UK	7.2				Alkham Road Junior	1396		1247
4	Abriel	Hassan	1459	M	White UK	6.8				Oldham Park Primary	1396		
5	Atwalli	Shranjeet	1247	F	Indian	9				Alkham Road Junior			
6	Bactavatchala	Minitha	1463	F	Pakistani	5.2				Potter Colvin Primary	1464		
7	Barji	Rupa	1397	F	White UK	3.8	1	2		Hinchel Junior	1413		
8	Benchford	Deborah	1248	F	Indian	1.1		1		Alkham Road Junior			
9	Bhudia	Heena	1249	F	White UK	4.5				Alkham Road Junior			
10	Biddle	Laura	1337	F	White UK	8				Greenhill Junior			
11	Biddle1	Luke	1318	M	White UK	7.3				All Souls Junior			

Options for Each Factor		
Option	Meaning & Restrictions	How to Change
Status	*Turns the Factor On (if you want to use) or Off (if you don't).*	*Click the grey button in cell C5, G5 etc*
Name	*The name you wish to give the Balancing Factor (e.g. Gender, Ability etc)*	*Type the name in cell B6, F6 etc*
Entry Type	*The type of data you will be using (Text, Integer or Real)*	*Click the grey button in cell C7, G7 etc*
	Choose Text if you want to use letters or a mixture of numbers and letters (e.g. M, F, White UK, S1, 5P etc) *Fill in the text categories and their weights under the headings*	
	Choose Integer if you want to use whole numbers (1, 4, 102 etc). Fill in the integer categories and their weights under the headings	
	Choose Real if you want to use any numbers and then balance the students across different ranges (e.g. 0 to 2.5, 2.5 to 5.0, 5.0 to…. etc) Fill in the "from (& incl)" and "to (not incl)" and their weights under the headings. "from (& incl)" is the minimum, "to (not incl)" is the maximum	
Balance Others?	*ON results in the "Others" being forcibly balanced. Only choose ON if you really need them balanced*	*Click the grey button in cell C8, G8 etc*

In each Factor you can include up to 20 categories - just type in the categories in the appropriate places marked by the headers "Text", "Integer" and "from (& incl)" "to (not incl)". Each category requires you to give it a weight. You can type in a number from 0 to 10:

0 if you want the category displayed but do not require it to be balanced
1 the recommended starting setting
2-10 if you require the program to give increased significance to trying to balance the distribution of students in this category

Each factor has 10 optional "Combination" Factors allowing you to indicate that you also wish to balance the sum of more than one factor. For example, if you wished to balance the total number of students who are "White UK" and "White Other" you could create an entry in Factor 2 as follows

Name	Formula	Weight
Total White	F2C3,F2C4	1

The formula indicates you want to balance the sum of Factor 2 Category 3 and Factor 2 Category 4. (Note that the comma is not an essential part of the formula)

You can even combine categories from different factors as in the example supplied on the disk.

Name	Formula	Weight
Total Beh/Learning	F4C1,F4C2,F5C1,F5C2	1

The formula balances the total number of students with behaviour and learning problems (Factor 4 Category 1 plus Factor 4 Category 2 plus etc.)

Building Your Customised Sorting Application

Once you have made all your choices click on the *Utilities* sheet and press the "Build" button. The program will then check that your instructions are valid. If it finds an error the problem will be highlighted and a suggestion as to how to correct it, displayed. If all information is deemed valid the *List, Balance, Feeders, Restrictions* and *Targets* sheets will be rebuilt and the chosen settings maintained (even after closing the program) until you again choose to rebuild the application.

Examples of Student Sorting Kit Customisations

School 1

This school is a mixed comprehensive, taking in 246 students the majority of whom are classed as White UK, Asian Pakistani or Asian Indian. There is a significant intake of children with special needs. Five feeder schools supply the majority of children. The Head of Year 7 decides to categorise the children's ability as A, B, C or D and the level of Special Need as 1, 2, 3, 4 or 5. She declares 4 factors as follows:

Factor 1			Factor 2			Factor 3			Factor 4		
Status = On			Status = On			Status = On			Status = On		
Name = Gender			Name = Ethnic			Name = Ability			Name = Special N		
Type = Text			Type = Text			Type = Text			Type = Integer		
Text		Wt	Text		Wt	Text		Wt	Int		Wt
M		2	Wh		1	A		1	5		1
F		2	Pa		1	B		1	4		1
			In		1	C		1	3		1
									2		1
									1		1

When running the sorting routine she chooses to balance 5 feeder schools.

School 2

The Head of Year at this boys' grammar school likes to evenly distribute the "talents" and academic abilities evenly across the year. For academic ability he uses a percentage score in a test taken by all potential students. He declares

Factor 1			Factor 2			Factor 3		
Status = On			Status = On			Status = On		
Name = Score			Name = Music			Name = Sport		
Type = Real			Type = Integer			Type = Integer		
from	to	Wt	Int		Wt	Int		Wt
0	40	1	1		1	1		1
40	60	1	2		1	2		1
60	80	1	3		1	3		1
80	100	1						

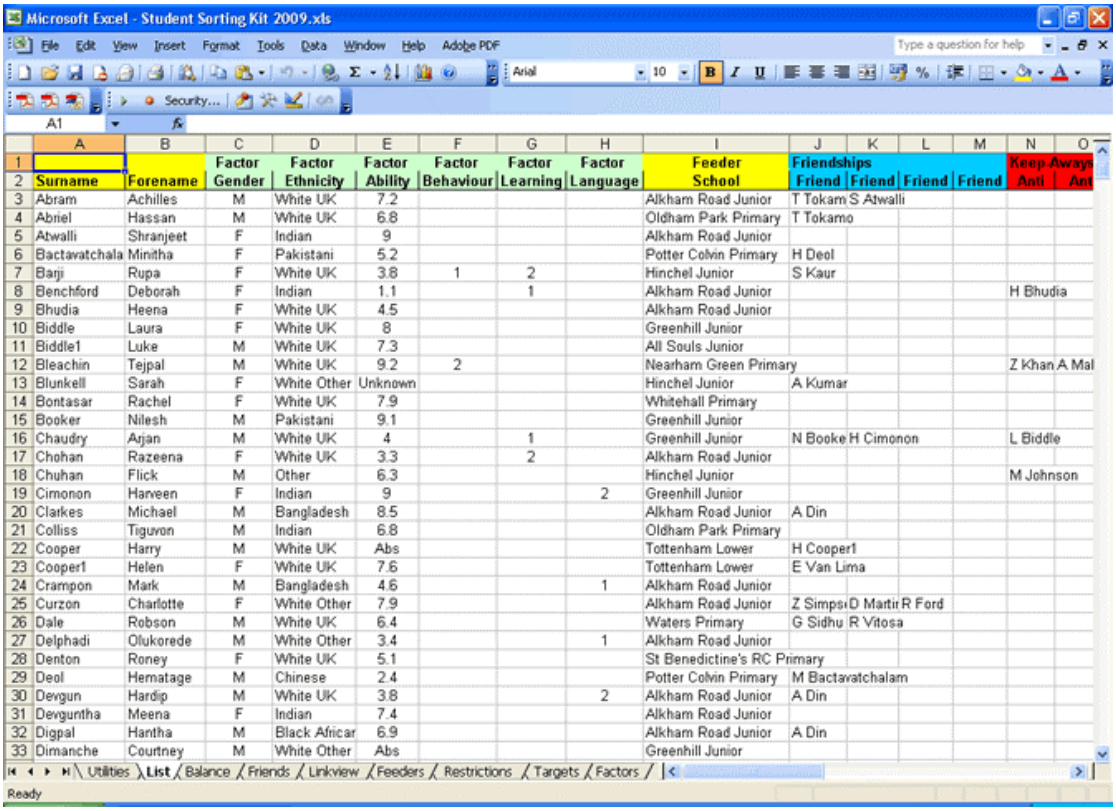
School 3

This school makes use of Key Stage 2 scores in sorting their students

Factor 1			Factor 2			Factor 3			Factor 4		
Status = On			Status = On			Status = On			Status = On		
Name = Gender			Name = English			Name = Maths			Name = Science		
Type = Text			Type = Real			Type = Real			Type = Real		
Text		Wt	from	to	Wt	from	to	Wt	from	to	Wt
M		1	0	30	1	0	40	1	0	60	1
F		1	30	50	1	40	60	1	60	100	1
			50	70	1	60	80	1			
			70	100	1	80	100				

The use of ranges (Data Type = Real) here is interesting. When you declare a range keep in mind that you don't want too few students in any one range thus making balancing them pointless.

