American University of Beirut

Department of Computer Science
CMPS 209- Fall 2009
Assignment 8

Objectives

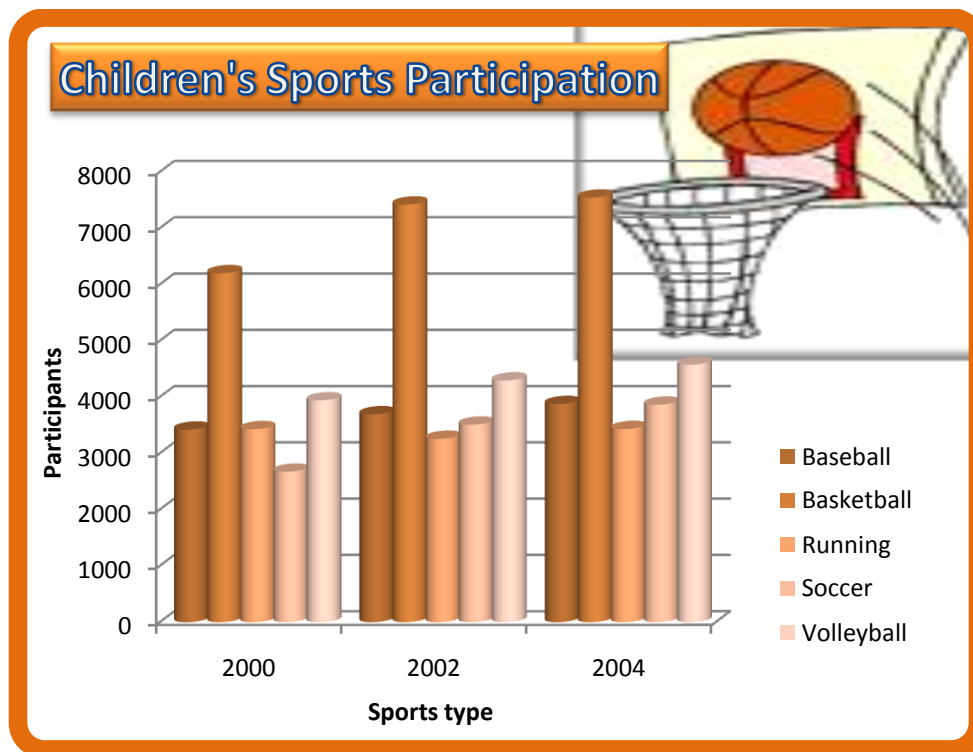- *Using Application Software: Ms Excel .*

Instructions

- *Your work should be uploaded on moodle before Monday, January 4, 2010, 6 pm .*
- *No assignments will be accepted by emails.*
- *This assignment is meant to be __individual work__, make sure that your submission reflects __your__ effort.*

Exercise One: Column Charts

Open "Sports" sheet in the " f09-209-Assign08-DATAFILE " workbook. The purpose of this exercise is to plot data about children's participation in sports activities during the years 2000-2004.
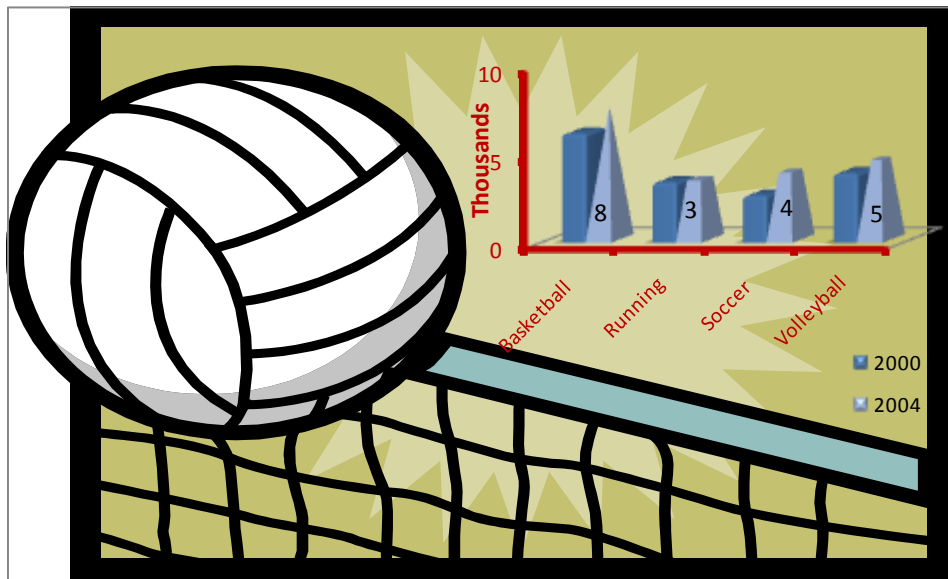

