**Date: ............................................. Name: .....................................................................................................**

**WINCHESTER COLLEGE VBK PRACTICAL MATHEMATICS** **AND MICROSOFT EXCEL COURSE**

**FINANCIAL ANALYSIS & PERSONAL BUDGET PROJECT**

**Scope**

This project will expose you to a practical problem that all of us will face - how to manage our finances. Most of you will already have some experience managing a bank or building society account. When you become eighteen and leave Winchester, you will be able to apply for all manner of financially interesting things: Loans, Credit Cards, Investments... You will become the master of you own financial destiny! You will have the freedom to spend your money as you see fit, but also the responsibility of managing your own monetary affairs. Society can be somewhat harsh if you get this wrong.

In this project you will have access to a full year of (fictional!) financial transactions of a certain Mr L.O. d'Zamoney. He is very wealthy compared to average UK earnings, but you may be surprised how *normal* his spending patterns are, and indeed how the costs of basic essentials such as housing, power, food (and school fees) add up.

The idea is to use Microsoft Excel to analyse this data, and work out a high level picture of his spending. Although the data is not outrageously extensive (there are 591 transactions, which is probably typical of most adults) the dataset is clearly too big to analyse 'just by looking at it.' You will need to learn techniques to handle this 'Big Data' and distil the story it tells about the life of Mr d'Zamoney.....

**Some key skills to master**

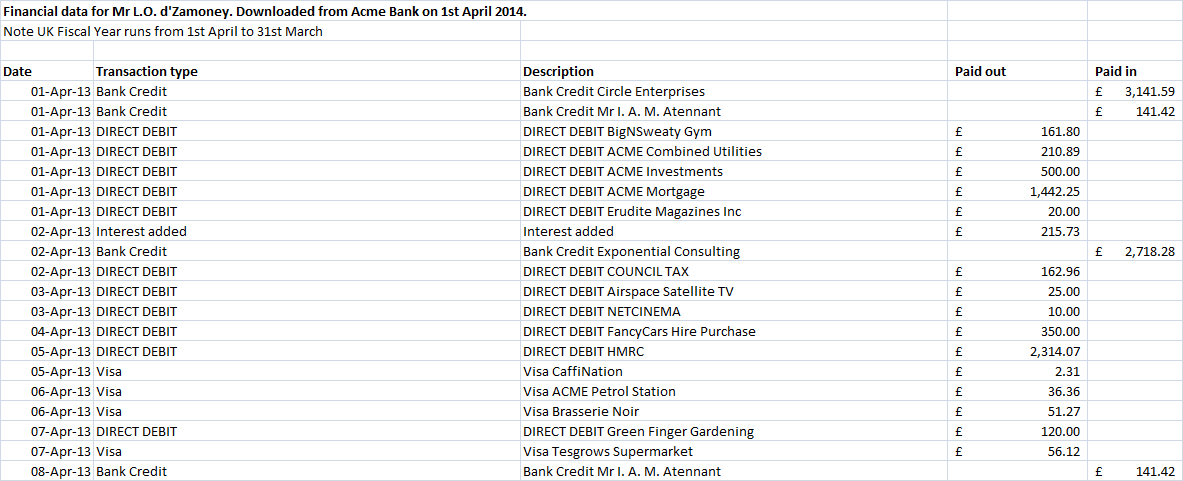
* Use of filters and sorting
* Appreciation of use of date and time data (which is different from 'normal' numbers and text)
* Use auto-sums to work perform rapid arithmetic, on the cells you are interested in!
* Rounding and presentation of financial data. Use of colour, fonts and borders as appropriate to enhance clarity.
* Pivot tables - an automatic summary of the data.
* Use of drop down menus, possible using several worksheets - i.e. devise your own financial categories.
* Fast cut & paste techniques using keyboard shortcuts.

**Ideas for next steps**

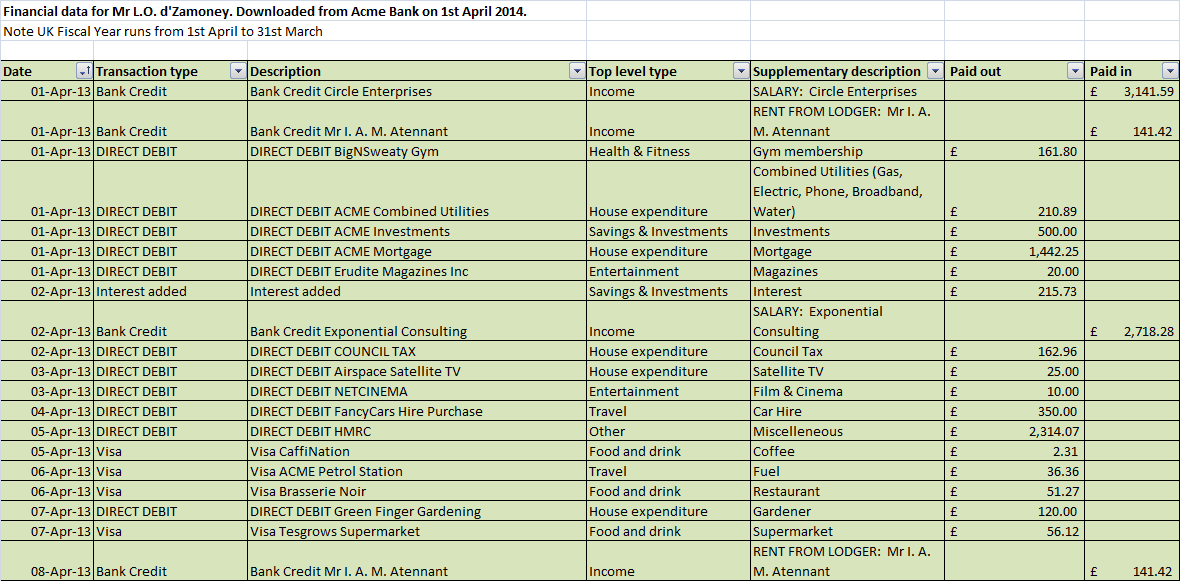
1. Load the 'Financial data' spreadsheet into Microsoft Excel. Apply **filters** to the headings.
2. Use filters to work out (i) total income, (ii) total expenditure.
3. Use filters to work out spending and income patterns. How often is Mr d'Zamoney paid? How many holidays did he have, and where? What is the total cost of his mortgage for the year? How often does he drink coffee, have a haircut, visit the supermarket .....
4. Create a **Pivot Table** on a separate sheet (see 'How to Guide'). Use this to work out a high level view of spending and income in broad areas such as 'Housing costs', 'Entertainment', 'Travel' etc. An effective way of doing this is to create a list of these categories in a separate sheet, and then create a **drop-down-menu** column in the data spreadsheet, which allows you to assign a category from this list to each transaction. The pivot table will then sum items automatically against these categories.
5. Create a **pie chart** to display the data, and visually relate different types of spending. What are the two main categories?
6. Develop a **budget** for Mr d'Zamoney for 2014-2015. Could he cope if he were to lose one of his incomes?

AF 13/5/14

**Raw data**



With **filters** and **extra categories** added via **drop-down menus**. And a splash of colour.



Extract from a **Pivot Table**, which can be used to sum over particular categories such as **'Books'** and **'Music'**

Note in this example two levels of category have been used i.e. **'Coffee'** is a sub-element of **'Food & drink'**

