Sukkur Institute of Business Administration University
Department of Computer Science

Information and Communication Technologies

Lab # 10:Exploring Advanced Features of Microsoft Excel

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Conditional Formatting

Conditional Formatting lets the user apply formatting to a cell or a range of cells based on specific criteria.

There are various conditions that can be tested in order to apply the formatting:

- Format cells based on their values
- Format cells that contain a certain text
- Format top/bottom-ranked cells in a range
- Format duplicates
- Format cells based on a formula
- And much more

Task 1 Conditional Formatting

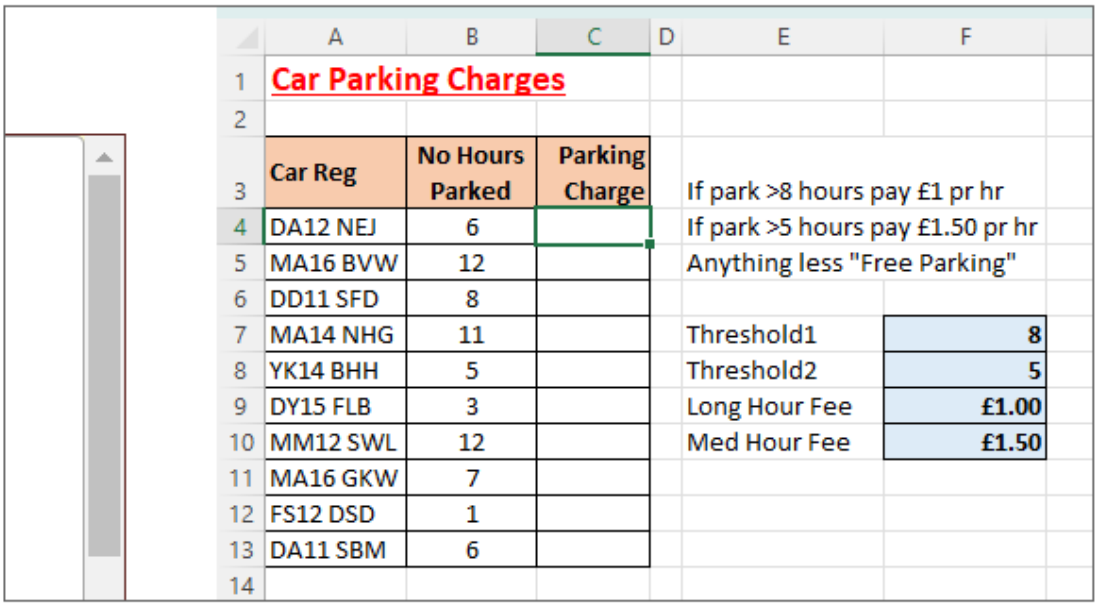
1) Calculate the entries of **Percentage** Column using the formula:
   Percentage = Achieved / Target
2) Format the **Percentage** column entries to Percentage Format.
3) Apply Conditional Formatting, so that:
   - anyone with 100% or above gets a Green Light
   - anyone between 80% and 100% Success Rate gets an Amber Light
   - anyone below this gets a Red Light

Note: **Your answer should resemble the diagram shown below**

Sales Reps - Annual Summary			
Name	**Target**	**Achieved**	**Percentage**
Jerry Mouse	£85,000	£94,500	111.18%
Ivor Cricket	£120,000	£118,000	98.33%
Curly Sue	£100,000	£107,000	107.00%
Randy Cunningham	£65,000	£29,000	44.62%
Arthur Shilling	£50,000	£67,000	134.00%
Hugh Jass	£150,000	£198,000	132.00%
Wendy House	£95,000	£124,750	131.32%
Carol Service	£95,000	£94,750	99.74%
Christmas T. Rees	£75,000	£75,000	100.00%

Task 2 Advanced Ifs

We want to calculate the parking charges for the following cars:



