SESSION:

Excel Analytics I, II, III & IV

Assignment – Task 28-31

Jagannath Chaudhary – B4

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1. Introduction

This assignment will help you understand the concepts learned in the session.

1. Objective

This assignment will test your skills on the concepts of Excel analytics.

1. Prerequisites

Not applicable.

1. Associated Data Files

1. Problem Statement

Task 1:

You should form a table on a worksheet titled “class list” that includes the names and test scores of your students. You have 7 students in your class, their names are: Allen, Borlin, Catlin, Dorsey, Eugene, Finneran, and Greco. Their scores on the first 3 tests are as follows:

	Test 1	**Test 2**	**Test 3**
Allen	Test 89	Test 78	Test 89

Borlin	Test 67	Test 56	Test 66
Catlin	Test 78	Test 76	Test 76
Dorsey	Test 56	Test 34	Test 45
Eugene	Test 26	Test 100	Test 99
Finerra n	Test 99	Test 98	Test 97
Greco	Test 78	Test 87	Test 88

Solution :

1. Opened a new file in MS Excel .
2. Typed the given data and created a Table and Saved the data .

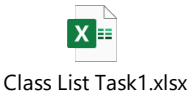
	Test 1	Test 2	Test 3
Allen	89	78	89
Borlin	67	56	66
Catlin	78	76	76
Dorsey	56	34	45
Eugene	26	100	99
Finnera n	99	98	97
Greco	78	87	88

3. Excel Sheet Saved as ‘Class List’.

	Test 1	Test 2	Test 3
Allen	89	78	89

Borlin	67	56	66
Catlin	78	76	76
Dorsey	56	34	45
Eugene	26	100	99
Finneran	99	98	97
Greco	78	87	88

Class List Task1.xlsx



Task :

You are expected to submit the steps you followed for doing all the below subtasks.

- Use the **"Sales_Data.xml" (Download Link)** file.
- Access the "xml" file in excel and save it to a comma delimited "csv" file.
- Make all the rows where "attractiveness<6" to
- Background color = red, font = 8, font type = italic.
- Hide All the rows where "attractiveness<6" by using grouping. Hide in the sense, we should be able to see there are some rows there, which we can unfold to see. Also, try hiding the data without grouping.
- Use the same data. The column named "attractiveness" is in general format. It is actually a rating from 1 to 10. Can you prepend "C" before the number. i.e, if it is 1, it should be converted to "C1". Format the column to text type.

Other question and answers are submitted as 2 excel files as downloadable files.

Solution Task 2

- Access the "xml" file in excel and save it to a comma delimited "csv" file.

Step	Description	Shot Key

1	Data Tab	Alt + A
2	From Other Sources	FO
3	From XML Data Import	Down shift, Enter
4	File	Alt + F
5	Save as	A
	Choose the location to save the file	
6	Select under save as type – CSV (Comma delimited) (*.CSV)	Tab , Downshift , Enter for save as type CSV (Comma delimited) (*.CSV)
7	Save	Save

• Make all the rows where “attractiveness<6” to
background color = red, font = 8, font type = italic.

Select A2 to D201
Conditional Formatting > New Rule
Use a formula to determine which cells to format
Formula ‘ =$D2<6 ‘
Click on format tab
Select font style as Italic
Under fill tab select red colour
Click tab ‘ ok’
Click ‘ok’ on new formatting rule window.

advertise	sales	plays	attractiveness
10.256	330	43	10
985.685	120	28	7
1445.563	360	35	7
1188.193	270	33	7
574.513	*220*	*44*	*5*
568.954	*170*	*19*	*5*
471.814	*70*	*20*	*1*
537.352	210	22	9
514.068	200	21	7
174.093	300	40	7
1720.806	290	32	7
611.479	*70*	*20*	*2*
251.192	150	24	8
97.972	190	38	6
406.814	240	24	7

265.398	*100*	*25*	*5*
1323.287	*250*	*35*	*5*
196.65	210	36	8
1326.598	280	27	8
1380.689	230	33	8
792.345	210	33	7
957.167	230	28	6
1789.659	320	30	9
656.137	210	34	7
613.697	230	49	7
313.362	250	40	8
336.51	*60*	*20*	*4*
1544.899	330	42	7
68.954	150	35	8
785.692	150	8	6
125.628	180	49	7
377.925	80	19	8
217.994	180	42	6
759.862	130	6	7
1163.444	320	36	6
842.957	280	32	7
125.179	200	28	6
236.598	130	25	8
669.811	190	34	8
612.234	150	21	6
922.019	230	34	7
50	310	63	7
2000	340	31	7
1054.027	240	25	7
385.045	180	42	7
1507.972	220	37	7
102.568	40	25	8
204.568	190	26	7
1170.918	290	39	7
689.547	340	46	7
784.22	250	36	6
405.913	*190*	*12*	*4*
179.778	120	2	8
607.258	230	29	8
1542.329	190	33	8
1112.47	210	28	7
856.985	170	10	6
836.331	310	38	7

