TO ANSWER THESE QUESTIONS:

I. Submit one word document and write your answers to the questions in there. Also, send the workbook that contains your pivot tables. Make sure to give the word document and excel worksheet your name for easy identification.

II. Create a new sheet in your worksheet for each pivot table you create and name it. For example, for U.S Voters case study, you name the worksheet for the pivot table "Voters Pivot"

III. Answer all questions using your pivot tables to show it and creating charts while necessary.

QUESTION 1

Create a pivot table for the U.S. Voters case study and use it to answer the following:

A) How many states had a **Voter Population %** below 55%? Which states?

Answer: 5 states had a voter population of less than 55%, and the states are Texas, Arkansas, Oklahoma, Hawaii and West Virginia.

Steps: From the below result, a pivot table was created, the State was placed in the row pane, and a calculated column was created to get the % of Voter's population using the formula;

%of Voters' population = Confirmed Voters/Citizen Population. Then filtered to show the population less than 55%.

QUESTION 1A	
State	**Sum of % of Voters Population**
Arkansas	0.532701422
Hawaii	0.517204301
Oklahoma	0.523408925
Texas	0.538102353
West Virginia	0.477477477
Grand Total	**0.5312943**

B) How many confirmed voters in CA were over 65 years old in 2012? What percentage does that represent out of the total confirmed voters in CA? What percentage of the confirmed voters in the entire country?

Answer: The number of confirmed voters in California that are over 65 years old in 2012 was 2902000. The percentage represents in the state's total population is 21.56% and represents 2.18% of the entire country.

Steps: A Pivot table was created, and the State and Age were placed in the Rows pane and changed the layout to the outline form. Then the Confirmed Voters were placed twice in the values pane, where one of the Confirmed Voters' columns was viewed as a % of Grand Total. After that, the country was filtered to only show California.

QUESTION 1B			
State	Age	Sum of Confirmed Voters	% of Confirmed Voters
California		13463000	100.00%
	18 to 24	1447000	10.75%
	25 to 34	2070000	15.38%
	35 to 44	2118000	15.73%
	45 to 64	4926000	36.59%
	65+	2902000	21.56%
Grand Total		13463000	100.00%

C)Show both **Citizen Population** and **Confirmed Voters** by Age, as **% of Column Total**. What percentage of the citizen population do 45- to 64-year-old represent? What percentage of the confirmed voter population?

Answer: The percentage of the Citizen Population aged 45 to 64 is 35.63%, and the percentage it represents in the confirmed voter population is 39.12%.

Steps: The previous pivot table was copied and remodified in the same spreadsheet. Then the Age column was put in the rows pane, and the Confirmed Voters and Citizen Population were placed in the values pane. After that, both columns were viewed as percentage of grand total.

QUESTION 1C		
Row Labels	Sum of Confirmed Voters	Sum of Citizen Population
18 to 24	8.54%	12.80%
25 to 34	14.27%	16.49%
35 to 44	15.77%	15.93%
45 to 64	39.12%	35.63%
65+	22.30%	19.14%
Grand Total	100.00%	100.00%

As a politician seeking to improve voter turnout rates among young adults (18–24), which states would you target first?

Answer: As a politician, since we have states with the lowest turnout in West Virginia, Hawaii, and Oklahoma, those are the states I will improve.

Steps: Turnout means that many people registered, but few came out to vote. We need to calculate % Turnout, which is

%Turnout = Confirmed Voters/ Registered Voters

The Age was placed in the filter pane and the State in the row pane, then I did a calculated column to get the %Turnout. Turned the column to a percentage format, and then filtered it to give Ages 18–24. The column was also sorted in ascending order.

QUESTION 1D	
Age	(All)
Row Labels	**Sum of % Voters Turn Out**
West Virginia	0.477477477
Hawaii	0.517204301
Oklahoma	0.523408925
Grand Total	**0.509300959**

Question 2

A) Filter and **sort** the Pivot to show the 5 employees who earned the highest Base Pay in 2011. Who were they?

Answer: The 5 employees who earned the highest base pay in 2011 are John Loftus, Naomi Kelly, Barbara Garcia, George Gascon and Kenneth Lombardi.

