



# American University of Beirut

Department of Computer Science

CMPS 209- Fall 2014

Assignment 4

Sessions of Oct. 8- Oct. 14

## Objectives

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- Using Application Software: Microsoft Excel 2010.

## Instructions

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- This assignment covers material from Excel Handouts 0 and 1.
- Solve the following exercises during the lab session. The assignment is due by the end of your lab session.

## Using your network drive

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- On your Z:// drive, create a new folder and name it as follows:
  - Example: If your user name is abc99 and you are in section 2 and you are doing assignment 1 then your folder should have the following name: abc99.2.1
- Your work should be saved into this folder so that it can be graded.
- Download the "F14-A04-DATAFILE.xlsx" from Moodle, and save it in your folder on Z:// drive as Yourname-A04.xlsx .

The data file contains a list of information about different gifts donated to a "best artistic photograph" competition. More precisely, the list contains the full name of the donor, his address, the gift donated, the category (equipment, product, gift certificate, service, or other), the quantity donated and the total value of items donated by the same person.

## Exercise One: Formulas + Basic Functions

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Open "Formulas" worksheet in your datafile.

- Insert in cell I4, the appropriate formula to get the individual value of the item donated by "Vickie Anderson". Copy the same formula to get the individual values of all other items.
- Insert in cell J4, the appropriate formula to calculate the percentage of the first donated value (290\$) from the total amount of donations.
- Fill in the cells G36 to G39, by the appropriate functions to get respectively, the highest quantity, lowest quantity, average quantity (rounded to the nearest 100<sup>th</sup>), and total quantity of all items. Copy the same functions to fill the cells: H36 to J39.


Full Name	City / State	Item Donated	Category	Quantity	Total Value	Individual Value	Donated Percentage
Vickie Anderson	Greeley, CO	MP3 Player	Equipment	2	\$290	\$145	4%
Michael Anderson	Topeka, KS	Gift Basket	Product	3	\$225	\$75	3%
Natalie Barguno	Phoenix, AZ	Toy Store Gift Certificate	Gift Certificate	3	\$150	\$50	2%
Dennis Boothe	Alva, OK	YMCA Swimming Lessons	Service	2	\$130	\$65	2%
Benjamin Brown	Tucson, AZ	Digital Camera	Equipment	1	\$400	\$400	5%
Emiko Francani	Emporia, KS	Floral Arrangement	Gift Certificate	2	\$150	\$75	2%
Robert Hall	Denver, CO	Grocery Gift Certificate	Gift Certificate	3	\$150	\$50	2%
Tara Huber	Omaha, NE	Laptop Computer	Equipment	1	\$1,000	\$1,000	14%
Kevin Jackson	Amarillo, TX	Movie Tickets + Popcorn	Gift Certificate	4	\$120	\$30	2%
Peggy Jackson	Grand Junction, CO	Restaurant Gift Certificate	Gift Certificate	2	\$150	\$75	2%
Kim Jansen	Oklahoma City, OK	MP3 Player	Equipment	3	\$600	\$200	8%
Kim Jones	Oklahoma City, OK	Fondue Set	Product	4	\$80	\$20	1%
Kelly Kripton	Dodge City, KS	Football Tickets	Product	2	\$150	\$75	2%
Kristen Kripton	Fort Collins, CO	Free Photography Sitting	Service	2	\$90	\$45	1%
Larry Lopez	Topeka, KS	Restaurant Gift Certificate	Gift Certificate	4	\$160	\$40	2%
George Martin	Denver, CO	Car Wash Card	Other	2	\$100	\$50	1%
Shelly Martin	San Fransisco, CA	Massage	Other	2	\$100	\$50	1%
Catherine McCue	Tulsa, OK	Restaurant Gift Certificate	Gift Certificate	2	\$80	\$40	1%
Marion McMahan	Tulsa, OK	Automotive Gift Certificate	Gift Certificate	2	\$100	\$50	1%
Robert McMahan	Lincoln, NE	Web Site Services	Service	2	\$200	\$100	3%
Catherine McQuaide	Dallas, TX	10 pounds of Fresh Fish	Product	3	\$300	\$100	4%
Anita Miller	Grand Junction, CO	MP3 Player	Equipment	4	\$580	\$145	8%
Huong Ngyun	Dallas, TX	Gym Membership	Other	2	\$500	\$250	7%
Ian Parker	Lubbock, TX	Gym Membership	Gift Certificate	3	\$600	\$200	8%
Huong Pham	Colorado City, CO	Restaurant Gift Certificate	Gift Certificate	3	\$180	\$60	2%
Donna Reed	Dumas, TX	Hotel Accommodations	Gift Certificate	2	\$200	\$100	3%
Dan Reed	Austin, TX	Yoga Class	Service	2	\$200	\$100	3%
Jennifer Ward	Houston, TX	1-Year Free Coffee	Product	1	\$100	\$100	1%
Bobby Wilcox	Lincoln, NE	Automotive Gift Certificate	Gift Certificate	1	\$100	\$100	1%
Idelle Wilcox	Oklahoma City, OK	Restaurant Gift Certificate	Gift Certificate	4	\$180	\$45	2%
			Highest Value	4	\$1,000	\$1,000	14%
			Lowest Value	1	\$80	\$20	1%
			Average	2.43	\$245.50	\$127.83	3.0%
			Total	73	\$7,365	\$3,835	100%

