

## Computer Science - Practical 5

### Excel Spreadsheets as a Database

For today's practical please try the following exercises. They will guide you through loading a file of data into Excel and carrying out some queries on it. Items below the thick line are optional but you may find them useful. This practical is not assessed. You may also work on your homework if you have time left at the end of the practical. If you need help, please ask!

- Start Microsoft Excel ..... ☐
  - Obtain the file `flights_hp2.csv` (from Blackboard or floppy disk)..... ☐
  - Copy the file to your home directory ..... ☐
  - Open the file in Notepad (right mouse click in Windows Explorer) ..... ☐
  - Look at the contents of the data, then close the file ..... ☐
  - Open the file in Excel (you may need to show "All files \*.\*" )..... ☐
  - Confirm the contents look the same as in Notepad (you may need to adjust some of the column widths) ..... ☐
  - Has Excel correctly identified dates and times? (see Format->Cells)..... ☐
  - Click on Data -> Filter... -> Autofilter. What has changed? ..... ☐
  - Use the filter queries to find answers to the following questions-
    - How many departures are there from DFW? ..... ☐
    - How many flights are there from EWR to PHX? ..... ☐
    - Which flights depart before one o'clock in the morning? ..... ☐
    - How many different types of aircraft are used? ..... ☐
  - Now click on Data->Sort – and choose Sort By -> Dep ..... ☐
  - Can you use sorting and filtering at the same time? ..... ☐
  - Now click on Data->Form – What is shown? ..... ☐
  - Click on the "Criteria" button. Investigate how it works..... ☐
  - Click on the "New" button and create a new flight. Where is it in the list? ..... ☐
  - Choose a flight and lick on the "delete" button. What is deleted? ..... ☐
  - What format does Excel save the file in? How do you save it as Excel? ..... ☐
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#### Creating your own database

Can you create your own CD database from scratch? With a blank spreadsheet, put in headings in row 1 (e.g. Artist, Album title, Reference number, rating etc.) Click on Data->Form, accept the suggestion then enter your data.

#### Constructing a graph (challenging!)

This uses the skills from today and the graphing work we did last week. The airline which provided this data is based in PHX (Phoenix, Arizona). Can you extract data from the chart and use it to produce a bar chart of the number of **departures** from Phoenix during each hour of the day.