Steps: The Employee name was placed in the rows pane, the base pay in the values pane, and the year in the filter. The year was filtered to 2011, and the top 5 by the sum of the Base Pay.

QUESTION 2A	
Year	2011
Row Labels	**Sum of Base Pay**
Barbara A Garcia	270591.04
George Gascon	252221.06
John J Loftus	274126.5
Kenneth A Lombardi	239247
Naomi M Kelly	270641.5
Grand Total	**1306827.1**

A) Among employees with >=$100k Base Pay in 2012, Did any employee earn more than 50% of their salary from Other Pay? If so, who?

Answer: Yes, the person is Anna L. Cuthbertson.
Steps: The previous pivot table was copied and placed in another part of the sheet. The year was filtered to 2012, the name still remained, I then added the base pay into the values pane. I did a calculated column to calculate for the total pay and %of the total pay using the below formula;

Total pay = base pay + overtime pay + other pay
%of other pay = other pay/ Total pay.

Then I used the conditional formatting to check for values greater than 50%.

QUESTION 2B			
Year	2012		
Row Labels	**Sum of Base Pay**	**Sum of Total pay**	**Sum of % of Other Pay**
Anna L Cuthbertson	116478.01	243855.39	50.86%
Frank E Lee	115178	230526.18	48.06%
Garrett Dowd	114116.13	205430.15	44.45%
James Bosch	110661.2	253269.44	44.00%
Edward Browne	112401.08	170223.02	29.60%
Glenn Ortega	112401.07	174066.67	28.50%
Milton Yuen	126968.07	180106.56	28.47%
John Ruggeiro	110242.93	161437.08	25.86%
Pei Yue Ho	107592.49	192467.59	24.45%
George M Kouremetis Jr	112703.74	146504.96	23.07%
Ricardo Guerrero	112380.73	156148.32	22.08%
Victor Zarazua	127677.6	163415.08	21.87%
George Perez	112421.49	159696.17	21.72%
Stevie Bacolot	112421.45	157485.22	21.69%
Sharon Mccole Wicher	196081.86	250122.04	21.61%
Kevin Jones	135973.02	237511	21.52%
Eugene Yoshii	135990.41	199511.86	20.79%
Richard Hillis	105971.93	133057.43	20.36%
Leanora Militello	204395.73	255621.32	20.04%
Lawrence Hecimovich	180051	224998.62	19.98%

B) Clear all filters and pull in **Job Category** and **Job Title** as row labels (Titles sorted alphabetically), then **group** any titles including the word "*Curator*" into a new category called "**Curator**". How many employees held some sort of Curator position in either 2012 or 2013? Among those, who earned the highest average base pay?

Answer: The total number of employees that held a curator position is 9. The employee with the highest base pay is Dennis Sharp with a job title of Curator 3.

Step: A new pivot table was created and the Job Title was placed in the row pane while the Year in filter pane, Base Pay in values pane. A filter search was done to get all the Job Titles havig curators and using the group tool, the result was grouped as Curators. Thereafter, it was sorted from largest to smallest and conditional formatting was done on it to highlights the highest value.

QUESTION 2C		
Year	(All)	
Job Title2	**Job Title**	**Sum of Base Pay**
Curator		**774937.1**
	Curator 3	351141.74
	Curator Iii	146438.53
	Curator I	79397.32
	Curator 4	75891.36
	Curator 1	62900.51
	Curator 2	59167.64
Grand Total		**774937.1**

Question 3

A) Show the **count** of attacks by country -- which 3 countries had the highest number of reported attacks over the past 5 years (2012-2016)? During this period, what % of reported attacks occurred in Spain?

Answer: The 3 countries that had the highest number of reported attacks in the past 5years(2012-2016) are USA, Australia, and South Africa. The % of the reported attacks in Spain is 1.66%

Step: I added a year column in the dataset using the formula

Year =TEXT(B2,"yyyy").

I added the year column to filters pane and filtered by 2012 to 2016, countries to row pane, countries again to values pane. Sorted it by largest to smallest and filtered by top 3.

1b) the previous pivot table was copied to another place and the country was added again to the values pane and viewed as % of grand total, filtered by top 10.