	A	B	C	D	E	F
1	**Car Parking Charges**					
2						
3	**Car Reg**	**No Hours Parked**	**Parking Charge**		If park >8 hours pay £1 pr hr	
4	DA12 NEJ	6			If park >5 hours pay £1.50 pr hr	
5	MA16 BVW	12			Anything less "Free Parking"	
6	DD11 SFD	8				
7	MA14 NHG	11			Threshold1	**8**
8	YK14 BHH	5			Threshold2	**5**
9	DY15 FLB	3			Long Hour Fee	**£1.00**
10	MM12 SWL	12			Med Hour Fee	**£1.50**
11	MA16 GKW	7				
12	FS12 DSD	1				
13	DA11 SBM	6				
14						

In cell **C4**, create a nested **=IF** formula that either calculates the parking charges or displays the message **Free Parking**. Use these rules to help you:

- If the hours parked > 8, the driver should pay £1 per hour
- If the hours parked >5, the driver should pay £1.50 per hour
- Anything less should display **Free Parking**

Change your parking thresholds and parking fees to check that your formula works

	A	B	C	D	E	F
1	**Car Parking Charges**					
2						
3	**Car Reg**	**No Hours Parked**	**Parking Charge**		If park >8 hours pay £1 pr hr	
4	DA12 NEJ	6	£18.00		If park >5 hours pay £1.50 pr hr	
5	MA16 BVW	12	£24.00		Anything less "Free Parking"	
6	DD11 SFD	8	£16.00			
7	MA14 NHG	11	£22.00		Threshold1	**6**
8	YK14 BHH	5	£15.00		Threshold2	**3**
9	DY15 FLB	3	Free Parking		Long Hour Fee	**£2.00**
10	MM12 SWL	12	£24.00		Med Hour Fee	**£3.00**
11	MA16 GKW	7	£14.00			
12	FS12 DSD	1	Free Parking			
13	DA11 SBM	6	£18.00			
14						