The List sheet

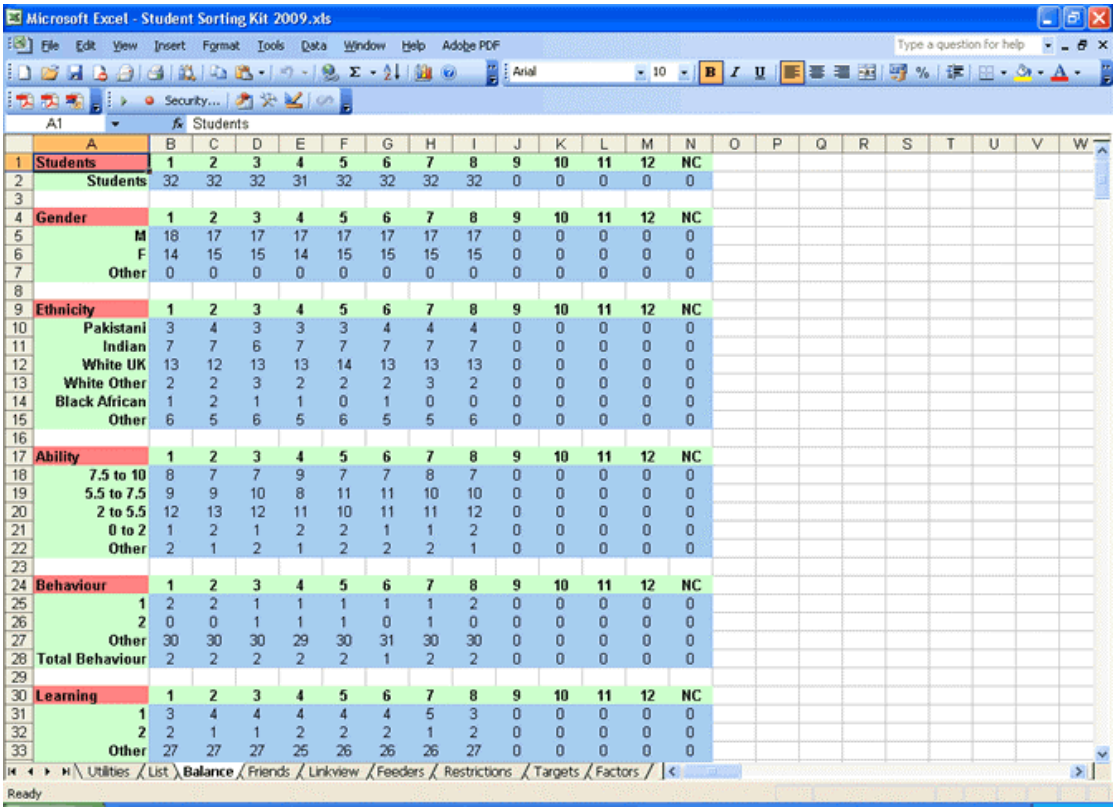


	Factor	Factor	Factor	Factor	Factor	Factor		Friendships				Keep-Aways	
Surname	Forename	Gender	Ethnicity	Ability	Behaviour	Learning	Language	School	Friend	Friend	Friend	Friend	Anti	Ant
Abram	Achilles	M	White UK	7.2				Alkham Road Junior	T Tokarn	S Atwalli				
Abriel	Hassan	M	White UK	6.8				Oldham Park Primary	T Tokarno					
Atwalli	Shranjeet	F	Indian	9				Alkham Road Junior						
Bactavatchala	Minitha	F	Pakistani	5.2				Potter Colvin Primary	H Deol					
Barji	Rupa	F	White UK	3.8	1	2		Hinchel Junior	S Kaur					
Benchford	Deborah	F	Indian	1.1		1		Alkham Road Junior					H Bhudia	
Bhudia	Heena	F	White UK	4.5				Alkham Road Junior						
Biddle	Laura	F	White UK	8				Greenhill Junior						
Biddle1	Luke	M	White UK	7.3				All Souls Junior						
Bleachin	Tejpal	M	White UK	9.2	2			Nearham Green Primary					Z Khan	A Mal
Blunkell	Sarah	F	White Other	Unknown				Hinchel Junior	A Kumar					
Bontasar	Rachel	F	White UK	7.9				Whitehall Primary						
Booker	Nilesh	M	Pakistani	9.1				Greenhill Junior						
Chaudry	Arjan	M	White UK	4		1		Greenhill Junior	N Booke	H Cimonon			L Biddle	
Chohan	Razeena	F	White UK	3.3		2		Alkham Road Junior						
Chuhan	Flick	M	Other	6.3				Hinchel Junior					M Johnson	
Cimonon	Harveen	F	Indian	9			2	Greenhill Junior						
Clarkes	Michael	M	Bangladesh	8.5				Alkham Road Junior	A Din					
Colliss	Tiguvon	M	Indian	6.8				Oldham Park Primary						
Cooper	Harry	M	White UK	Abs				Tottenham Lower	H Cooper1					
Cooper1	Helen	F	White UK	7.6				Tottenham Lower	E Van Lima					
Crampon	Mark	M	Bangladesh	4.6			1	Alkham Road Junior						
Curzon	Charlotte	F	White Other	7.9				Alkham Road Junior	Z Simpsi	D Martir	R Ford			
Dale	Robson	M	White UK	6.4				Waters Primary	G Sidhu	R Vitosa				
Delphadi	Olukorede	M	White Other	3.4			1	Alkham Road Junior						
Denton	Roney	F	White UK	5.1				St Benedictine's RC Primary						
Deol	Hematage	M	Chinese	2.4				Potter Colvin Primary	M Bactavatchalam					
Devgun	Hardip	M	White UK	3.8			2	Alkham Road Junior	A Din					
Devguntha	Meena	F	Indian	7.4				Alkham Road Junior						
Digpal	Hantha	M	Black Africar	6.9				Alkham Road Junior	A Din					
Dimanche	Courtney	M	White Other	Abs				Greenhill Junior						

This is where you input the details of your students. (You can save much time and energy here if you can obtain the names, feeder schools and ethnicities on disk and then just copy and paste them in.) The *List* sheet is divided into columns. Note the requirements for each column as shown in the table below.

Comment	Column Title	Requirements
Compulsory	**Surname**	*Any text. For more details on how to input, see P. 19*
Compulsory	**Forename**	*Any text. For more details on how to input, see P. 19*
Optional	**Unique ID**	*Any text or number unique to each student*
Balancing Factors	**Factor**	*Up to a maximum of twelve columns given over to various factors you wish to balance across your classes. For example, Ability, Special Needs, Test Scores, Ethnic Background etc.*
Compulsory	**Feeder School**	*Usually contains feeder names but can be left blank or used for other characteristics you wish to balance*
Friendship Columns	**Friend, Friend etc**	*Either names in the form of Initial SPACE Surname or Unique IDs. For more details on how to input see P. 19*
Keep-Away Columns	**Anti, Anti etc.**	*Either names in the form of Initial SPACE Surname or Unique IDs. For more details on how to input see P. 19*
Restriction Columns	**Restriction Element 1, etc.**	*Indicating students and their restrictions to certain groups/classes. For example, when a student's choice of language restricts their possible classes etc*
Compulsory	**Class**	*This column will be completed by the program but you can make manual changes after the Assign routine if you wish*
Compulsory	**Ignored Links**	*This column will be completed by the program to indicate any friendship or keep-away conditions it has been unable to meet in order to remain within your parameters*
Comment Columns	**No Title**	*Can be used to record any extra information about students. You can add your own column headings*

The Balance sheet



	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	**Students**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**NC**
2	**Students**	32	32	32	31	32	32	32	32	0	0	0	0	0
3														
4	**Gender**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**NC**
5	**M**	18	17	17	17	17	17	17	17	0	0	0	0	0
6	**F**	14	15	15	14	15	15	15	15	0	0	0	0	0
7	**Other**	0	0	0	0	0	0	0	0	0	0	0	0	0
8														
9	**Ethnicity**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**NC**
10	**Pakistani**	3	4	3	3	3	4	4	4	0	0	0	0	0
11	**Indian**	7	7	6	7	7	7	7	7	0	0	0	0	0
12	**White UK**	13	12	13	13	14	13	13	13	0	0	0	0	0
13	**White Other**	2	2	3	2	2	2	3	2	0	0	0	0	0
14	**Black African**	1	2	1	1	0	1	0	0	0	0	0	0	0
15	**Other**	6	5	6	5	6	5	5	6	0	0	0	0	0
16														
17	**Ability**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**NC**
18	**7.5 to 10**	8	7	7	9	7	7	8	7	0	0	0	0	0
19	**5.5 to 7.5**	9	9	10	8	11	11	10	10	0	0	0	0	0
20	**2 to 5.5**	12	13	12	11	10	11	11	12	0	0	0	0	0
21	**0 to 2**	1	2	1	2	2	1	1	2	0	0	0	0	0
22	**Other**	2	1	2	1	2	2	2	1	0	0	0	0	0
23														
24	**Behaviour**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**NC**
25	**1**	2	2	1	1	1	1	1	2	0	0	0	0	0
26	**2**	0	0	1	1	1	0	1	0	0	0	0	0	0
27	**Other**	30	30	30	29	30	31	30	30	0	0	0	0	0
28	**Total Behaviour**	2	2	2	2	2	1	2	2	0	0	0	0	0
29														
30	**Learning**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**NC**
31	**1**	3	4	4	4	4	4	5	3	0	0	0	0	0
32	**2**	2	1	1	2	2	2	1	2	0	0	0	0	0
33	**Other**	27	27	27	25	26	26	26	27	0	0	0	0	0

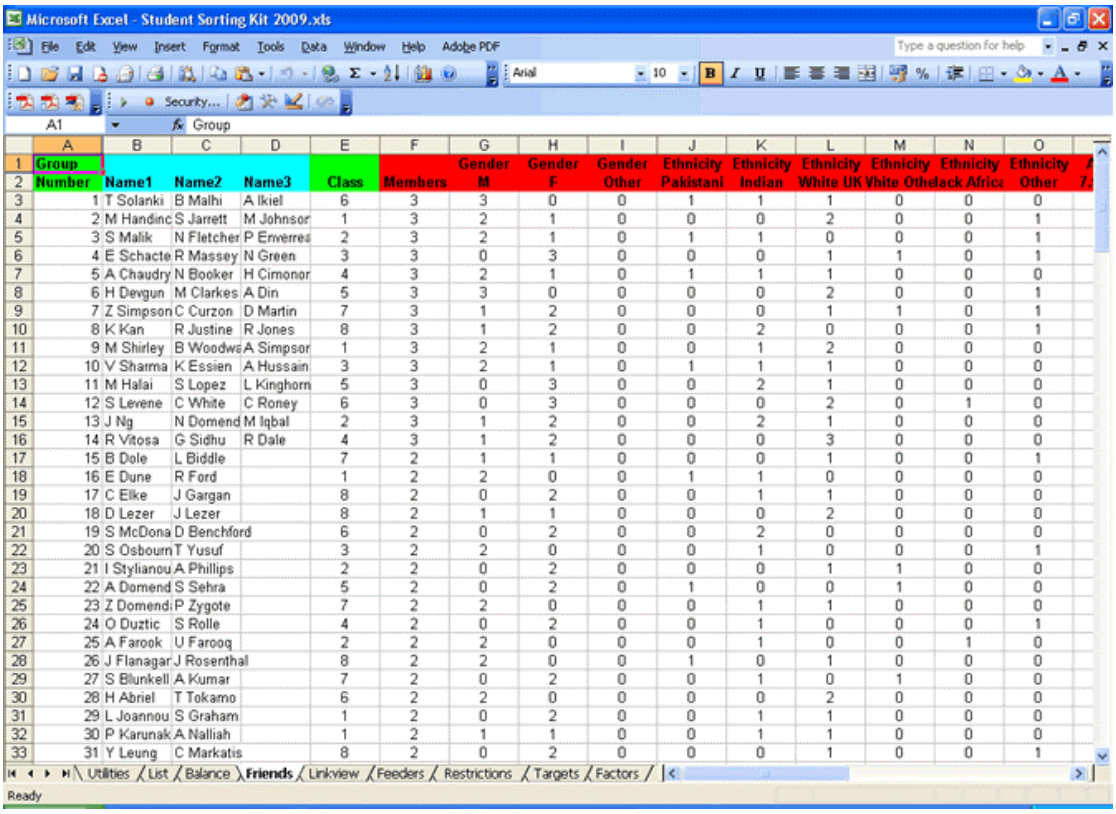
After the assignment procedure has been run this sheet will provide you with information regarding the distribution of each balancing factor and category across your classes. The first factor is the number of students in each class. The rest of the details are for you to decide on when building your customised sorting program. Each factor will contain an "Other" category to pick up any students who have information not matching any of your specified categories.

The student assignment routine will attempt to balance all categories evenly from class to class whilst adhering to your instructions on those students to keep together, those who should be apart and those who must be restricted to certain classes. If you attempt to do the impossible (such as assigning three “Keep-Aways” to two classes) the program will get as close as it can to an ideal solution and then identify any problems it couldn’t solve in the “Ignored Links” column.

The "**NC**" (No Class) column is always supplied so that you can see how many of each category you have in your cohort before you assign students to classes. To view this, just open the *Utilities* sheet and press the "Update Balances" button.

Note that if you have very few students in a category it may not be desirable to distribute them evenly. In this case you may want to go back to the *Factors* sheet and set the weighting for that category to zero so that the program concentrates on balancing the other more important categories.