236.908	*90*	*19*	*4*
1077.855	140	13	6
579.321	300	30	7
1500	340	38	8
731.364	170	22	8
25.689	100	23	6
391.749	200	22	9
233.999	80	20	7
275.7	100	18	6
56.895	70	37	7
255.117	50	16	8
566.501	240	32	8
102.568	*160*	*26*	*5*
250.568	290	53	9
68.594	140	28	7
642.786	210	32	7
1500	300	24	7
102.563	230	37	6
756.984	280	30	8
51.229	160	19	7
644.151	200	47	6
15.313	*110*	*22*	*5*
243.237	110	10	8
256.894	*70*	*1*	*4*
22.464	100	1	6
45.689	190	39	6
724.938	*70*	*8*	*5*
1126.461	360	38	7
1985.119	*360*	*35*	*5*
1837.516	*300*	*40*	*5*
135.986	120	22	7
237.703	150	27	8
976.641	220	31	6
1452.689	280	19	7
1600	300	24	9
268.598	140	1	7
900.889	290	38	8
982.063	180	26	6
201.356	140	11	6
746.024	210	34	6
1132.877	250	55	7
1000	250	5	7
75.896	120	34	6

1351.254	290	37	9
202.705	60	13	8
365.985	140	23	6
305.268	290	54	6
263.268	160	18	7
513.694	100	2	7
152.609	160	11	6
35.987	150	30	8
102.568	140	22	7
215.368	230	36	6
426.784	230	37	8
507.772	*30*	*9*	*3*
233.291	80	2	7
1035.433	190	12	8
102.642	90	5	9
526.142	120	14	7
624.538	*150*	*20*	*5*
912.349	230	57	6
215.994	150	19	8
561.963	210	35	7
474.76	*180*	*22*	*5*
231.523	140	16	7
678.596	360	53	7
70.922	10	4	6
1567.548	240	29	6
263.598	270	43	7
1423.568	290	26	7
715.678	220	28	7
777.237	230	37	8
509.43	*220*	*32*	*5*
964.11	240	34	7
583.627	260	30	7
923.373	170	15	7
344.392	130	23	7
1095.578	270	31	8
100.025	*140*	*21*	*5*
30.425	*60*	*28*	*1*
1080.342	210	18	7
799.899	210	28	7
107.752	240	37	8
893.355	210	26	6
283.161	200	30	8
917.017	140	10	7

234.568	90	21	7
456.897	120	18	9
206.973	100	14	7
1294.099	360	38	7
826.859	180	36	6
564.158	150	32	7
192.607	*110*	*9*	*5*
10.652	*90*	*39*	*5*
45.689	160	24	7
42.568	230	45	7
20.456	40	13	8
635.192	60	17	6
1002.273	230	32	7
1177.047	230	23	6
507.638	120	0	6
215.689	*150*	*35*	*5*
526.48	120	26	6
26.895	60	19	6
883.877	280	26	7
9.104	120	53	8
103.568	230	29	8
169.583	230	28	7
429.504	40	17	6
223.639	140	26	8
145.585	360	42	8
985.968	210	17	6
500.922	260	36	8
226.652	250	45	7
1051.168	200	20	7
68.093	150	15	7
1547.159	250	28	8
393.774	100	27	6
804.282	260	17	8
801.577	210	32	8
450.562	290	46	9
26.598	220	47	8
179.061	*70*	*19*	*1*
345.687	110	22	8
295.84	250	55	9
2271.86	*320*	*31*	*5*
1134.575	300	39	8
601.434	180	21	6
45.298	180	36	6

759.518	200	21	7
832.869	320	44	7
56.894	140	27	7
709.399	100	16	6
56.895	120	33	6
767.134	230	33	8
303.172	150	21	7
700.929	250	35	9
910.851	190	26	7
888.569	240	14	6
800.615	250	34	6
1500	230	11	8
785.694	110	20	9

• Hide All the rows where “attractiveness<6” by using grouping. Hide in the sense, we should be able to see there is some rows there, which we can unfold to see. Also try hiding the data without grouping.