Part A

1) Plot the chart: Use a 3D cylinder chart(subtype 1) under the column group to plot the data for the years 2000-2004.
2) From the design tab:

a) Switch the row and column
b) Select data source, and then remove the In-line skating series.
c) Select the chart layout 10
d) Select the orange themed colors for your cylinders (style8)
3) From the layout tab:
   a) chart title, above the chart
   b) Axis titles: horizontal below the axis, and vertical rotated (move it)

4) Format the chart:
   a) Chart title: shape style (moderate effect accent6) word art style (fill text 2 outline) and change its location to the left.
   b) Chart area:
     ♦ filling: insert the basket ball picture from the file basketball.jpg, and place it in the upper corner. Change the stretchoffset options from the left to 55% and from the top to 50%.
     ♦ Border: 7pt thickness, flat, bevel. Material:special effect, shadow: blurring by 10%. Cap type: round, join type: bevel.
5) Save your work.

Part B

1) Plot the chart: Use the data from the sports sheet to plot the basketball, soccer, volley, and running series for the years 2000 and 2004 using 3D cylinder chart(subtype 1)under the column group . choose to plot the series by columns.
2) From the design tab:
   a) Switch the row and column
   b) Select data source then remove series as necessary.
   c) Select the chart layout 3
   d) Select the blue themed colors for your columns (style35)
3) From the layout tab:
   a) Remove the chart title
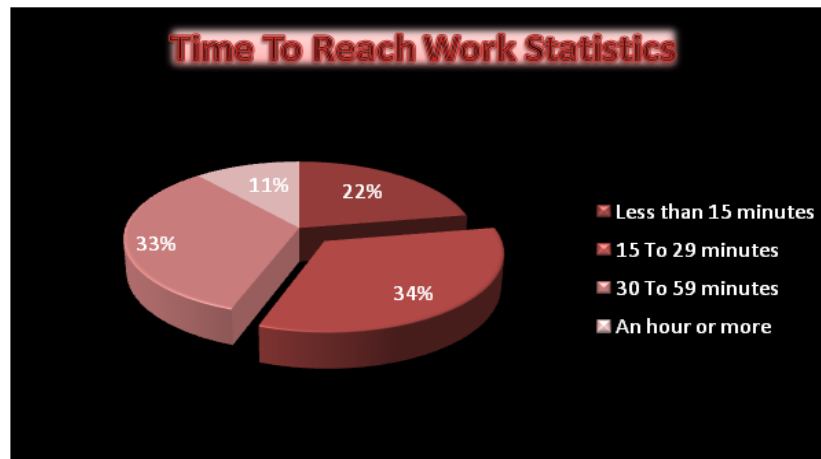   b) Axis titles: horizontal below the axis, and vertical rotated (move it)

c) Primary vertical axis: show in thousands (change the label to show parentheses). Give it a dark red color, and change its thickness to 3.
d) Primary horizontal axis: Give it a dark red color, and change its thickness to 3.
e) Remove the primary horizontal gridlines
f) Overlay the legend at the right of the chart

4) Format the chart:
   a) Chart area: filling: insert the volleyball picture from the clipart gallery.
   b) Axes:change labels font color to dark red, decrease the font sizes to 9, and solid line styles to 3pts thickness.
   c) Series: change the shape of the 2004 data series to partial pyramid, and show labels inside each pyramid(do it one by one).
   d) Change the location of the legend as necessary to put it in the lower part of the chart.
5) Rotate the chart. Observe the changes of your chart when you change the theme of your workbook.
6) Save your work.