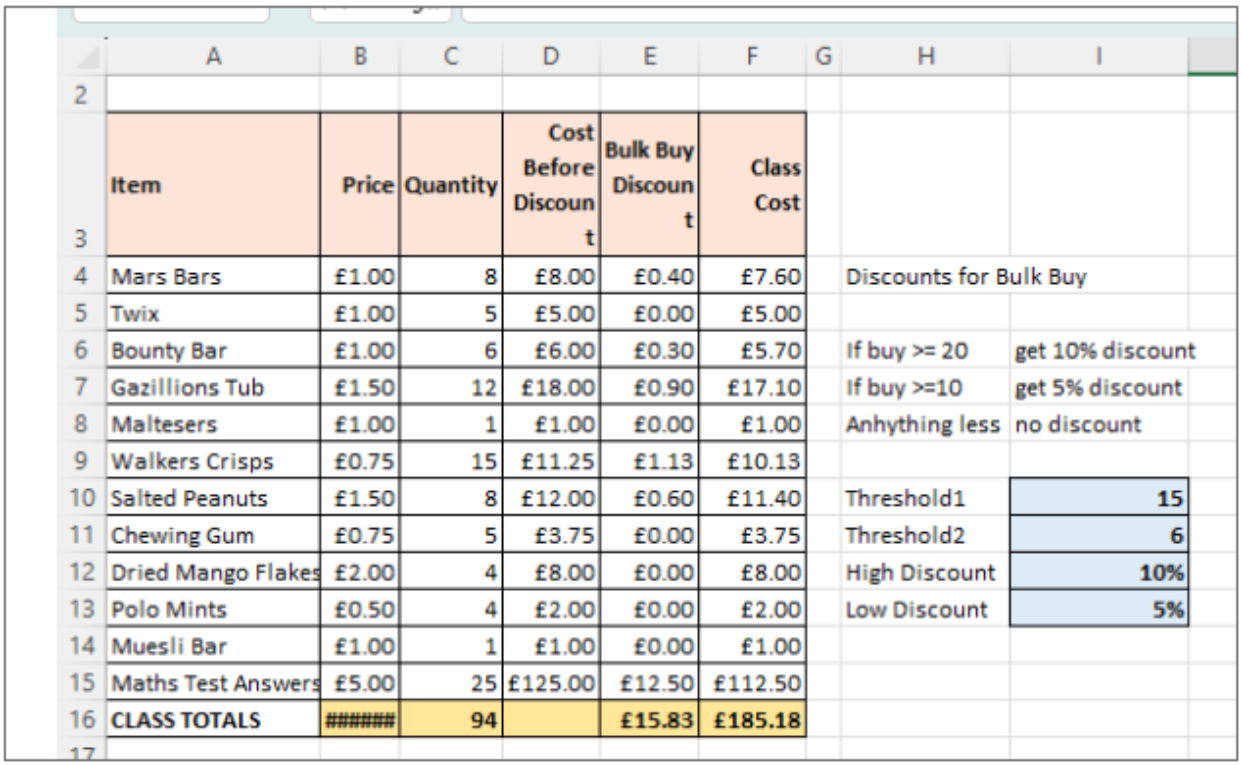
Task 3 Advanced Ifs/Nested Ifs

We want to calculate the bulk buy discounts:

In cell **E4**, create a nested **=IF** formula that calculates the correct bulk buy discount percentage. Use the following guide to help you:

- If the quantity >=20 the customer should get 10%
- If the quantity >=10 the customer should get 5%
- For anything less the customer should get no discount

Lower the order thresholds and change the discount percentages to check that your formula works:



	A	B	C	D	E	F	G	H	I
2									
3	**Item**	**Price**	**Quantity**	**Cost Before Discount**	**Bulk Buy Discount**	**Class Cost**			
4	Mars Bars	£1.00	8	£8.00	£0.40	£7.60		Discounts for Bulk Buy	
5	Twix	£1.00	5	£5.00	£0.00	£5.00			
6	Bounty Bar	£1.00	6	£6.00	£0.30	£5.70		If buy >= 20	get 10% discount
7	Gazillions Tub	£1.50	12	£18.00	£0.90	£17.10		If buy >=10	get 5% discount
8	Maltesers	£1.00	1	£1.00	£0.00	£1.00		Anhything less	no discount
9	Walkers Crisps	£0.75	15	£11.25	£1.13	£10.13			
10	Salted Peanuts	£1.50	8	£12.00	£0.60	£11.40		Threshold1	**15**
11	Chewing Gum	£0.75	5	£3.75	£0.00	£3.75		Threshold2	**6**
12	Dried Mango Flakes	£2.00	4	£8.00	£0.00	£8.00		High Discount	**10%**
13	Polo Mints	£0.50	4	£2.00	£0.00	£2.00		Low Discount	**5%**
14	Muesli Bar	£1.00	1	£1.00	£0.00	£1.00			
15	Maths Test Answers	£5.00	25	£125.00	£12.50	£112.50			
16	**CLASS TOTALS**	######	**94**		**£15.83**	**£185.18**			
17									

Task 4 Nested Ifs

In this exercise, you will be able to practice and understand how to use Nested IF in Excel.

Syntax:

```
IF(condition1, result1, IF(condition2, result2, IF(condition3, result3, result4)))
```

The school decided to use the following grade system:

- Grade higher or equal to 80 - Excellent
- Grade higher or equal to 60 but lower than 80 – Good

- Grade lower than 60 - Failed

Task 5 Nested Ifs

Your task is to calculate the sales commission based on the sales value. The commission for the sales value between $600,000 to $750,000 is 3%, $750,001 to $900,000 is 5%, more than $900,000 is 7%.

Sales	Commission
Less Than $600,000	0%
$600,000 - $750,000	3%
$750,001 - $900,000	5%
More Than $900,000	7%

Task 6 Pivot Table

When you have a lot of data it can sometimes be difficult to analyze all of the information in your worksheet. **Pivot Tables** can help make your worksheets more manageable by summarizing data and allowing you to manipulate it in different ways.