Using grouping
sort the data from Smallest to largest for the column ‘D’ i.e. attractiveness
Select the rows from Row 2 to Row 27
Under ‘ Data’ tab go to ‘Group’. Click ‘ Group’
Click ‘1’ OR ‘-1’ to hide the rows where “attractiveness<6”

advertise	sales	plays	attractiveness
30.425	*60*	*28*	*1*
179.061	*70*	*19*	*1*
471.814	*70*	*20*	*1*
611.479	*70*	*20*	*2*
507.772	*30*	*9*	*3*
236.908	*90*	*19*	*4*
256.894	*70*	*1*	*4*
336.51	*60*	*20*	*4*
405.913	*190*	*12*	*4*
10.652	*90*	*39*	*5*
15.313	*110*	*22*	*5*
100.025	*140*	*21*	*5*

102.568	160	26	5
192.607	110	9	5
215.689	150	35	5
265.398	100	25	5
474.76	180	22	5
509.43	220	32	5
568.954	170	19	5
574.513	220	44	5
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1323.287	250	35	5
1837.516	300	40	5
1985.119	360	35	5
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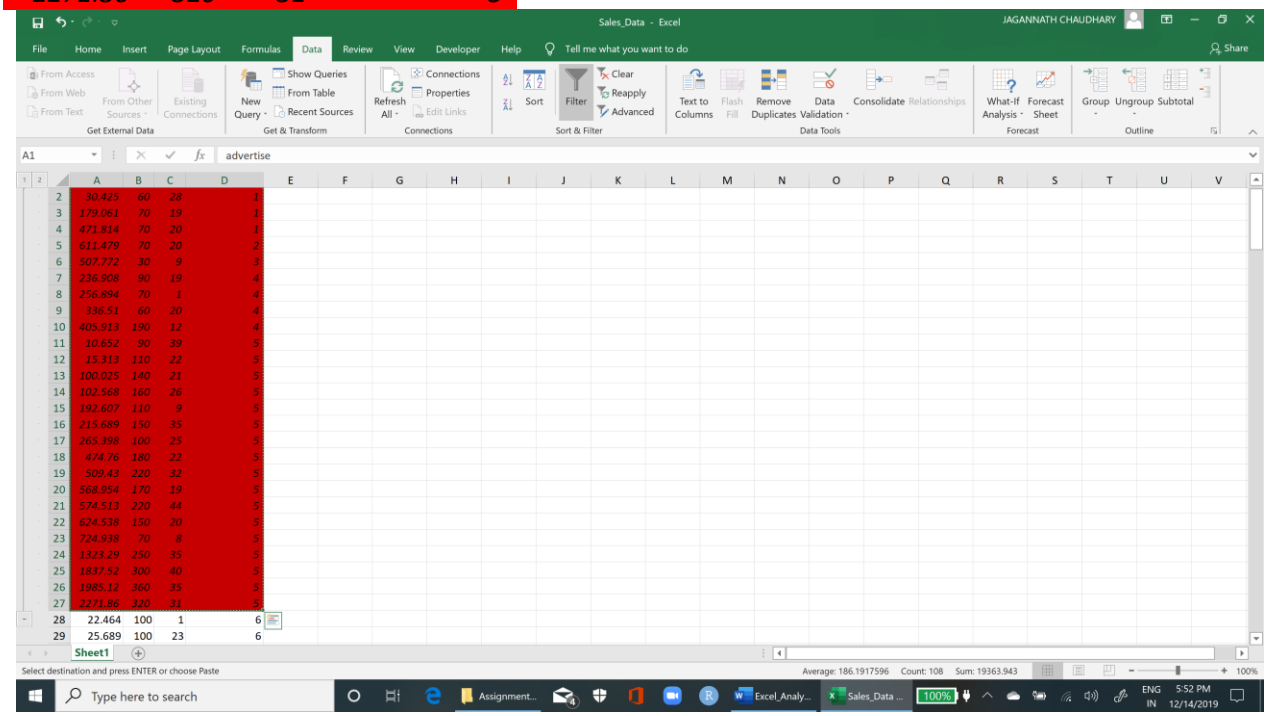


