

CPSC203 – Introduction to Problem Solving and Using Application Software

Winter 2010 Tutorial 8: Mehrdad Nurolahzade

Introduction

- Analysis and forecasting
- Sorting data in Excel
- Filtering data in Excel

Analysis and Forecasting

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Compound Interest

 The compound interest is the amount of money earned on a deposit during a period of time. It can be calculated using the following formula:

- P = future value
- C = initial deposit
- r = interest rate (expressed as a fraction e.g. 0.06 = 6%)
- n = # of times per year interest is compounded
- t = number of years invested.

Continuous Compound Interest

- P=C e ^ (rt)
- e is a mathematical constant that is used for this formula, to which you can refer in calculation using EXP(1).

Sorting Textual Data

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Sorting Numerical Data: Single Column

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Sorting Numerical Data: Multiple Columns

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Filtering for Unique Values

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Spreadsheets Review (1)

• Given the spreadsheet file below:

	А	В	С	D	E	F	G	Н	1	J	К
1	Faculty	2007 Budget	2008 Budget	Growth	Growth %	Total %	2009 Forcast	Trend1	Trend2		Total 2008 Budget
2	Science	128	132								Average 2008 Budget
3	Engineering	197	205								Minimum Budget
4	Arts	73	99								Maximum Budget
5	Medicine	143	155								Standard Deviation of 2008 Budget
6	Law	65	65								
7	Humanities	74	84								
8	Business	136	165								

- Compute the following:
- "Total 2008 Budget", "Average 2008 Budget", "Minimum 2008 Budget", "Maximum 2008 Budget", and "Standard Deviation of 2008 Budget". Format cells as Number.
- Net "Growth" = "2008 Budget" "2007 Budget". Format cells in this column as Number.

Spreadsheets Review (2)

- 3. "Growth %" = "Growth" / "2007 Budget". Format cells in this column as Percentage.
- 4. "Total %" = "2008 Budget" / "Total 2008 Budget". Format cells in this column as Percentage.
- "2009 Forecast" = "2008 Budget" * (1 + "Growth %").
 Format cells in this column as Number.
- "Trend1" of growth using nested IF function: If "Growth %" is less than or equal to 5% then trend is "Slow",

Otherwise if "Growth %" is less than or equal to 10% then trend is "Normal",

Otherwise trend is "Fast". Format cells in this column as Text.

Spreadsheets Review (3)

- 7. "Trend2" using the same logic in step 6 using lookup table this time. Format cells in this column as Text.
- Create a pivot table where rows are from "Faculty" and columns are from "Trend1" and the data is the Maximum of "Growth %".
- Create a column chart where the X-axis is "Faculty" and Y-axis is "Growth %". Give your chart a title, and axis titles. Change the range of values for Y-axis to 0.0 to 1.0.