The Friends sheet



Group Number	Name1	Name2	Name3	Class	Members	Gender M	Gender F	Gender Other	Ethnicity Pakistani	Ethnicity Indian	Ethnicity White UK	Ethnicity White Othe	Ethnicity Black Africa	Ethnicity Other
1	T Solanki	B Malhi	A Ikiel	6	3	3	0	0	1	1	1	0	0	0
2	M Handinc	S Jarrett	M Johnsor	1	3	2	1	0	0	0	2	0	0	1
3	S Malik	N Fletcher	P Enverres	2	3	2	1	0	1	1	0	0	0	1
4	E Schacte	R Massey	N Green	3	3	0	3	0	0	0	1	1	0	1
5	A Chaudry	N Booker	H Cimonor	4	3	2	1	0	1	1	1	0	0	0
6	H Devgun	M Clarkes	A Din	5	3	3	0	0	0	0	2	0	0	1
7	Z Simpson	C Curzon	D Martin	7	3	1	2	0	0	0	1	1	0	1
8	K Kan	R Justine	R Jones	8	3	1	2	0	0	2	0	0	0	1
9	M Shirley	B Woodwa	A Simpsor	1	3	2	1	0	0	1	2	0	0	0
10	V Sharma	K Essien	A Hussain	3	3	2	1	0	1	1	1	0	0	0
11	M Halai	S Lopez	L Kinghorn	5	3	0	3	0	0	2	1	0	0	0
12	S Levene	C White	C Roney	6	3	0	3	0	0	0	2	0	1	0
13	J Ng	N Domend	M Iqbal	2	3	1	2	0	0	2	1	0	0	0
14	R Vitosa	G Sidhu	R Dale	4	3	1	2	0	0	0	3	0	0	0
15	B Dole	L Biddle		7	2	1	1	0	0	0	1	0	0	1
16	E Dune	R Ford		1	2	2	0	0	1	1	0	0	0	0
17	C Elke	J Gargan		8	2	0	2	0	0	1	1	0	0	0
18	D Lezer	J Lezer		8	2	1	1	0	0	0	2	0	0	0
19	S McDona	D Benchford		6	2	0	2	0	0	2	0	0	0	0
20	S Osbourn	T Yusuf		3	2	2	0	0	0	1	0	0	0	1
21	I Stylianou	A Phillips		2	2	0	2	0	0	0	1	1	0	0
22	A Domend	S Sehra		5	2	0	2	0	1	0	0	1	0	0
23	Z Domend	P Zygote		7	2	2	0	0	0	1	1	0	0	0
24	O Duztic	S Rolle		4	2	0	2	0	0	1	0	0	0	1
25	A Farook	U Farooq		2	2	2	0	0	0	1	0	0	1	0
26	J Flanagar	J Rosenthal		8	2	2	0	0	1	0	1	0	0	0
27	S Blunkell	A Kumar		7	2	0	2	0	0	1	0	1	0	0
28	H Abriel	T Tokamo		6	2	2	0	0	0	0	2	0	0	0
29	L Joannou	S Graham		1	2	0	2	0	0	1	1	0	0	0
30	P Karunak	A Nalliah		1	2	1	1	0	0	1	1	0	0	0
31	Y Leung	C Markatis		8	2	0	2	0	0	0	1	0	0	1

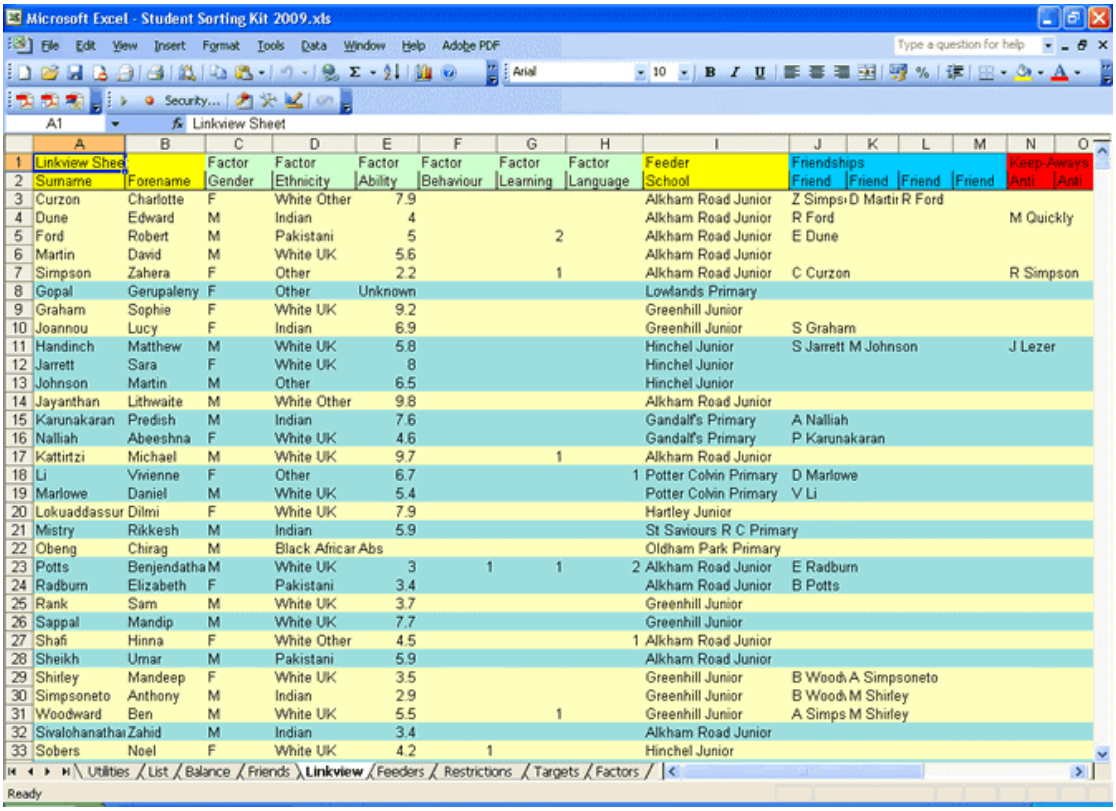
This page appears blank at first but will be cleared and refilled automatically every time a class assignment routine is run so do not make changes to this sheet. It will show the names of students in their friendship groups, the number of the class to which the group has been assigned and the 'character' of each friendship group as specified by you when you build the program.

The sheet can be viewed to help you make any manual alterations to classes after the assignment routine has been performed. If you decide to move a student manually from one class to another for a particular reason, this sheet provides a quick way to find out if the move will break up a positive friendship. **Manual changes must be made on the *List* sheet and not this sheet.**

If, after the assignment routine has been performed, you are dissatisfied with the result or realise that an omission had been made on the *List* sheet, then the *List* sheet can be edited and a new assignment routine performed during which the *Friends* sheet will be re-created.

Note that friendship groups are listed in an order representing the relative “flexibility of movement” of each group. Large friendship groups and students with tight restrictions will appear at the top. Lone students with no restrictions will appear at the bottom.

The Linkview sheet



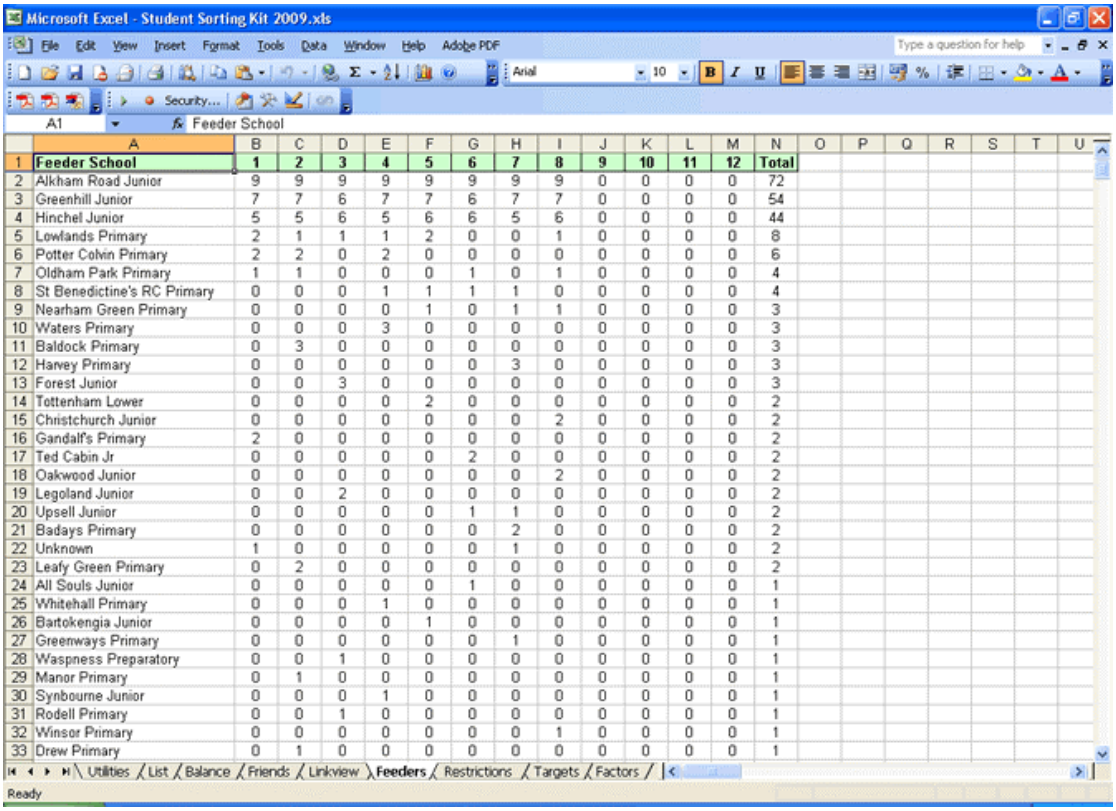
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	Linkview Shee		Factor	Factor	Factor	Factor	Factor	Factor	Feeder	Friendships				Keep-Aways	
2	Surname	Forename	Gender	Ethnicity	Ability	Behaviour	Learning	Language	School	Friend	Friend	Friend	Friend	Anti	Anti
3	Curzon	Charlotte	F	White Other	7.9				Alkham Road Junior	Z Simps	D Martir	R Ford			
4	Dune	Edward	M	Indian	4				Alkham Road Junior	R Ford				M Quickly	
5	Ford	Robert	M	Pakistani	5			2	Alkham Road Junior	E Dune					
6	Martin	David	M	White UK	5.6				Alkham Road Junior						
7	Simpson	Zahera	F	Other	2.2			1	Alkham Road Junior	C Curzon				R Simpson	
8	Gopal	Gerupaleny	F	Other	Unknown				Lowlands Primary						
9	Graham	Sophie	F	White UK	9.2				Greenhill Junior						
10	Joannou	Lucy	F	Indian	6.9				Greenhill Junior	S Graham					
11	Handinch	Matthew	M	White UK	5.8				Hinchel Junior	S Jarrett	M Johnson			J Lezer	
12	Jarrett	Sara	F	White UK	8				Hinchel Junior						
13	Johnson	Martin	M	Other	6.5				Hinchel Junior						
14	Jayanthan	Lithwaite	M	White Other	9.8				Alkham Road Junior						
15	Karunakaran	Predish	M	Indian	7.6				Gandalf's Primary	A Nalliah					
16	Nalliah	Abeeshna	F	White UK	4.6				Gandalf's Primary	P Karunakaran					
17	Kattirtzi	Michael	M	White UK	9.7			1	Alkham Road Junior						
18	Li	Vivienne	F	Other	6.7			1	Potter Colvin Primary	D Marlowe					
19	Marlowe	Daniel	M	White UK	5.4				Potter Colvin Primary	V Li					
20	Lokuaddassur	Dilmi	F	White UK	7.9				Hartley Junior						
21	Mistry	Rikkesh	M	Indian	5.9				St Saviours R C Primary						
22	Obeng	Chirag	M	Black Africar Abs					Oldham Park Primary						
23	Potts	Benjendatha	M	White UK	3	1	1	2	Alkham Road Junior	E Radburn					
24	Radburn	Elizabeth	F	Pakistani	3.4				Alkham Road Junior	B Potts					
25	Rank	Sam	M	White UK	3.7				Greenhill Junior						
26	Sappal	Mandip	M	White UK	7.7				Greenhill Junior						
27	Shafi	Hinna	F	White Other	4.5			1	Alkham Road Junior						
28	Sheikh	Umar	M	Pakistani	5.9				Alkham Road Junior						
29	Shirley	Mandeep	F	White UK	3.5				Greenhill Junior	B Wood	A Simpsoneto				
30	Simpsoneto	Anthony	M	Indian	2.9				Greenhill Junior	B Wood	M Shirley				
31	Woodward	Ben	M	White UK	5.5			1	Greenhill Junior	A Simps	M Shirley				
32	Sivalohanathai	Zahid	M	Indian	3.4				Alkham Road Junior						
33	Sobers	Noel	F	White UK	4.2	1			Hinchel Junior						

This page appears blank at first but will be filled when the “Analyse Current Friendship Links” button is pressed.