Solution

Without grouping – Option1

sort the data from Smallest to largest for the column ‘D’ i.e. attractiveness

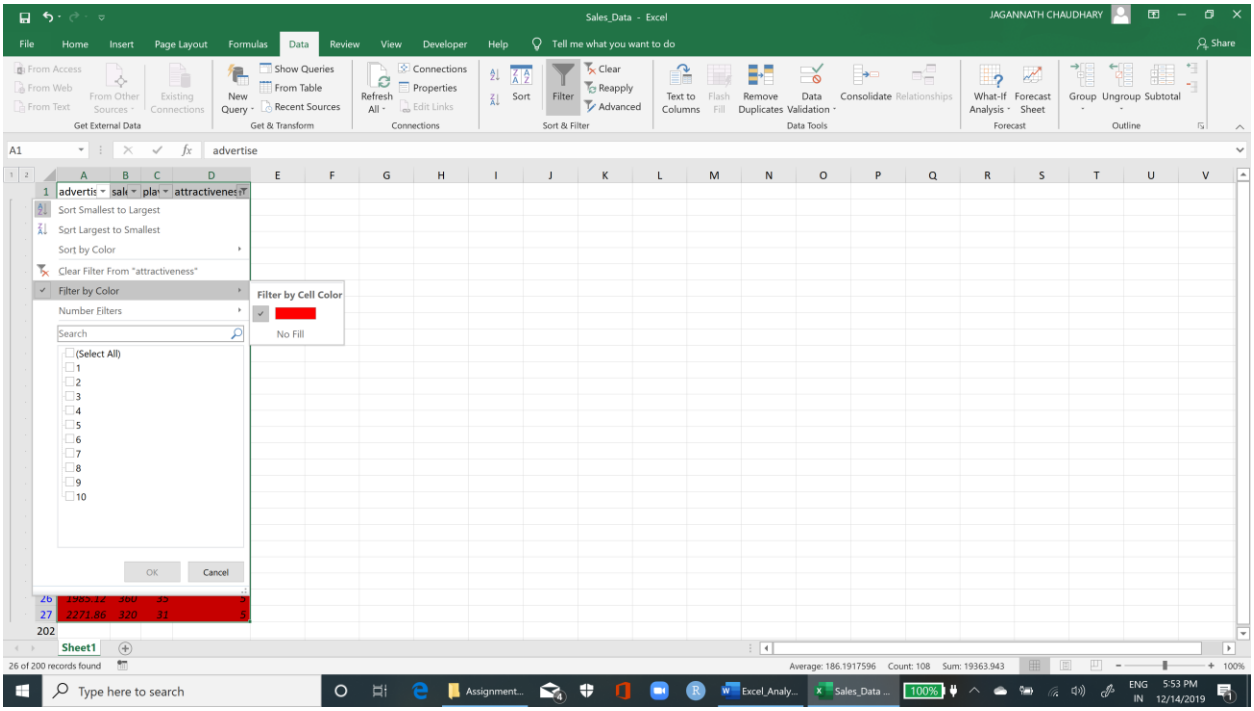
Select the rows from Row 2 to Row 27

Right Click and hide

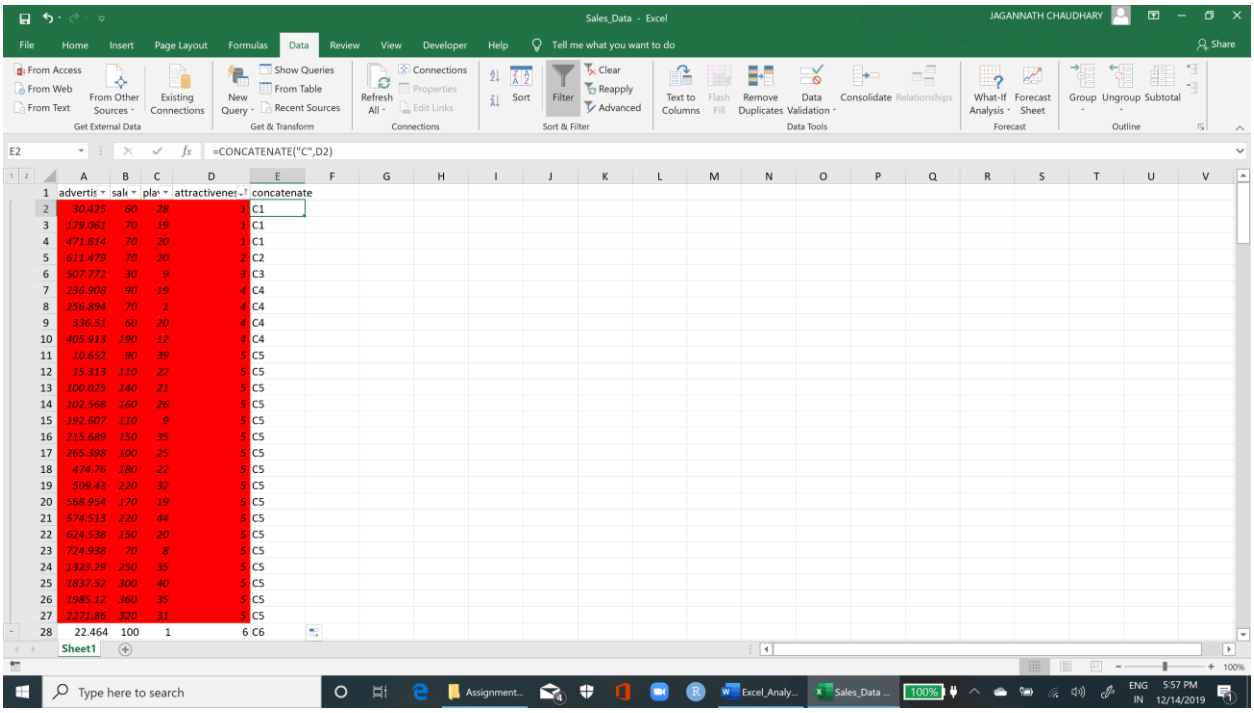
Without grouping – Option2

Apply Filters to Column D: Filter by Colour > No Fill

Apply Filters to Column D: Filter by Numbers > Greater than or equal to 6



• Use the same data. The column named “attractiveness” is in general format. It is actually a rating from 1 to 10. Can you prepend “C” before the number. i.e. if it is 1, it should be
converted to “C1”. Format the column to text type.
Use formula
=CONCATENATE("C",D2)
Select the column
Under home tab select the “ ABC Text” from the drop down



Solution

Task 3:

You should form a table on a worksheet titled “class list” that includes the names and test scores of your students. You have 7 students in your class, their names are: Allen, Borlin, Catlin, Dorsey, Eugene, Finneran, and Greco. Their scores on the first 3 tests are as follows:

	Test 1	**Test 2**	**Test 3**
Allen	Test 89	Test 78	Test 89

Borlin	Test 67	Test 56	Test 66
Catlin	Test 78	Test 76	Test 76
Dorsey	Test 56	Test 34	Test 45
Eugene	Test 26	Test 100	Test 99
Finerran	Test 99	Test 98	Test 97
Greco	Test 78	Test 87	Test 88

- Using an Excel function, show each student's average in an additional column labeled "Average"
- Using an Excel function, show each student's rounded average in an additional column labeled "Rounded Average"