**Exercise Two: Statistical Functions**

Open sheet: "Statistical Functions" in your workbook. Insert the appropriate functions to answer the following questions:

- What is the total number of donors?
- How many donors donated "Equipment" items?
- What is the percentage of donated Products from all the donated gifts?
- How many donors from Colorado State, donated Gift Certificates?
- What is the average individual value of all donated Products?
- How many Services and Gift Certificates were donated?
- What is the total quantity of donated Services, having individual values above 50\$?

- How many items have their individual value between 100\$ and 400\$ (inclusively)?
- How many distinct items have their value greater than the average individual value of all items?

 <i>Main Statistics</i>	
What are the highest two individual values donated?	1000, 400
What is the total number of donors?	30
How many donors donated Equipment items?	5
What is the percentage of Products from all the donated gifts?	18%
How many donors from Colorado state, donated Gift Certificates?	3
What is the average individual value of all donated Products?	74
How many Services and Gift Certificates were donated?	43
What is the total quantity of donated Services with ind value above 50\$?	6
How many items have their individual values between 100\$ and 400\$?	12
How many distinct items have their value greater than the average individual value?	7


**Exercise Three: More Statistical Functions**

Open sheet “**More Statistics**” in your workbook. Some statistics are to be conducted based on the category of the items donated.

- Insert in cell M7 the appropriate function to get the average individual value of all donated items belonging to the Equipment category. Copy the same function to get the average value of: Product, Gift Certificate, Service, and Other.
- Insert in cell O7 the appropriate function to get the number of distinct Equipment items donated. Copy the same function to all other items (O8 to O11).
- Insert in cell O15 the appropriate function to get the number of distinct items donated having individual value between 0 and 99 inclusively. The same function should be copied to cells: O16 to O20.
- Insert in cell P15 the appropriate function to get the total quantity of items donated, having individual values between 0 and 99 inclusively. Copy the same function to all other cells.

## Statistical Tables

Category	Average Value	Number of Distinct Items
<i>Equipment</i>	378.00	5
<i>Product</i>	74.00	5
<i>Gift Certificate</i>	70.38	13
<i>Service</i>	77.50	4
<i>Other</i>	116.67	3



Values between (inclusively)			Number of distinct items	Total Quantity
<i>0</i>	<i>and</i>	<i>99</i>	17	46
<i>100</i>	<i>and</i>	<i>199</i>	8	17
<i>200</i>	<i>and</i>	<i>299</i>	3	8
<i>300</i>	<i>and</i>	<i>399</i>	0	0
<i>400</i>	<i>and</i>	<i>499</i>	1	1
<i>500</i>	<i>and</i>	<i>1000</i>	1	1

**Exercise Four: Conditional Formatting**

Open the “Conditional Formatting” worksheet.