The procedure analyses all the friendship links you have specified on the *List* sheet and groups the linked children in a coloured band so that you can see very clearly all the friendships you have created intentionally or otherwise. In the above diagram, the first five students are coloured yellow showing that these five students are linked as friends in some way. The next child is in a blue band by herself and therefore has no friendship links at all.

If you refresh this sheet after the children have been assigned to classes, you will also be able to see which friendship groups have been maintained or broken by the assignment routine simply by examining the “Class” column on the right of the sheet. Of course, if you see anything you are not happy with, you can simply return to the *List* sheet, alter your friendship links and run the routines again.

The Feeders sheet



	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	**Feeder School**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**Total**
2	Alkham Road Junior	9	9	9	9	9	9	9	9	0	0	0	0	72
3	Greenhill Junior	7	7	6	7	7	6	7	7	0	0	0	0	54
4	Hinchel Junior	5	5	6	5	6	6	5	6	0	0	0	0	44
5	Lowlands Primary	2	1	1	1	2	0	0	1	0	0	0	0	8
6	Potter Colvin Primary	2	2	0	2	0	0	0	0	0	0	0	0	6
7	Oldham Park Primary	1	1	0	0	0	1	0	1	0	0	0	0	4
8	St Benedictine's RC Primary	0	0	0	1	1	1	1	0	0	0	0	0	4
9	Nearham Green Primary	0	0	0	0	1	0	1	1	0	0	0	0	3
10	Waters Primary	0	0	0	3	0	0	0	0	0	0	0	0	3
11	Baldock Primary	0	3	0	0	0	0	0	0	0	0	0	0	3
12	Harvey Primary	0	0	0	0	0	0	3	0	0	0	0	0	3
13	Forest Junior	0	0	3	0	0	0	0	0	0	0	0	0	3
14	Tottenham Lower	0	0	0	0	2	0	0	0	0	0	0	0	2
15	Christchurch Junior	0	0	0	0	0	0	0	2	0	0	0	0	2
16	Gandalf's Primary	2	0	0	0	0	0	0	0	0	0	0	0	2
17	Ted Cabin Jr	0	0	0	0	0	2	0	0	0	0	0	0	2
18	Oakwood Junior	0	0	0	0	0	0	0	2	0	0	0	0	2
19	Legoland Junior	0	0	2	0	0	0	0	0	0	0	0	0	2
20	Upsell Junior	0	0	0	0	0	1	1	0	0	0	0	0	2
21	Badays Primary	0	0	0	0	0	0	2	0	0	0	0	0	2
22	Unknown	1	0	0	0	0	0	1	0	0	0	0	0	2
23	Leafy Green Primary	0	2	0	0	0	0	0	0	0	0	0	0	2
24	All Souls Junior	0	0	0	0	0	1	0	0	0	0	0	0	1
25	Whitehall Primary	0	0	0	1	0	0	0	0	0	0	0	0	1
26	Bartokengia Junior	0	0	0	0	1	0	0	0	0	0	0	0	1
27	Greenways Primary	0	0	0	0	0	0	1	0	0	0	0	0	1
28	Waspness Preparatory	0	0	1	0	0	0	0	0	0	0	0	0	1
29	Manor Primary	0	1	0	0	0	0	0	0	0	0	0	0	1
30	Synbourne Junior	0	0	0	1	0	0	0	0	0	0	0	0	1
31	Rodell Primary	0	0	1	0	0	0	0	0	0	0	0	0	1
32	Winsor Primary	0	0	0	0	0	0	0	1	0	0	0	0	1
33	Drew Primary	0	1	0	0	0	0	0	0	0	0	0	0	1

This page appears blank at first but will be cleared and refilled every time a class assignment routine is run so do not make changes to this sheet. It shows the names of the feeder schools and the classes to which their children have been assigned.

You can also generate this list before or after a class assignment routine has been run using the “Update Balances and Feeders” button on the *Utilities* sheet.

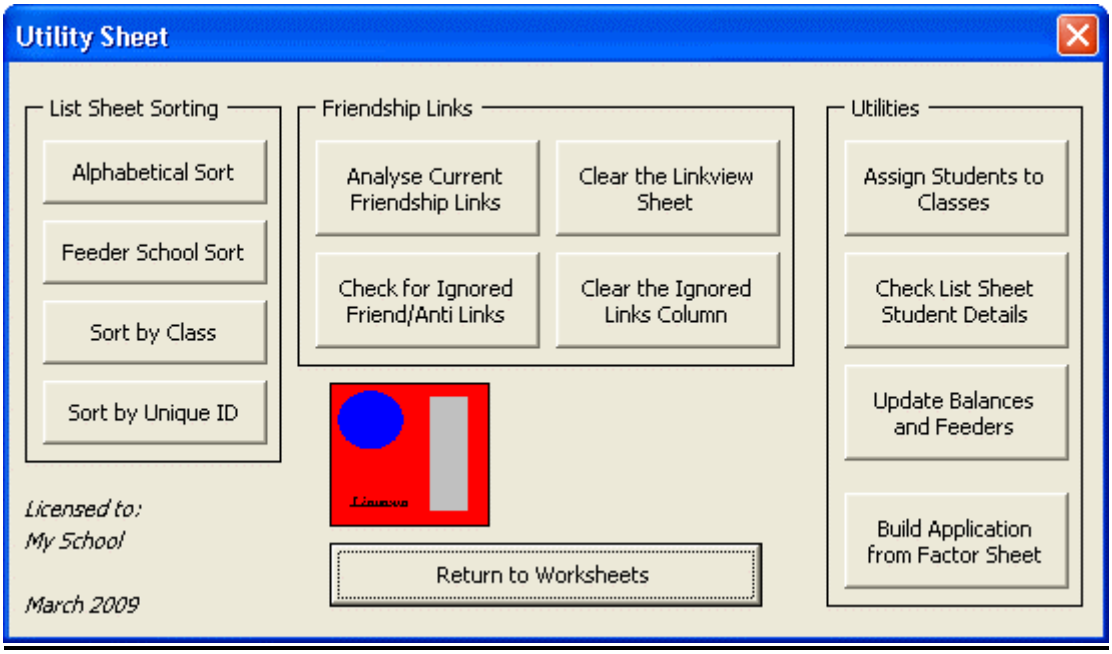
The sheet can be viewed to help you make an informed decision as to which, if any feeder schools you would like to balance evenly. In the example above you would perhaps desire to balance the three main feeders to avoid creating any tutor groups dominated by students from these schools.

Advice on balancing children from certain feeder schools

Before you assign students to classes you can obtain some useful information about feeder school numbers by pressing the “Update Balances and Feeders” button on the *Utilities* sheet. Having examined the *Feeders* sheet you may want to avoid a situation in which children from one feeder school dominate a particular tutor group. In this case you could choose to “evenly distribute students from some feeder schools” when running the assignment routine. You will then be asked to state, what you consider to be the number of main feeders for your intake (i.e. those supplying the most children, as shown at the top of the *Feeders* sheet).

Only choose to balance your main feeders. The more feeders you try to balance the less chance the program has of balancing your other factors.

The Utilities sheet



This is the sheet from which you will control all the procedures. It will activate when you click on the *Utilities* sheet tab. It consists of ten command buttons that you can click to perform the routine specified. The routines are as follows:

Command	Comments
Alphabetical Sort	*Sorts your student list alphabetically*
Feeder School Sort	*Sorts your students by feeder school so that you can decide if you want to keep certain students together. Also useful for identifying 'lone' students from certain feeder schools after assigning students*
Sort by Class	*Once the program has assigned class numbers this will sort them into alphabetical class lists*
Sort by Unique ID	*Sorts your students by Unique ID if you have chosen to use this method of linking students*
Assign Students to Classes	*When you have finished your student list and details, this will create balanced classes whilst maintaining positive friendships and breaking up negative ones. Don't worry, if you've missed an important detail on your list you can edit the list and run the routine again*
Check List Sheet Student Details	*Run this before you assign students. A check will be made to see if your student list contains ambiguities or inconsistencies. If a problem is identified, it will highlight the problem and ask you to edit the list before assigning students to classes (more details in the next section)*
Update Balances and Feeders	*Updates the Balance and Feeder sheets after you have made manual changes or if you simply want to calculate the number of students in each category or Feeder*
Build Application from Factor Sheet	*After using the Factors sheet to make all your choices about the way the program works, you press this button to create your own customised sorting program*
Analyse Current Friendship Links	*Refreshes the Linkview page so that you can see how children are linked as friends*
Clear the Linkview Sheet	*Clears the Linkview sheet*
Check for Ignored Friend/Anti Links	*Looks at class allocations and friendship/keep-away links simultaneously and indicates any ignored links in the "Ignored Links" column of the List sheet*
Clear the Ignored Links Column	*Clears the Ignored Links column on the List sheet*

More details on some of the "Utilities" sheet command buttons

"Student Detail Check**"** It is always advisable to run this procedure after you have entered the student details. It will save time in the long run! It performs the following functions:

If you have chosen 'Forename SPACE Surname' as your link method, it

- **Checks for possible ambiguities in your student list**. The program requires that no students have identical names when interpreted in the form "Initial" SPACE "Surname. For example Jerry Springer and Jack Springer would cause a problem as the program will identify them as the same person, J Springer. In this case the routine will highlight both names and ask you to make a note so that, after the check has finished, you can make an alteration such as changing Jerry Springer to Jerry Springer1 (J Springer1 in the friends or Keep-Away's column).
- **Checks for problems with Friends and Keep-Aways such as unidentified students, spelling mistakes and inconsistencies such as a student being listed as a Keep-Away to himself**.
- **Automatically deletes unnecessary spaces at the beginning, end and in the middle of names and codes that would otherwise cause problems with identification.**

If you have chosen "Unique ID" as your link method, it

- **Checks for possible duplication of unique IDs in your student list**.
- **Checks for problems with Friends and Keep-Aways such as unidentified students and inconsistencies such as a student being listed as a Keep-Away to himself**.

The routine will inform you through pop-up boxes when it has completed a check. Click OK to continue after every message. If a problem is identified the program will highlight the cell or row in which the problem lies and tell you the nature of the problem and ask you to make a note of it so that a change can be made after the routine is finished. If you wish to make adjustments immediately, you can choose to "*Cancel"* at any time.

"Check for Ignored Friend/Anti Links**"** can be used if you have chosen to make manual changes to the class of one or more students. It will examine every student to see if they have been placed away from a "Friend" or with a "Keep-Away", printing an "F" or "E" respectively in the "Ignored Links" column if either case has been identified. For example

If "E" is printed in the "Ignored Links" column then this student is in a class with one of their named Keep-Aways.
If "F" is printed in the "Ignored Links" column then this student is in a class that does not include one of their named Friends.
If a combination such as "FEE" is printed then there are three ignored links, one involving a Friend and two involving Keep-Aways.