- If a student's rounded average is above "95", he/she has received "honors" in the class. In an additional column titled "Honors", insert a function that will return the word "Yes" if they have received honors, otherwise would return the word "No"

- If a student's rounded average is 90 or greater, they receive an "A".

Between 80 and 90 is a "B", between 70 and 80 is a "C", between 60 and 70 is a "D", and lower than 60 is an "F". Somewhere on your sheet, enter this information in cells. Create an additional column titled "Grade" and insert a nested IF function that returns the appropriate grade for each student. Use an absolute cell references in your nested IF function to indicate cut-off points between grades. Hint: You will need to place the "cut-off grade" values in cells somewhere on your worksheet.

SUMMARY STATISTICS

	Test 1	Test 2	Test 3	Average	rounded average	Honors	Grade
Allen	89	78	89	85.33	85.3	No	B
Borlin	67	56	66	63.00	63.0	No	D
Catlin	78	76	76	76.67	76.7	No	C
Dorsey	56	34	45	45.00	45.0	No	F
Eugene	26	100	99	75.00	75.0	No	C
Finneran	99	98	97	98.00	98.0	Yes	A
Greco	78	87	88	84.33	84.3	No	B

formula for grade
iF(F2>$B$12,$D$11,IF(F2>$B$13,$D$12,IF(F2>$B$14,$D$13,IF(F2>$B$15,$D$14,$D$15))))

COUNTIF($H$2:$H$8,"A")

Countif formulas used and shown in sheet "class list"

Cut Off Grade	Grid Ref		Countif
100	90	A	1
89	80	B	2
79	70	C	2
69	60	D	1
59	0	F	1

Class List Task1.xlsx

Task 4:

"Data.xlsx" (Download Link)

Using the excel spreadsheet "Data.xlsx", create a series of Pivot Tables (or Pivot Charts) to answer the following questions.