- Apply the appropriate conditional formatting to change the font color of the donors name to bold italic red, for all donors who offered gifts with total value greater than 200\$.
- Highlight the total value by light red, for all items with individual value above 100\$.

Full Name	City / State	Item Donated	Category	Quantity	Total Value
<b><i>Vickie Anderson</i></b>	Greeley, CO	MP3 Player	Equipment	2	\$290
<b><i>Michael Anderson</i></b>	Topeka, KS	Gift Basket	Product	3	\$225
Natalie Barguno	Phoenix, AZ	Toy Store Gift Certificate	Gift Certificate	3	\$150
Dennis Boothe	Alva, OK	YMCA Swimming Lessons	Service	2	\$130
<b><i>Benjamin Brown</i></b>	Tucson, AZ	Digital Camera	Equipment	1	\$400
Emiko Francani	Emporia, KS	Floral Arrangement	Gift Certificate	2	\$150
Robert Hall	Denver, CO	Grocery Gift Certificate	Gift Certificate	3	\$150
<b><i>Tara Huber</i></b>	Omaha, NE	Laptop Computer	Equipment	1	\$1,000
Kevin Jackson	Amarillo, TX	Movie Tickets + Popcorn	Gift Certificate	4	\$120
Peggy Jackson	Grand Junction, CO	Restaurant Gift Certificate	Gift Certificate	2	\$150
<b><i>Kim Jansen</i></b>	Oklahoma City, OK	MP3 Player	Equipment	3	\$600
Kim Jones	Oklahoma City, OK	Fondue Set	Product	4	\$80
Kelly Krypton	Dodge City, KS	Football Tickets	Product	2	\$150
Kristen Krypton	Fort Collins, CO	Free Photography Sitting	Service	2	\$90
Larry Lopez	Topeka, KS	Restaurant Gift Certificate	Gift Certificate	4	\$160
George Martin	Denver, CO	Car Wash Card	Other	2	\$100
Shelly Martin	San Fransisco, CA	Massage	Other	2	\$100
Catherine McCue	Tulsa, OK	Restaurant Gift Certificate	Gift Certificate	2	\$80
Marion McMahan	Tulsa, OK	Automotive Gift Certificate	Gift Certificate	2	\$100
Robert McMahan	Lincoln, NE	Web Site Services	Service	2	\$200
<b><i>Catherine McQuaide</i></b>	Dallas, TX	10 pounds of Fresh Fish	Product	3	\$300
<b><i>Anita Miller</i></b>	Grand Junction, CO	MP3 Player	Equipment	4	\$580
<b><i>Huong Ngyun</i></b>	Dallas, TX	Gym Membership	Other	2	\$500
<b><i>Ian Parker</i></b>	Lubbock, TX	Gym Membership	Gift Certificate	3	\$600
Huong Pham	Colorado City, CO	Restaurant Gift Certificate	Gift Certificate	3	\$180
Donna Reed	Dumas, TX	Hotel Accommodations	Gift Certificate	2	\$200
Dan Reed	Austin, TX	Yoga Class	Service	2	\$200
Jennifer Ward	Houston, TX	1-Year Free Coffee	Product	1	\$100
Bobby Wilcox	Lincoln, NE	Automotive Gift Certificate	Gift Certificate	1	\$100
Idelle Wilcox	Oklahoma City, OK	Restaurant Gift Certificate	Gift Certificate	4	\$180

**Submission**

Save your file and upload it to Moodle.

*Enjoy your work!!*