The routine uses the colours red and blue as warnings:
Red indicates the student has named friends but has not been placed in any friendship group at all. Blue indicates the student is not with any of their named friends but has been placed in a friendship group.

Advice on the best way to input details of friendship groups

For best results it is always preferable for you to use the “Friends” columns to create **small specific closed** groups of friends (groups who are linked together as friends and not to any other students). In this way you can have confidence that, when you run the "Assign" routine and choose the "maximum number of students in a friendship group", the program will not have to break up friendship groups into smaller ones. Here is an example (in which the 'Forename SPACE Surname' linking method is being used):

Name	Friend1
A Amoah	T Healy
T Healy	
A Patel	T Healy

Effect of choosing the "maximum sized friendship group"

Choose "3" and all three students will be placed together. *Choose "2" and T Healy will be placed with only one of the others.*

However, if for every student you have a list of possible friends and you just want the program to choose one or two names from it, then you will have to supply more information to ensure all the links are made. For example:

Name	Friend1	Friend2	Friend 3
A Amoah	A Patel	T Healy	E Eduard
E Eduard	A Amoah	T Healy	A Patel
T Healy	A Amoah	A Patel	E Eduard
A Patel	T Healy	A Amoah	E Eduard

Effect of choosing the "maximum sized friendship group"

Choose "4" and all four students will be placed together. *Choose "3" or "2" and the group would be split into two groups of two students*

Important Note

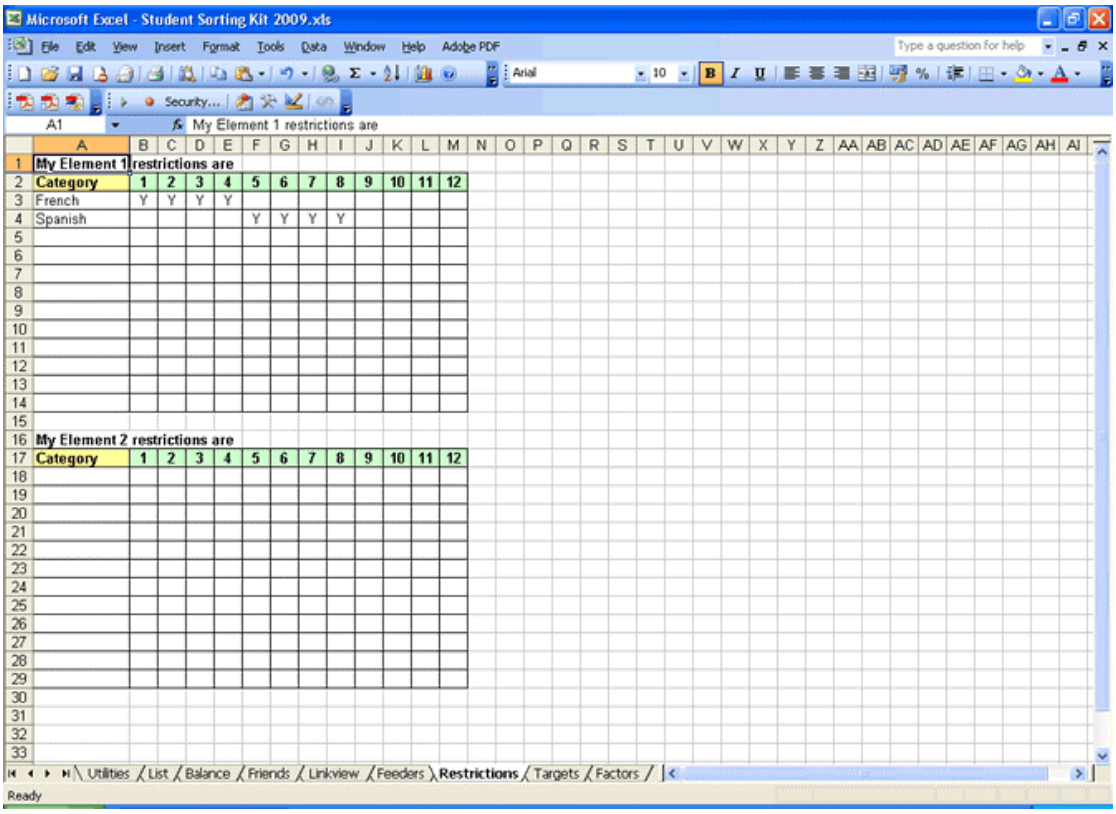
It is important to understand that the program does not automatically assume that Friend1 is a friend of Friend2 or Friend3. For example:

Name	Friend1	Friend2	Friend 3
A Amoah	A Patel	T Healy	E Eduard
E Eduard			
T Healy			
A Patel			

Effect of choosing the "maximum sized friendship group"

Choose "4" and all four students will be placed together. *Choose "3" and A Amoah will be placed with two of the others* *Choose "2" and A Amoah will be placed with one of the others but the remaining two students will not necessarily be placed together*

The Restrictions sheet



The Restriction Tables allow you to place limits on the range of classes considered when assigning certain students. Most schools use the first restriction element to enable certain students to be pinned to certain classes. For example, if you were assigning certain students to 6 classes, you could declare six restriction codes such as

My Element 1 restrictions are

Category	1	2	3	4	5	6	7	8	9	10	11	12
Class1	**Y**											
Class2		**Y**										
Class3			**Y**									
Class4				**Y**								
Class5					**Y**							
Class6						**Y**						

In the above example, any student with the code Class1 in their Restriction Element 1 column would be pinned to Class 1 etc. Other schools use restrictions to comply with timetable requirements. For example, if one or more students particularly want to study French and this is taught in Classes 1 to 5 only, then you could place "French" in the Restriction Table and type a "**Y**" in the cells for those classes.

My Element 2 restrictions are

Category	1	2	3	4	5	6	7	8	9	10	11	12
French	**Y**	**Y**	**Y**	**Y**	**Y**							

The word "French" should then be placed in each of these students' restriction cells on the *List* sheet. For example, if you wish student N Hentall to study French, and

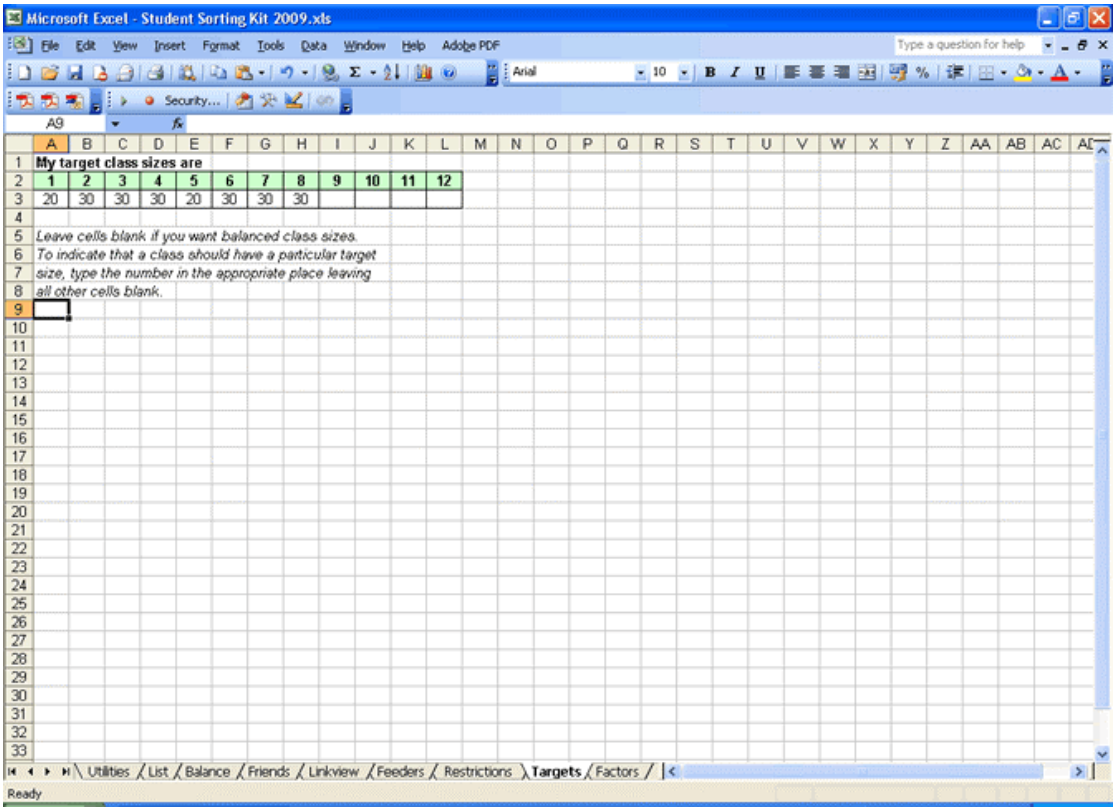
therefore be placed in one of the French classes you would add the word “French” in the appropriate slot on the *List* sheet as shown:

Surname	First Name		Restriction Factor 1	Restriction Factor 2	Class
Hentall	Nikki		Class5	French	

NB whatever you type in the restriction cell on the list sheet, must match exactly how you have typed it under Category on the Restrictions sheet, i.e. same upper and lower case and same spacing. Of course, if a student has more than one restriction element indicated, the program will consider only the classes acceptable to all restrictions when sorting. In the example above, the program would realise that Nikki Hentall can only go in Class 5.

Note that, before a sort, the program will check to make sure every student can be assigned to at least one class. If not, it will stop the process and ask you to edit your restrictions.

The Targets sheet



The Class Size Table on the *Targets* sheet allows you to place limits on the sizes of one or more classes. For example, if Classes 4 and 8 need to be of size 25, this number can be placed in the cells for these classes and the program will then distribute students in the correct proportions whilst keeping Classes 4 and 8 to the required size.

	1	2	3	4	5	6	7	8	9	10	11	12
Class Sizes				**25**				**25**				

If you do not have any such class size restrictions when assigning your students, please ensure that the contents of the restriction table are deleted.

Information and advice about assigning students to classes

Assigning Students to Classes

After you have made the appropriate checks you are ready to assign students to classes. Select the *Utilities* Sheet and click on the "Assign Students" button. You will then be asked to make six decisions:

1. **Into how many classes do you want to place these students?** - Enter an appropriate number.
2. **What is the maximum number of students in a friendship group? -** Enter a number from 1 upwards. Choosing 1 means that friendships will not be considered. Choosing a very large number may result in poor balances.
   2.a **Is this maximum number rigid or flexible? -** This question is only asked for friendship groups of size two or more. Answer Rigid or Flexible (R or F). Choosing Rigid means the program will never exceed this number. Choosing Flexible means the program will stick to it unless a student has named friends but can't be placed in any friendship group under this condition
   2.b **What is the absolute maximum number of students in a friendship group? –** This question will only be asked if you have answered Flexible to question 2a. Enter a number within the given limits. The program will then try to stick to the previous maximum but use a little flexibility in "mopping up" students who have named friends but who remain alone.
3. **Shall I take into account the Keep-Away columns? -** Answer Yes or No (Y or N). In some cases you may wish the program to ignore the “Keep-Aways” when assigning students to classes. If this is so, choose No.
4. **Do you wish to evenly distribute students from some feeder schools?** – Answer Yes or No (Y or N).
   4.a **How many feeder schools do you wish to distribute evenly? –** This question will only be asked if you have answered Yes to question 4. Enter a number that represents the number of MAIN feeders.
5. **Do you want a Standard(S), Quick(Q) or Complex(C) search? -** Answer S, Q or C. “Standard” is slower than “Quick” but more often produces slightly better balances. “Quick” sometimes works better if tight restrictions are in force. “Complex” is the slowest search but can improve balances when you have many or large-sized friendship groups
6. **How many cycles shall I use? -** Enter a number from 1 to 10. Satisfactory balances can usually be reached within roughly 6 cycles.