• What are the averages for purchases in each region?

• What form of payment is most common?

• Do our customers shop at work (most likely between 8:00 and 17:00) or at home?

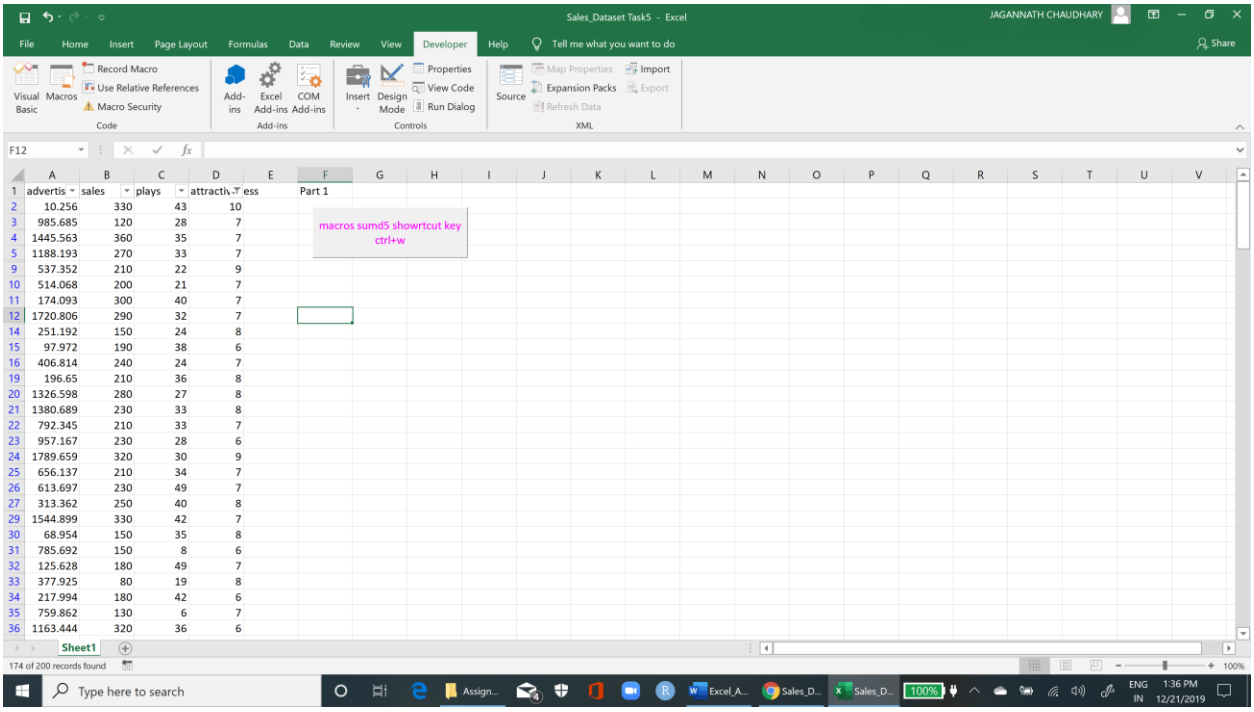
• Turn in a printout of the pivot tables you used to answer each question.

Note: To answer number 3, a new column is created in the spreadsheet labeled "Hour of Day" and set it to just the hour instead of hour and minutes. In other words = hour(G8). The students who are excel power users should use an "if" formula to create a value of either day (time between 8:00 and 17:00) or night (not between 8:00 and 17:00).

Task 5:

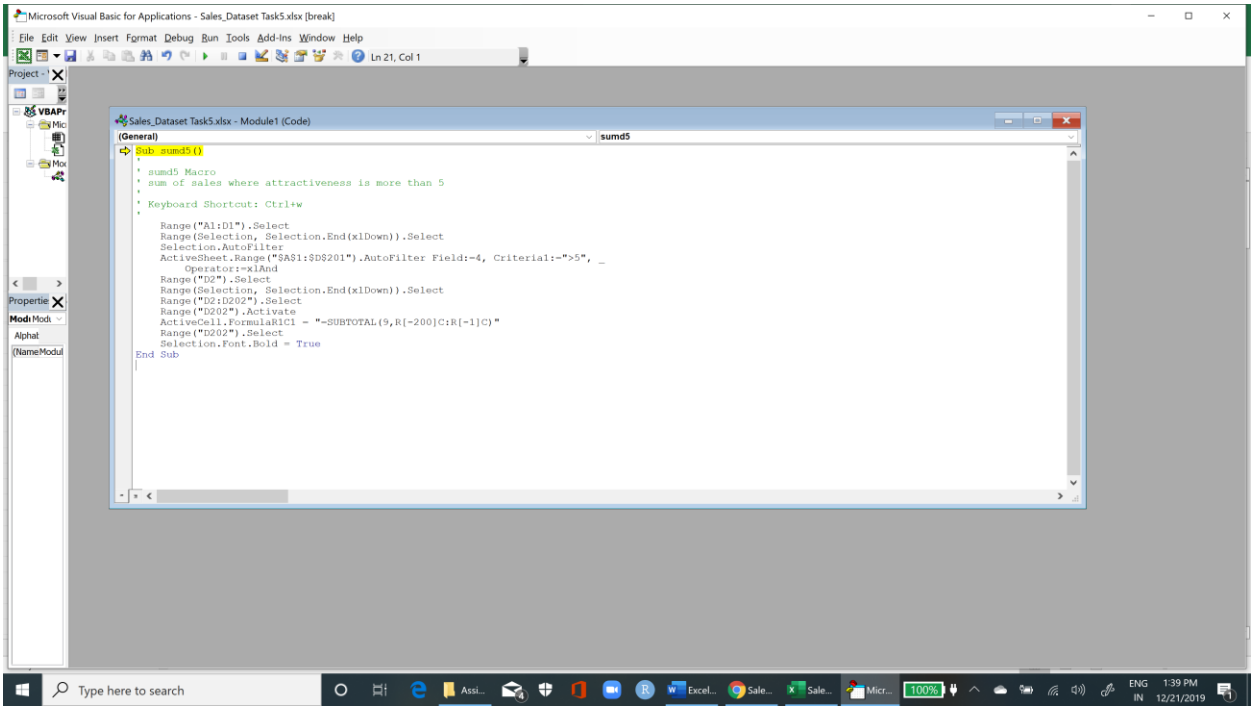
Use “Sales_Dataset.xlsx” file

Create and execute a macro (show a button), to sum of “Sales” where the “attractiveness” rating is more than 5.



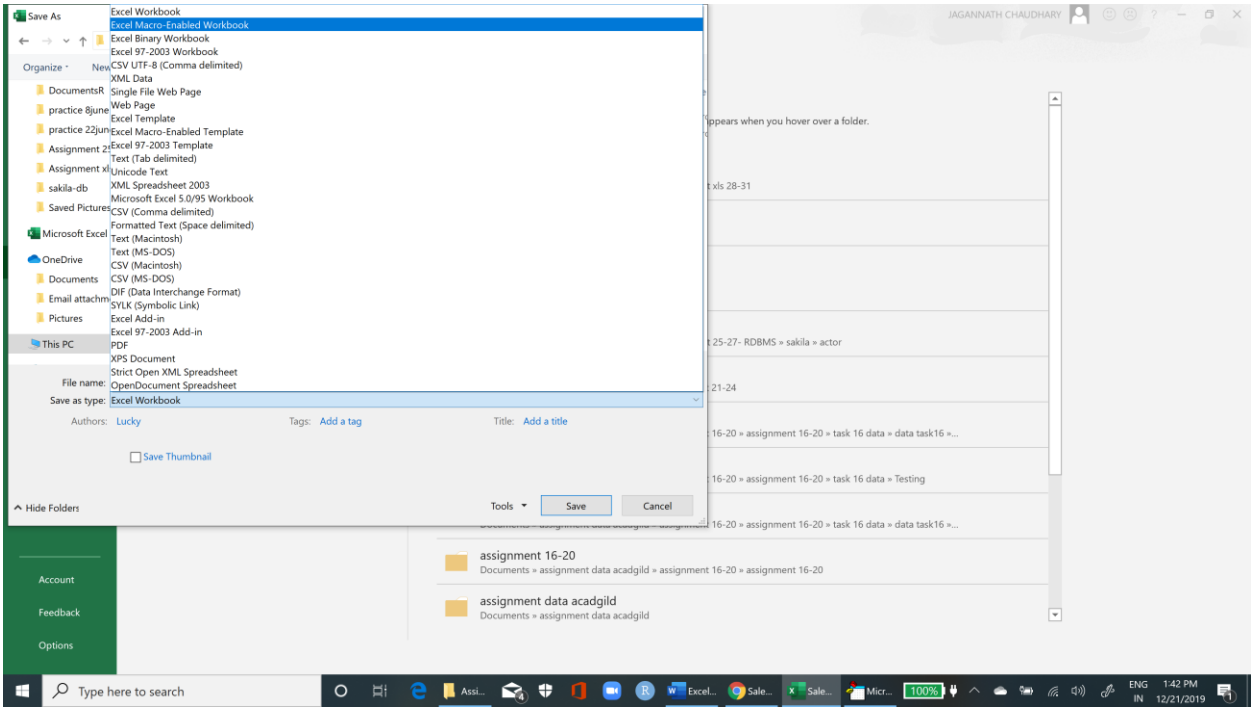
• Do it by recording a Macro.