Create a pivot table from this data, then use the filters within to view the average prices of holidays that have a **Travel Method** of **Plane** and a **Resort Name** that begins with the letter **S**

1	Travel Method	Plane		
2				
3	Average of Price	Column Labels		
4	Row Labels	Santiago	Seville	Grand Total
5	Chile	1259		1259
6	Spain		243.5	243.5
7	Grand Total	1259	243.5	582
8				

Your pivot table should now look something like this.

Confirm that there are 3 holidays in total, by using the drill-down feature:

	A	B	C	D	E	F
1	Country	Resort Name	No of Days	Travel Method	Price	Holiday ID
2	Chile	Santiago	21	Plane	1259	CH266H
3	Spain	Seville	10	Plane	199	TH8956SP
4	Spain	Seville	14	Plane	288	NM9876Y
5						

Task 7 Pivot Table and Sliders

1. Select the data given in the sheet and use it to create a pivot table in a new sheet.
2. Enable all field's checkboxes except for unit price field to create a generic pivot table.
3. Apply the $ currency to the sum of total sales.
4. Drag the relevant fields in the filter, column and row section to generate a data set to see the overall sales all franchisers.
5. Select any cell of the pivot table and create slicers for months, regions, products and franchisers.
6. Now use these slicers to generate the following views. Show your teacher each view:
    a. ABC trading's overall sales of CG-125 in all regions.
    b. XYZ trading's overall sales of both products in south region.
    c. NZB trading's sales in January for both products in all regions.
    d. All franchiser's sales of CD-70 in both months with number of units sold.
7. Insert the pivot chart feature to generate a graph on any criterion.
8. Arrange the graph and slicers below the data table so that they are clearly visible and properly placed on the excel sheet.

Task 8 Data Validation

	A	B	C	D	E
1	Pesko Part-time Workers Weekly P				
2					
3	*Staff ID*	*Surname*	*Initial*	*Hours Worked*	
4	M/141	Abbot	R	16	£15
5	M/289	Arlington	T	18	£17
6	F/112	Brown	T	22	£21
7	F/219	Davies	F	19	£18
8	F/881	Davis	G	18	£17
9	M/448	Davis	W	18	£17
10	F/66	Fox	S	12	£11
11	M/557	Kelsey	A	16	£15
12	M/44	Marsh	H	16	£15
13	M/191	Oliver	H	18	£17
14	M/352	Potts	B	22	£21
15	F/336	Taylor	M	12	£11
16	**TOTAL**			**207**	**£2,06**

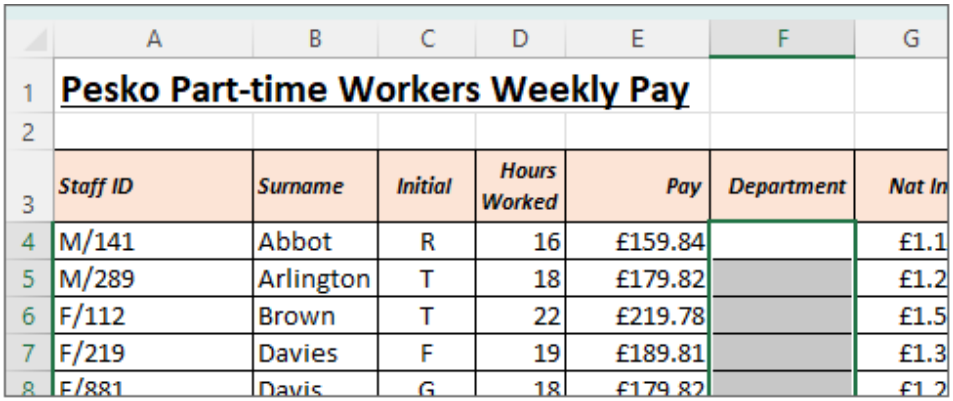
The hours worked must be between 0 and 26.