Exercise Two: Pie Charts

Open "Survey" sheet, and then plot the data in the table using a 3D- pie chart. Choose the 3D-style 44 under Pie.
1) Apply the following layout and formatting options:
   a) The data labels should show the percentages.
   b) the slice of 34%.should be exploded
   c) The chart title should be an artistic word art object, with a gradient filling effect and a soft-edged border of 5pts as shown in the figure above.
   d) The chart should have a 30° rotation along the y axis, and a 3D perspective effect of 20°.
2) Save your work.

Exercise Three: Combination Charts

II) Open "Temperatures" worksheet in the " F07-209-Assign7-DATAFILE.xls " workbook, then apply the following operations:

Country	Average Temperature				
	Winter	Spring	Summer	Fall	Average Temperature per year
Belgium	6	13	22	14	13.75
Cyprus	18	22	33	27	25
France	7	16	24	16	15.75
Greece	15	20	33	23	22.75
Italy	12	19	31	21	20.75
Russia	-5	9	22	8	8.5
Switzerland	3	15	24	14	14
United Kingdom	7	13	21	14	13.75

1) Insert an average function to calculate the average temperature per year for Belgium.
2) Copy the function to the other countries.
3) Plot the average temperature of Belgium through the Switzerland by using a 3D column chart. In the chart wizard choose the following:
   a) Add category labels and series name as shown.
   b) Display the legend at the lower corner.
   c) Add the chart as an object on the current sheet.
4) Format the chart as follows:
   a) Change the font size of the axes' labels, and legend to 8 (don't lock aspect ratio).
   b) Apply a preset "fog" filling to the chart area.
   c) Rotate the chart by 17° and give it an elevation of 45°.
5) Copy the above chart and paste it on the same sheet.
6) Select the new chart and apply the following:
   a) Change the chart type to 2d.
   b) Select the row representing the United Kingdom data point and add it to your existing chart.
   c) Format the borders by making them bold.
   d) Use the Word Art to create a title to your chart as you see in the chart below (Impact, set the font size to 20).
7) On your worksheet, draw a sun by using the Autoshapes tool. Color the sun yellow.
8) Select the sun drawing and cut it from the worksheet.
9) Select the average temperature data series in the 2nd chart and use Paste feature under the Edit menu to paste the sun.
10) Format the data series now by scaling the picture to 5 and stacking it.
11) Select the row for Italy from the table, and use the plot wizard to plot a line chart on the same sheet, with title Italy, and data values appearing on the chart, and no legend.
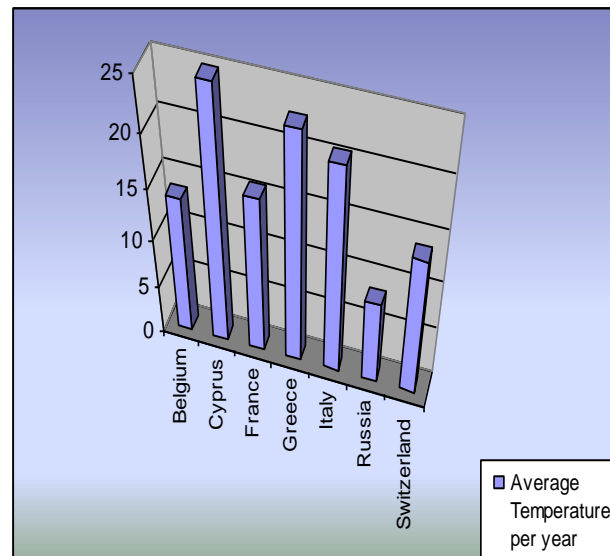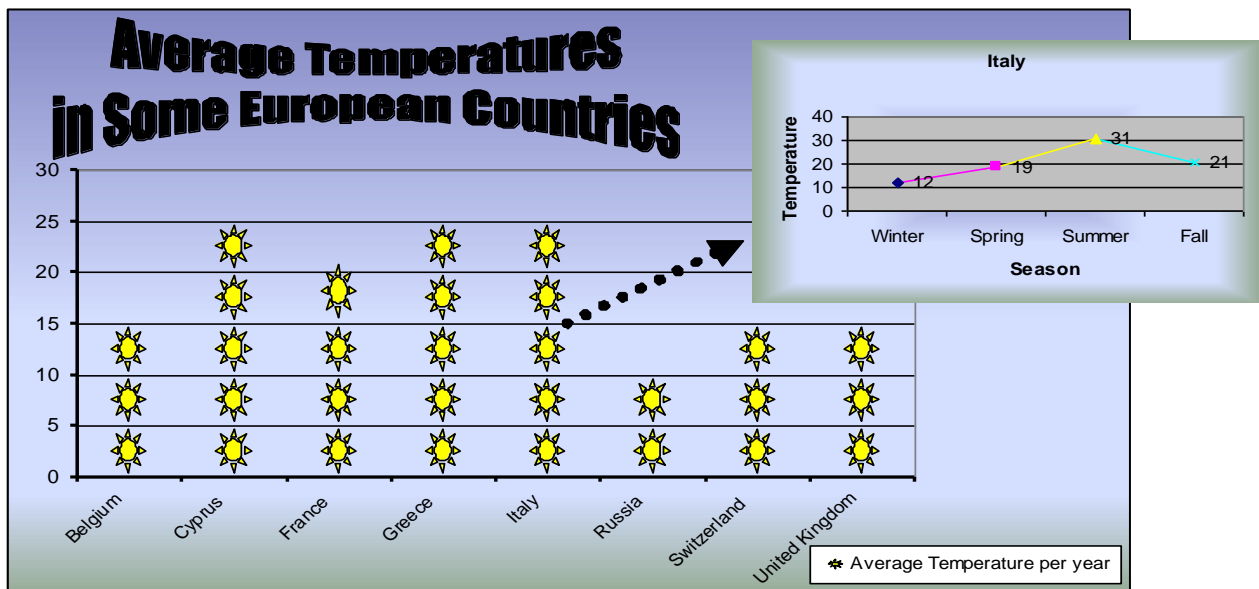