The program will then begin to sort your students into classes. If you look at the bottom-left of your screen you will see a message telling you how far it is through the process. At the end of the routine you will receive a final pop-up message indicating how close it has come to achieving a perfect balance (an average percentage deviation of zero).

Have a look at the balances achieved shown on the *Balance* sheet. You can create a completely different distribution simply by:

- running the "Assign Students" routine again immediately
- changing the number of cycles
- changing the maximum size of friendship group
- changing the type of search (S, Q or C)
- changing the number of balancing factors or categories **(don't forget to rebuild after you finish editing the *Factors* sheet)**
- changing the weight of certain categories **(don't forget to rebuild after you finish editing the *Factors* sheet)**

Improving the balances

Under certain circumstances the "Assign Students" routine will not generate perfect balances, especially if

- large friendship groups are allowed (If they are same-sexed friendship groups in a mixed school, the most serious effect will be on the gender balance)
- there are many keep-aways
- there are many students with very tight restrictions

However, before you resort to making manual alterations to the classes on the *List* sheet you could try various ways to improve the balances using the programs' options. Here are some possibilities:

1. If it is just the gender balance causing difficulties it is likely you have same-sexed friendship groups in a mixed school. Go to the *Factors* sheet and increase the weight of the male and female categories. (An increase of just 1 will usually do the trick). Then press the "Build" button on the *Utilities* sheet.
2. If you have specified large friendship groups, try reducing the allowable size.
3. Try changing the type of search (Standard, Quick or Complex). Usually the 'Standard' sort provides slightly better balances but under certain conditions (connected with restrictions and student associations) the Quick or Complex sorts work better.
4. If you want to improve a particular balance, try increasing its weighting on the *Factors* sheet. **(Don't forget to "re-build" after you have done so)**
5. If there are any categories you don't really need to balance, make sure they have a weighting of zero on the *Factors* sheet.
6. Sometimes a certain initial arrangement of students on the *List* sheet can generate a poorer balance than normal. You can always run one "Assign Students" routine straight after another (and another!). This will always generate an entirely new set of classes and may result in improved balances

Manually assigning students to classes

If you can't achieve your ideal solution using the techniques listed above, it may be time for you to make some manual adjustments to your classes. You may even want to do this if you have already achieved good balances but want to improve the way in which the friendship groups have turned out. If so, you can simply change a student's Class number on the *List* sheet

									Ignored
Surname	Forename							Class	Links
Johnson	Martin							5	

*Changes can be made in this column-------^*

but while doing so, keep in mind the following:

- Use the "Friends" sheet to check you aren't breaking a desired friendship
- After making an alteration press the "Update Balances" button so that you can instantly see what effect your change had on the balances
- By pressing the "Sort by Class" button you can instantly update your class lists.
- If you re-assign students after carrying out manual adjustments, these manual changes will be lost.

General advice about using the Student Sorting Kit

Building your student sorting program

- Decide which are your most important factors you want to balance and stick to those. Don't add unnecessary factors or categories. The more you add, the less chance the program will have of balancing the numbers
- The more restrictions you place on the students the fewer options the program has when trying to achieve a good balance
- If you require a gender balance and you have many same-sex friendship groups it is advisable to increase the weight of the gender factors to at least 2
- If you have too few students in a particular category it may well be pointless asking the program to distribute them evenly. Giving it a weight of zero will display the relevant information without asking the program to balance the category and therefore enable the program to concentrate on the others

Entering student information

- To fall into a category a student's factor information must exactly match that described on the *Factors* sheet. For example, if you have specified "M" for Male on the *Factors* sheet, you must use a capital "M" for males on the *List* sheet
- A friend or anti relationship only needs one indication on the *List* sheet. For example, if Tony has a friend Pat you do not have to tell the program that Pat has a friend Tony!
- Most student info such as name, feeder, gender etc can be copied and pasted into the *List* sheet directly from your school administration software
- When inputting students' names, if you have two or more students with the same surname and initial of forename i.e. Cooper Henry, Cooper Helen, you must differentiate between the two e.g. Cooper1 Harry, Cooper Helen as in the example in the fictitious data on the list sheet. Care must be taken when inputting ***Friends*** and ***Antis***. You can use Initial space Surname (or Unique ID). Make sure the spelling is the same as in the first 2 columns or the program will not pick it up.

Before running the "Assign" routine

- Run the "Student Detail Check" before assigning students to classes. This routine will spot any errors in the way you have identified your students and therefore avoid unexpected results!
- It is a good idea to run the "Update Balances and Feeders" routine before assigning students to classes. In this way you will be able to identify the number of main feeders you have and also avoid asking the program to balance unnecessary categories.

Running the "Assign" routine

- The program will sort students placing priority on friendships first, keep-aways next and finally, on achieving a good balance. Allowing large friendship groups or naming many keep-aways will naturally affect the quality of the final balance.
- Only choose to balance your main feeder schools. The more feeders you try to balance the less emphasis can be placed on your other factors

- It is recommended that you try the Standard search first. Then, if the results are not satisfactory, try the others. A Quick search can work better if tight restrictions are in use and the Complex search may achieve better results when many or large-sized friendship groups are allowed. A little experimentation with your own data will give you an idea which is the most suitable for your particular needs
- The recommended number of cycles is 6 to 8

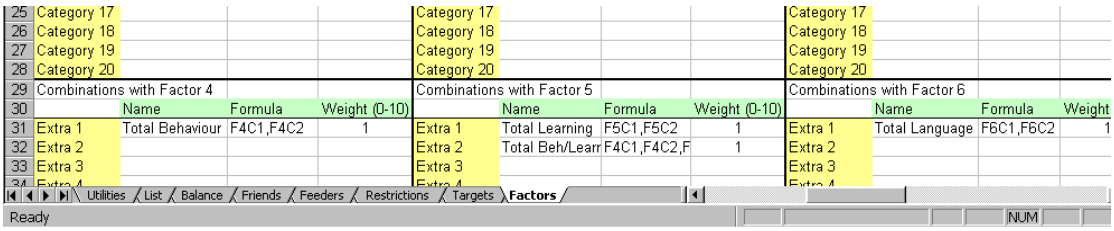
Appendix A - Gaining experience using the sample data

The 255 fictitious students and their details have been supplied on the original ***List*** sheet so that you can try out the procedures before using your own students. Use "Save As" to make a copy (use a different name) of the spreadsheet first of all. This will always preserve the master in its original condition.

Viewing the initial set-up of the Factors sheet

Click on the *Factors* sheet. The following specifications have already been made:

1. The largest number of classes I'll be sorting these students into is 12 (8 tutor groups but 12 craft groups) so **Max Classes = 12**
2. I want to indicate friendships using student names so **Link Method = Initial+Surname**
3. **Student Weight = 1** I'll increase this if my class numbers aren't well balanced
4. My students can make a language choice and I want the chance to pin certain children to particular classes so **Restrict Cols = 2**
5. I want to have 4 columns each for friends and keep-aways so **Friend Cols = 4** and **Anti Cols = 4**
6. I want to balance six different factors, gender, ethnicity, ability, behaviour, learning and language so **I turn on six factors using the Status buttons**
7. I then type their names in the name cells **Gender, Ethnicity, Ability etc.**
8. My categories for Gender are **M** and **F** so I set the entry type to **Text.** I want to make sure the program treats them with more importance than the other factors so I give both of them a **weight of 2**
9. My categories for Ethnicity are **Pakistani, Indian, White UK, White Other** and **Black African** so I set the entry type to **Text**. I want to balance all but the last category so I give them all a **weight of 1** with the last having a **weight of 0**.
10. I am provided with an ability score out of ten for each student with decimals acceptable so I set the entry type to **Real.** I decide that I will split the students using the intervals **0 to 2**, **2 to 5.5**, **5.5 to 7.5** and **7.5 to 10**.
11. For the remaining special needs factors I want to use **1** for moderate need and **2** for more severe need so I set the entry type to **Integer** and give each category a **weight of 1**
12. I want to make sure that the totals of each special need are distributed evenly so I create extra 'formulae' categories

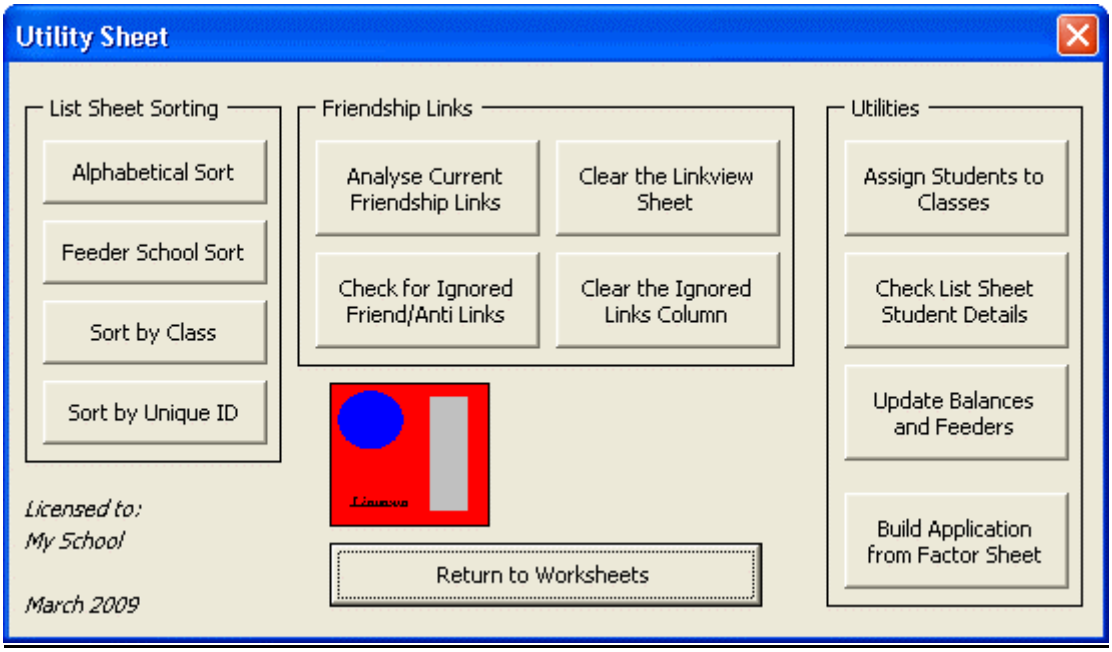


F4C1,F4C2 means I want to balance the sum of Factor 4 Category 1 and Factor 4 Category 2

F5C1,F5C2 means I want to balance the sum of Factor 5 Category 1 and Factor 5 Category 2

13. After I have finished I click on the *Utilities* sheet and press the "Build" button

Experimenting with the Utilities sheet



1. When you click on *Utilities* you will find a control panel appears.

2. Try the sorting routines first of all. These simply arrange your students in one of four ways. Every time you want to perform a function just click on *Utilities*.

3. If you now click the "Feeder Details" button you will find that the *Feeders* sheet is updated with the feeder totals.

4. If you now click the "Update Balances" button you will find that the *Balances* sheet is updated. If you have assigned your students to classes yet all the numbers will appear in the "NC" (no class) column

5. Try the "Student Detail Check" and observe and respond to the checks and questions that follow. The initial list contains no errors so the routine will be very speedy.