Set data validation on cells **D4:D15** to restrict users to only typing in a whole number between 0 and 26

Try to type in the following values into column D and check that the data validation rules work and only the last item is allowed:

- 11.5
- -7
- 38
- 17

In column F we want to choose the department name from a list to avoid typing errors

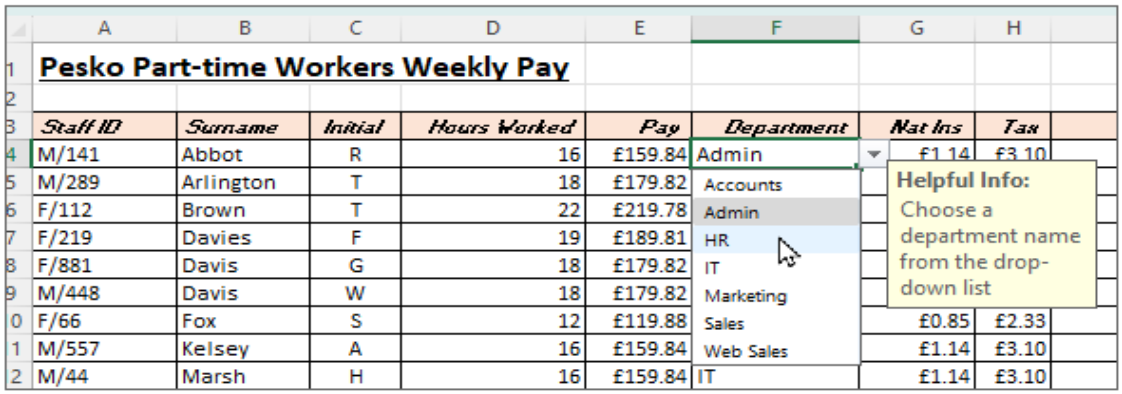


	A	B	C	D	E	F	G
1	**Pesko Part-time Workers Weekly Pay**						
2							
3	*Staff ID*	*Surname*	*Initial*	*Hours Worked*	*Pay*	*Department*	*Nat In*
4	M/141	Abbot	R	16	£159.84		£1.1
5	M/289	Arlington	T	18	£179.82		£1.2
6	F/112	Brown	T	22	£219.78		£1.5
7	F/219	Davies	F	19	£189.81		£1.3
8	F/881	Davis	G	18	£179.82		£1.2

We need to set up a validation list.

Set a data validation list for cells **F4:F15**, using the range name that is already set up on the **DV Range** tab called **Department Names**.

When you click in a cell in column F, you should now be able to choose a department name from the drop-down list:



	A	B	C	D	E	F	G	H
1	**Pesko Part-time Workers Weekly Pay**							
2								
3	*Staff ID*	*Surname*	*Initial*	*Hours Worked*	*Pay*	*Department*	*Nat Ins*	*Tax*
4	M/141	Abbot	R	16	£159.84	Admin	£1.14	£3.10
5	M/289	Arlington	T	18	£179.82			
6	F/112	Brown	T	22	£219.78			
7	F/219	Davies	F	19	£189.81			
8	F/881	Davis	G	18	£179.82			
9	M/448	Davis	W	18	£179.82			
10	F/66	Fox	S	12	£119.88		£0.85	£2.33
11	M/557	Kelsey	A	16	£159.84		£1.14	£3.10
12	M/44	Marsh	H	16	£159.84	IT	£1.14	£3.10

Accounts
Admin
HR
IT
Marketing
Sales
Web Sales

Helpful Info: Choose a department name from the drop-down list

A drop-down list should appear.

Task 9 Sum Ifs

The SUMIFS function has 3 required arguments (input data separated by commas), then up to an optional 127 pairs of criteria_range and criteria arguments. The syntax is as follows:

=SUMIFS(sum_range, criteria_range1, criteria1, [criteria_range2],[criteria2],...)

1. We wanted to get the total amount of sales from region code 542 only for employee 1005 in the Excel table. Find the result using sumifs.

2. We wanted to add together to Total amount of sales from all employees in the West region that sold more than $4000 worth of products. Find the result using sumifs.

Task 10 Sum Ifs

In this exercise, you will be able to practice the SUMIFS function, for situations where multiple columns have to be checked!
Open Task 8 and perform calculation in yellow highlighted cells.