Figure 1:First Chart after formatting

12) Format the Italy chart by removing the border of the chart area, selecting a different color for every data point, selecting a relaxed line, and a preset "fog" filling (centered horizontally).
13) Resize the plot area of the sun chart so that there will be enough space to put the detailed Italy chart.
14) Draw a thick dotted bold arrow from the Italy data point on the sun chart to the detailed Italy chart.
15) Select the first sun chart>> right click and choose *send to Back*.
16) Click on the sun chart, the detailed Italy chart, the word art title, and the arrow (using Ctrl) then right-click>> *grouping*>> *group*.
17) Your chart should look as shown in figure 2.
18) Save your work.

Figure 2: Second and third charts after formatting

Exercise Four: Filtering

Open the "Wedding Dinner" sheet.
1. Perform necessary filtering that answers the following questions.(Note that you should copy the answers to each question and paste them on the sheet "Wedding Filtering")
    1. Who are the guests invited by the bride?
    2. Who are the friends of the Bride (invited by the bride)?
    3. Who are guests whose first name is Steve?
    4. Who are friends who will come with their children?
    5. Who are guests whose family name is McCullough, who will not come?
2. Apply conditional formatting to the "Relation" field such that when the relation is "Family", the cell is colored yellow, and when the relation is "Friend", the cell is colored red.
3. Sort the wedding guests table according to the "Relation" field. The records should be ordered in the following order: family records come at the top, and then the friends, followed by colleagues. Within Family, friends, or colleagues, guests invited by the bride should come before members invited by the groom.

Exercise Five: Macros

1) Record a macro in your workbook with the name ColumnMacro, and shortcut Ctrl + K that performs the following tasks:
   a) Inserts a new column before column A.
   b) Gives the cells A1 through A10 a light red background and a red margin on the right border.
   c) Inserts the current date and time into A1.
   d) Modifies the header: Inserts the your name in the right part of the header, the page number in the center, and your section number in the right part of the header.
   e) Modifies the footer: Inserts the name of the sheet tab in the center of the footer.
   f) Changes the zoom to 80%
2) Save your work

Save your work then zip your folder and submit it using Moodle.

Happy Holidays!