6. Try the "Assign Students" button as many times as you wish. Experiment freely with changing your responses to the initial questions and observe the results. Here are some suggestions for experimentation:
   - Changing the number of classes
   - Changing the size of the largest friendship group
   - Changing the number of feeders to balance
   - Changing the type of search (Standard, Quick or Complex)

7. Try placing restrictions on some students (as described on pages 15 and 16) and then running the Assign routine.

8. Try changing the target class size of a class (as described on page 16) and then running the Assign routine

9. After an Assign routine, try manually changing the class numbers (in the *List* sheet "Class" column) of some students and then pressing the "Update Balances" button. You will see the effect of your changes.

Appendix B - Frequently asked questions

Is there a way to speed up the input of my student details?
Yes. Many schools are provided with or compile the details of their new students on disk or in school administration software. It is a very quick process to copy and paste the essential details onto the “List” sheet. If you are not sure how to do this there is sure to be a colleague familiar with the process of copying into Excel. Use their expertise to save you time.

How do I print a sheet?
You can choose to print any chosen area of a sheet simply by highlighting the area using the *mouse drag* technique and then clicking “File” “Print Area” and “Set Print Area”. Then choose to print. If you wish not to print a certain column, click in the column and click "Format" "Column" and "Hide" before printing.

I think I have messed up the Factors sheet because the "Build" routine doesn't seem to work. Can I recover it?
Yes. Open up a fresh version of the Student Sorting Kit (from a backup copy or use the original disk to reinstall it to a different area). Then simply copy and paste your current student data into the fresh copy.

Why are some students not with their friends?
This happens when

- Two students have restrictions which will not allow them to be placed in the same class
- Two students have other friends who have conflicting restrictions
- The program has realised that putting two friends together would take a friendship group over the maximum size specified
- The name in a friend column does not match a name listed in the first two columns interpreted in the form **Initial SPACE Surname** or **Unique ID**. In the case of the former, ensure you use only one letter for the initial.

I’m getting a large difference between the total numbers of students in the classes
This can happen if you are using the "Initial SPACE Surname" method and have not ensured there are no ambiguous names being used. Always run the Student Detail Check before assigning students to classes.

What are the differences between 'Text', 'Integer' and 'Real' categories?
You choose 'Text' if you are going to use letters or combinations of letters and numbers. You choose 'Integer' if you just want to use single whole numbers. You choose 'Real' if the students' can be assigned any number (including decimals) and you want the program to group them into certain ranges such as 1.5 to 4.3, 4.3 to 8.7, 8.7 to 12.5 etc.

All my categories are well balanced but my Males and Females are not. What can I do?
Go to the factors sheet and increase the weight of the Male and Female categories. Then open the *Utilities* sheet and press the "Build" button. This will force the sorting routine to give more consideration to the gender balance. An increase of just 1 will usually do the trick.

Macros – how do I enable / allow them to run?
When you open the Student Sorting Kit, you may find that clicking the Utilities sheet simply produces a darkly shaded page with a message about enabling macros. This will happen if your Excel security settings are set to disable macros (the Kit's programming code).

If you are using versions of **Excel from 1997 to 2003 (including Office XP)**, do the following:

- open Microsoft Excel;
- select Tools;
- select Options or Macro;
- select Security Settings;
- reduce your security settings to Medium
- close Excel
- open the Student Sorting Kit 2010
- when the security message is displayed, choose to enable macros

If you are using **Excel 2007**, there are several important points to note

Excel 2007 will automatically load with settings that disallow macros. A message will appear above your worksheet saying "Security Warning – Some active content has been disabled". An options button will follow the statement. If you press the button, you can simply choose to "Enable this content". After clicking OK, the macros will be activated.

If you want Excel 2007 to allow the macros to run without having to give permission every time you open the Kit, you must use the "Trust Center".

- Click on the logo at the top-left of the Excel window
- Click the button "Excel Options"
- Click "Trust Center"
- Click "Trust Center Settings"
- Click "Macro Settings"
- Choose to Enable all macros.
- Tick the box to "Trust access to the VBA project object model"

Note that Excel 2007 will automatically open the Student Sorting Kit 2010 in "Compatibility Mode". This is perfectly acceptable and will not prevent the Kit from functioning normally. However, there are different ways of saving Excel workbooks in Excel 2007. Using "Save As" presents you with various options. It is vital you read the following before choosing your format:

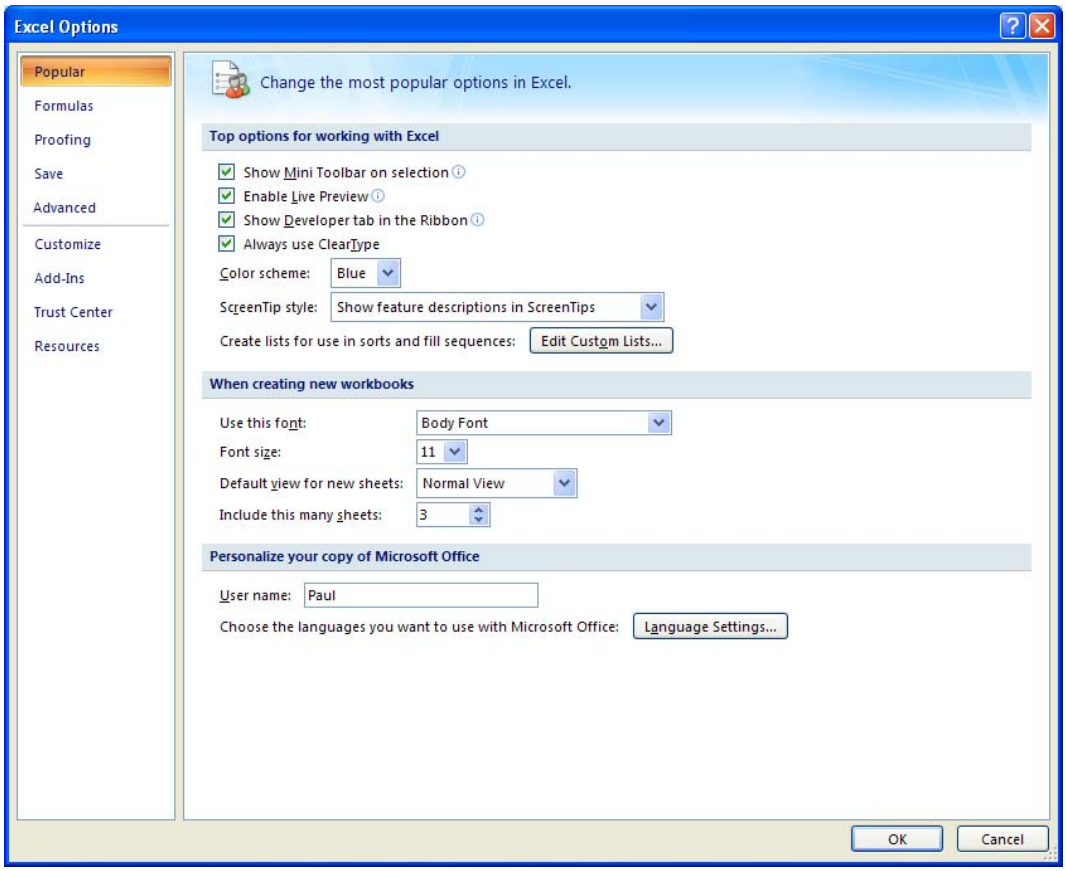
- Save As an "Excel 97-2003 Workbook" is the **recommended method**. It keeps the Student Sorting Kit in its original format and the program will not be affected.
- Save As an "Excel Workbook – Default". This will strip out all the programming for the Sorting Kit and, although your data will be preserved, the program will no longer function. **Do not use this option**.
- Excel Macro-Enabled Workbook. This keeps your information and the programming intact but will make the program unusable unless you have a virus checker capable of scanning encrypted files. We recommend that you **do not use this method**.

Appendix C - Using the Student Sorting Kit with Excel 2007

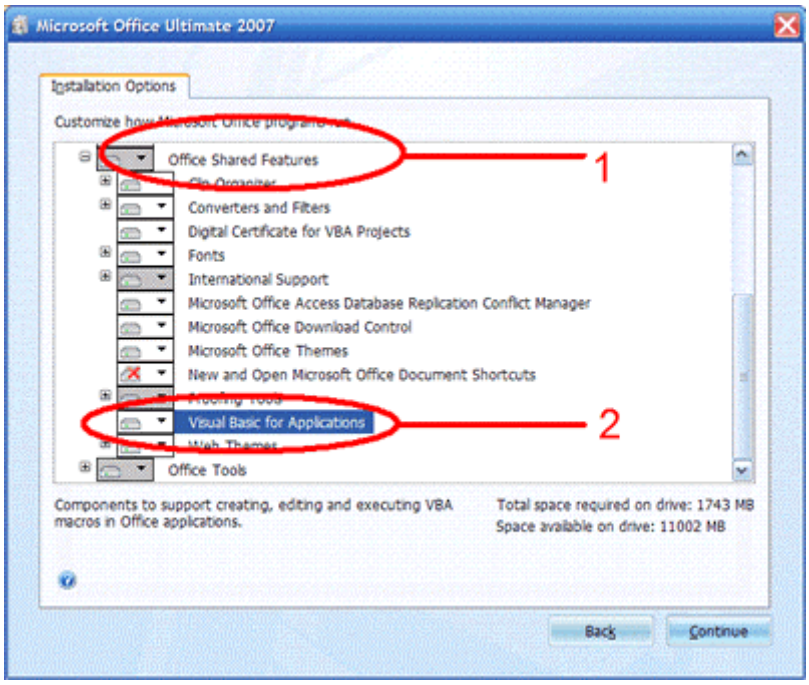
The Student Sorting Kit will run very satisfactorily in "compatibility mode" with Excel 2007. However, certain features work differently in Excel 2007 on account of its new file types, security features and interface. Users new to Excel 2007 should know the following before working with macro-driven programs such as the Student Sorting Kit:

Possible Problem 1
Some installations of Office 2007 do not automatically load the VBA programming language needed to run applications such as the Student Sorting Kit. To check that your Excel 2007 has the ability to run macros follow these instructions:

1. Click the Office logo in the top-left of your Excel window
2. Click the "Excel Options" button
3. You will be presented with this window