QUESTION 3A I	
Year	(Multiple Items)
Row Labels	**Count of Country**
USA	313
Australia	128
South Africa	30
Grand Total	**471**

QUESTION 3A II		
Year	(Multiple Items)	
Row Labels	**Count of Country**	**% of Attack by Country**
USA	313	57.64%
Australia	128	23.57%
South Africa	30	5.52%
Bahamas	19	3.50%
Reunion	12	2.21%
French Polynesia	10	1.84%
Spain	9	1.66%
New Caledonia	8	1.47%
New Zealand	7	1.29%
Brazil	7	1.29%
Grand Total	**543**	**100.00%**

B) Drag the "**Area**" field to the PivotTable row labels, change the **Report Layout** to Outline, and **filter** to show the top 5 areas by count of Case Number, by country. Where in South Africa were shark attacks most frequently reported over the past years?

Answer: The places in South Africa that had the most attacks are Kwazulu-natal, western Cape province, and Eastern cape Province.

Step: Country was added twice both in the row and values pane while area was placed in the rows pane. I made a search t show only South Africa.

QUESTION 3B		
Year	(All)	
Country	**Area**	**Count of Country**
South Africa		**531**
	KwaZulu-Natal	195
	Western Cape Province	179
	Eastern Cape Province	147
	Unknown	5
	Transvaal	1
	Eastern Province	1
	Western Province	1
	KwaZulu-Natal between Port Edward and Port St Johns	1
	South Atlantic Ocean	1
Grand Total		**531**

C) Replace "**Area**" with "**Type**" and show the Count of Case Number values as **% of Parent Total** for each country. What % of attacks in New Zealand were unprovoked? How many cases?

Answer: The percentage of unprovoked attacks in New Zealand is 85.71%

Step: The previous pivot table was copied and placed in another part. Then I replaced the area with type and filtered only to show New Zealand. Country was added again in the rows pane and viewed as % of Parent Total.

QUESTION 3C			
Year	(Multiple Items)		
Country	**Type**	**Count of Country**	**Count of Country2**
New Zealand		**100.00%**	**7**
	Provoked	14.29%	1
	Unprovoked	85.71%	6
Grand Total		**100.00%**	**7**

Question 4

The symbol and date were placed in the row pane while I did a calculated filed to get the daily spread using the formular. Daily spread = High – Low. I then filtered to get AMZN(Amazon) and then sorted by the daily pread from largest to lowest and filtered by top 10.
The previous pivot table was copied and I did a color scale conditional formatting to using the green white colors.

A) Create a **calculated field** named "**Daily Spread**" (*High—Low*), formatted as currency with two decimal places. On which date in the sample did Amazon (AMZN) see the largest price spread? (***note:*** *you may have to remove the Daily Change field*).

Answer: Amazon(AMZN) saw the largest price spread on the 23rd of October.

Step: The Symbol and Date were placed in the row pane while I a calculated field was created to get the daily spread using the formula.

Daily spread = High—Low.

The symbol column was filtered to get AMZN(Amazon), sorted by the daily Spread from largest to lowest, and filtered by the top 10.

QUESTION 4A		
Symbol	**Date**	**Sum of Daily Spread**
AMZN		**51.42**
	23-Oct	9.03
	26-Oct	7.19
	16-Sep	5.08
	27-Oct	4.84
	05-Nov	4.70
	10-Nov	4.61
	28-Oct	4.36
	06-Nov	4.31
	21-Oct	3.72
	16-Nov	3.58
Grand Total		**51.42**

B) Sort dates oldest to newest, and **conditionally format** the Daily Spread field as a **Color Scale**, from white (lower values) to green (higher values). Since a large price spread isn't necessarily good or bad, edit the color scale to show shades from white to blue (instead of green).

Step: The previous pivot table was copied and I did a color scale conditional formatting to using the green white colors.

QUESTION 4B	
Symbol	**Date**	**Sum of Daily Spread**
AMZN	**51.42**
23-Oct	9.03
26-Oct	7.19
16-Sep	5.08
27-Oct	4.84
05-Nov	4.70
10-Nov	4.61
28-Oct	4.36
06-Nov	4.31
21-Oct	3.72
16-Nov	3.58
Grand Total	**51.42**