• Try it using writing a VBA code in Macro.



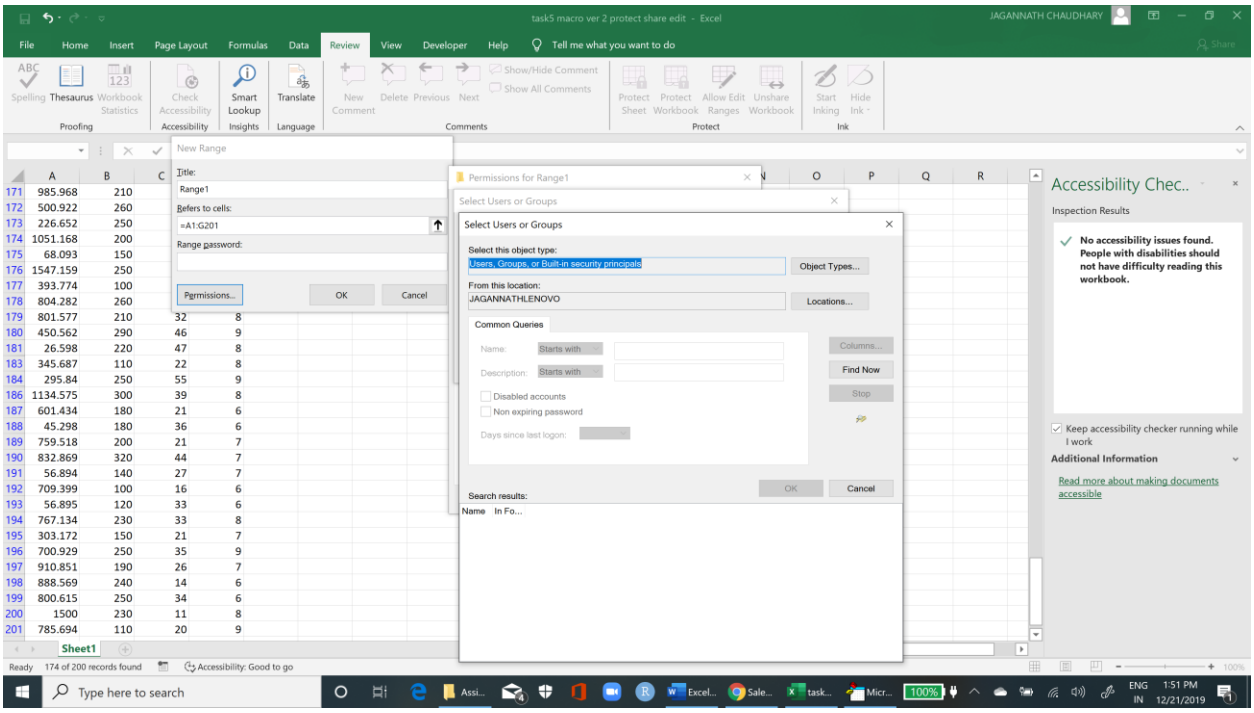
• Use http://www.excel-easy.com/vba.html for reference to write VBA script.

• Protect the Workbook and save version and upload as a first part of assignment



• Share the protected workbook, by giving edit access and implement track change. Upload this workbook as second part of your assignment.

• **Password for workbook protection is 123**



Note: Both upload should contain macros (two types as mentioned above).

1. Expected Output

Solution report with commands, explanation of commands, and screenshots of the output
should be submitted in .pdf format on GitHub the same GitHub should expected to submit on
student dashboard. This assignment contains 800 marks and will be evaluated within 14 days of submission.