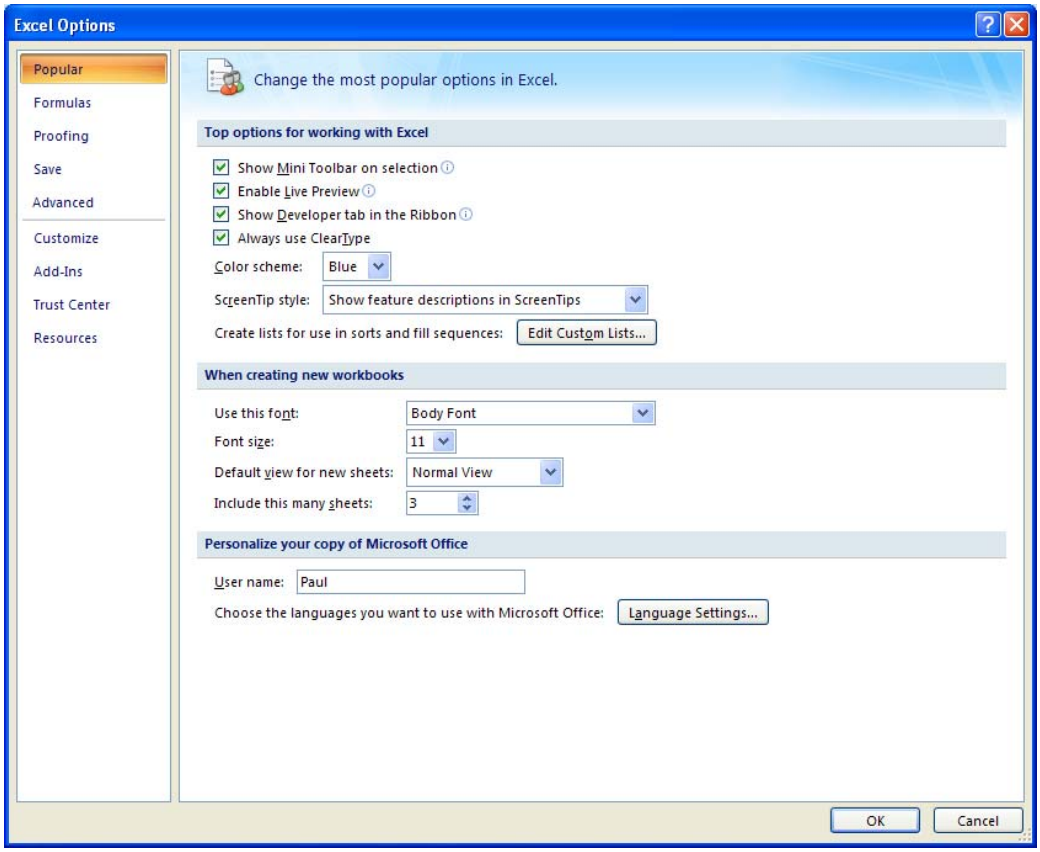
4. Choose "Popular" and tick the box to "Show Developer tab in the ribbon"
5. Click OK. You should now see a tab entitled "Developer" close to the top of your Excel window
6. Click the "Developer" tab and have a close look at the "Visual Basic" button, top-left. If it is not greyed out then your installation of Excel 2007 is fine. If it is greyed out then Visual Basic has not been installed yet. To install Visual Basic, you need the original installation medium (DVD or downloaded file) for Excel 2007 (or Office 2007) and to use the customize option to select and install Visual Basic for Applications which is located within the Office Shared Features



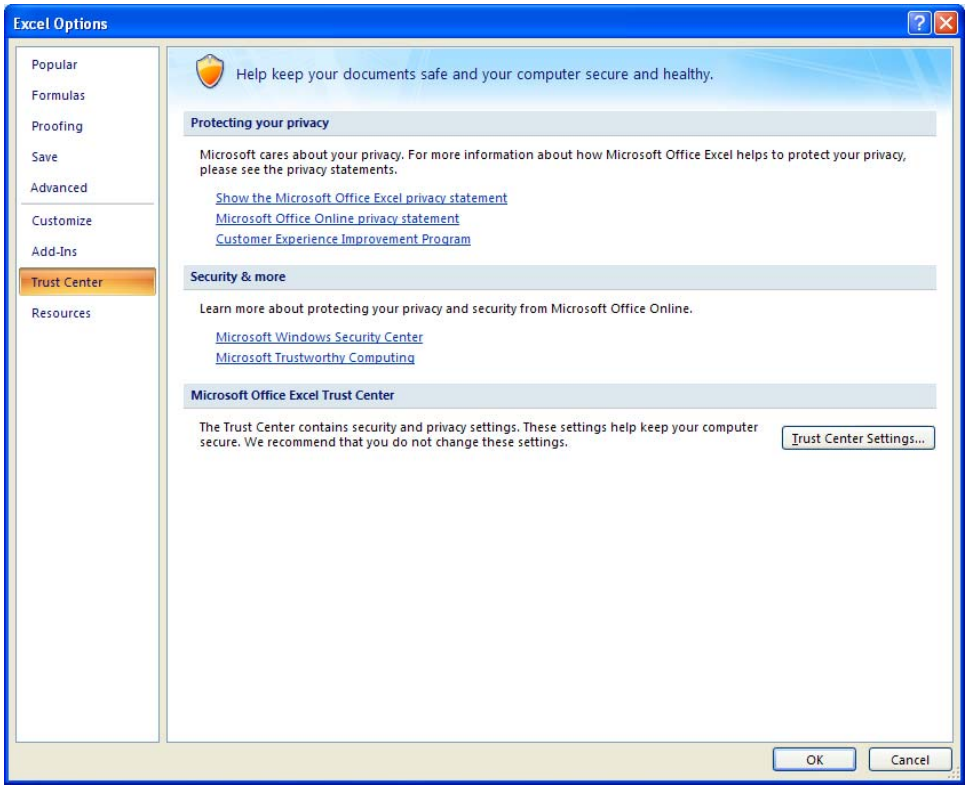
Possible Problem 2

Now that you are sure you have Visual Basic installed with your copy of Excel 2007, you must ensure you allow the macros (the programming bit) to run. To do this you must make certain choices with your security settings:

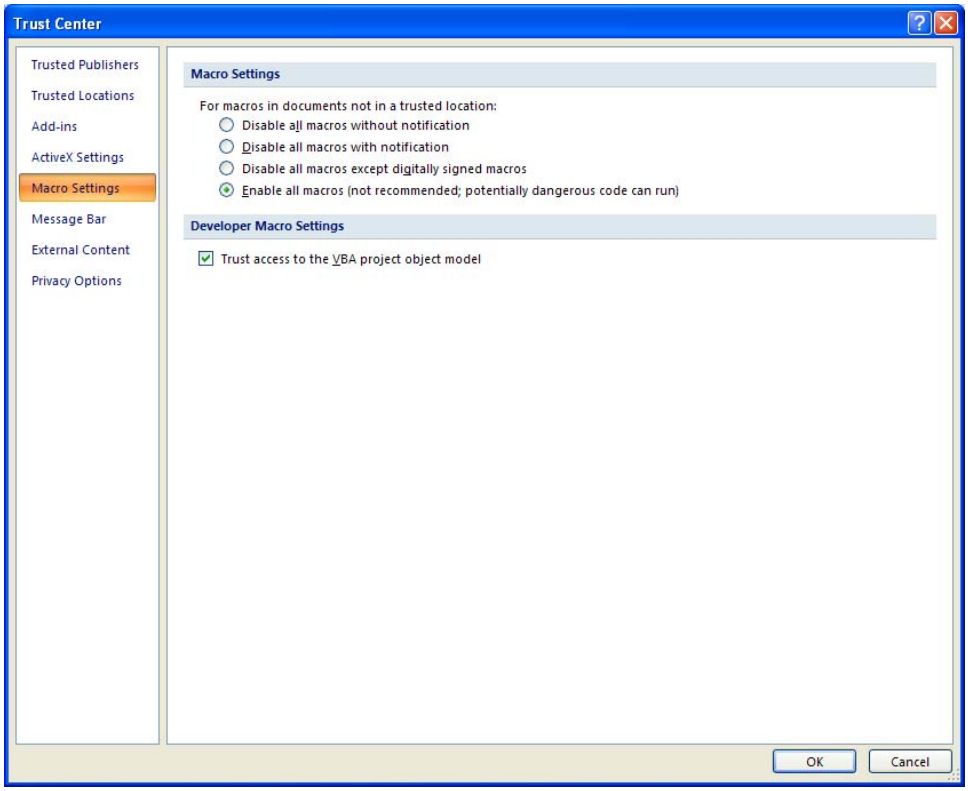
1. Click the Office logo in the top-left of your Excel window
2. Click the “Excel Options” button. You will be presented with this window



3. Choose “Trust Centre”

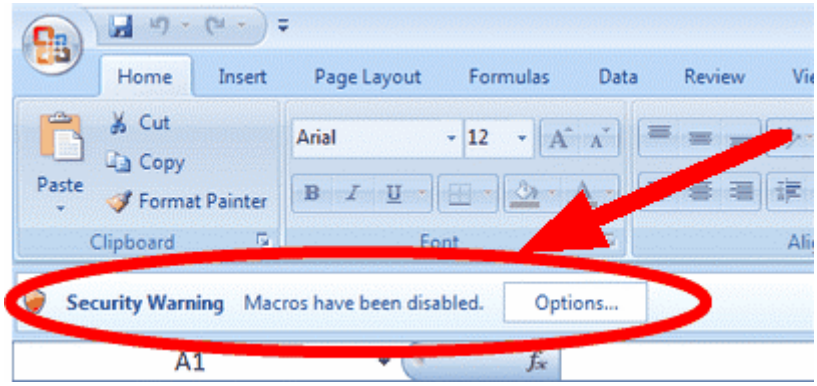


4. Click the “Trust Center Settings” button



5. Choose the “Macro Settings” option and
   a) Tick the box “Trust access to the VBA project object model” and
   b) Choose either “Disable all macros with notification” or “Enable all macros (not recommended, potentially dangerous code can run)”.

6. Click OK and then OK again
7. Now open the Student Sorting Kit
8. On opening, depending on your choice in 6(b) you may be presented with a warning (look out for it!)



9. If this warning appears, click the “Options” part and tick “Enable this content”

10. The Student Sorting Kit should now function normally. You will also see at the very top of your screen that Excel is running in “compatibility mode”. This is correct.

Possible Problem 3
When you want to save your work, Excel 2007 presents you with many choices of format for your new file. Unfortunately, two of the most tempting ones may lead you into difficulties so please use our recommended method:

Excel 97-2003 Workbook format
Our **recommended** “Save As” file format is **Excel 97-2003 Workbook**. This preserves your work and the program in its original form. It also has the advantage that you will be able to open the file on workstations with any version of Excel.

Excel Workbook –Default format
This **must not be used** because, on saving, the macro programming will be entirely stripped out leaving you with just your student information but no sorting utilities at all.

Macro-Enabled Workbook format
This sounds very tempting (the Student Sorting Kit converted into the new Excel 2007 format with all its macros intact!). This actually saves your work but, unfortunately, also saves the Sorting Kit macros in a new encrypted form. When you try to open the file again it is very common to find that the macros have been disabled and Excel will not allow you to enable them because "Excel could not detect a virus scanner capable of checking encrypted files". * We therefore do not (at the moment) recommend this method.

* *So many Office 2007 users have been frustrated by this problem (just google it!) that Microsoft have released a workaround (to be followed at your own risk!) Here is the link*

http://support.microsoft.com/kb/927150

Appendix D - Accompanying PowerPoint Presentations

Residing with your copy of the Student Sorting Kit are nine PowerPoint presentations to assist you in its use. To open them, open Microsoft PowerPoint and select one. Then click on "Slide Show" and select "View Show". Just click the mouse each time you wish to go to the next slide or Esc to finish the show. The contents of the presentations are as follows:

1. ***Introduction*** - *Introduces you to each sheet in the Student Sorting Kit*
2. ***Design Level 1*** - *Customising the Kit to your own requirements (a simple example)*
3. ***Design Level 2*** - *Customising the Kit (a more complicated example using restrictions)*
4. ***Design Level 3*** - *Customising the Kit (using "real" type factors and "pinning" students to classes)*
5. ***Design Level 4*** - *Customising the Kit (using the "Unique ID Option" and introducing using formulae on the Factors sheet)*
6. ***Checking Data*** - *Ensuring your student information is accurate before assigning students to classes*
7. ***Assigning Students*** - *Takes you through each question you need to answer whilst assigning students to classes*
8. ***Manual Adjustments*** - *How to make manual adjustments after the Kit has assigned students to classes*
9. ***The Kit and Curriculum*** *-A "Real" example in which the Kit is used to produce balanced tutor groups, English classes and Art classes*