Assignment-8

Problem Statement 1: Use the given dataset Quarterly_Estimates_of_GDP.xlsx and load it into a tableau workbook. The following are the tasks that are to be taken into consideration while constructing graphs and charts in the worksheets.

Dataset Description:

This data is given by RBI's official website and the data set contains the data of Indian GDP from various decades, we will do all operations on the last decade 2011-21 so select that table only and read the below detail carefully.

1. In the dataset, many sectors are given and they represent their contribution toward GDP.
2. Q1, Q2, Q3 & Q4 denote - April to June, July to September, October to December, and January to March quarters, respectively.
3. All values are in (Rupees Crore).
4. "Total Gross Value Added" is the final sum of all sectors.

Quarter end date	Quarter	Industry/ Year	Agriculture, Forestry and Fishing	Mining & Quarrying	Manufacturing	Electricity, Gas, Water Supply & Other Utility	Construction	Trade, Hotels, Transport, Communication and Services Related to	Financial, Real Estate and Professional Services	Public Administration, Defence and Other Services	Total Gross Value Added at Basic Price
30-06-2011	Q1	2011-12	336109	67873	356022	46302	186777	338658	404493	232898	1969132
30-09-2011	Q2	2011-12	269074	56967	333104	46466	190701	340497	410626	265771	1913207
31-12-2011	Q3	2011-12	500966	64849	333674	46623	195724	348957	340343	242760	2073896
31-03-2012	Q4	2011-12	395798	71346	387184	47277	204133	385006	375416	284553	2150712
30-06-2012	Q1	2012-13	341199	70780	358340	48480	189866	374095	442487	249343	2074589
30-09-2012	Q2	2012-13	274362	55618	373953	47290	186137	376921	452821	280806	2047909
31-12-2012	Q3	2012-13	506049	64859	355778	48004	194069	383184	377983	247602	2177528
31-03-2013	Q4	2012-13	402678	71352	398803	47861	209978	416943	406740	291896	2246251
30-06-2013	Q1	2013-14	354450	68134	383076	49464	198716	388784	494883	268723	2206230
30-09-2013	Q2	2013-14	289365	55661	387587	50076	194458	401895	524246	290609	2193897
31-12-2013	Q3	2013-14	539360	64419	377186	49637	198470	417976	409823	258070	2314941
31-03-2014	Q4	2013-14	426023	74892	412860	50423	209127	443407	438455	293393	2348579
30-06-2014	Q1	2014-15	362653	79536	422169	53900	209579	432298	540067	276954	2377154
30-09-2014	Q2	2014-15	299494	57940	423757	54880	204912	432834	592769	312770	2379356
31-12-2014	Q3	2014-15	522894	68663	389833	53221	206558	440658	459478	315706	2457010
31-03-2015	Q4	2014-15	420673	82547	448178	52046	214180	501900	481401	297685	2498612
30-06-2015	Q1	2015-16	371273	87184	466224	55232	218253	475242	594978	291805	2560191
30-09-2015	Q2	2015-16	307806	63469	472855	57848	205790	467655	669973	332828	2578225
31-12-2015	Q3	2015-16	511553	75875	450360	55200	216449	484331	506288	336948	2637004
31-03-2016	Q4	2015-16	425514	91445	514411	55878	224843	565595	523546	315216	2716448
30-06-2016	Q1	2016-17	389610	93382	512045	62529	234541	520053	675149	311418	2798726
30-09-2016	Q2	2016-17	326769	67441	508974	62355	222844	503823	745019	354769	2791994
31-12-2016	Q3	2016-17	549199	82751	487553	60850	232427	522805	532370	367659	2835614

Perform the following tasks:

1. Load the given dataset into a tableau workbook
2. Change the "quarter-end date" column's data type to date
3. Print line for an entire given timeline for "Total Gross Value Added"
4. Open a new sheet and find out the total contribution of Agriculture, Forestry, and Fishing fields to GDP for each year and each quarter with the help of a bar plot (use different color pellets to represent each quarter.)

5. Compare the contribution of manufacturing, mining, quarrying, and financial and real estate sectors and their contribution to GDP each year quarter-wise with the help of a bar plot
6. Find out in which quarter the agriculture and fishing sector contributed more to GDP in all years with help of a pie chart and try to conclude why

Problem Statement 2: Use the given dataset Quarterly_Estimates_of_GDP.xlsx and load it into a tableau workbook. The following are the tasks that are to be taken into consideration while constructing graphs and charts in the worksheets.

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Quarter end date	Quarter	Industry/ Year	Agriculture, Forestry and Fishing	Mining & Quarrying	Manufacturing	Electricity, Gas, Water Supply & Other Utility	Construction	Trade, Hotels, Transport, Communication and Services Related to	Financial, Real Estate and Professional Services	Public Administration, Defence and Other Services	Total Gross Value Added at Basic Price
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31-12-2016	Q3	2016-17	549199	82751	487553	60850	232427	522805	532370	367659	2835614

Perform the following tasks:

1. Load the given dataset into a tableau workbook
2. Change the "quarter-end date" column's data type to date
3. Make a hierarchy of "year", "quarter", and "quarter-end date" in the given order, and using a bar plot, observe "Public Administration, Defence, and Other Services"
4. Plot multilevel bar chart for "manufacturing", "construction", "mining & quarrying", and use highlighted features on "quarter" and "industry/year"
5. Find out in which year mining and quarrying contributed highest to GDP (Do sorting to find the answer visually)
6. Create two groups of the last decade in a 5-year gap on "industry/year" and compare construction activity, (leave 2021-22 out of this because it is not part of the last decade)
7. Use the filter on quarter and select only q1 and q2 data only then plot horizontal bar chart for "Public Administration, Defence, and Other Services" by different color
8. Create a set of Q1 as per their end date on the" quarter-end date" (select all data from June month) and compare "electricity gas, water supply and other utility" and visualize using a bar chart, and give colour to newly created set

Problem Statement 3: Use the given dataset Marksheet.xlsx and load it into a tableau workbook. The following are the tasks that are to be taken into consideration while constructing graphs and charts in the worksheets.

Dataset Description:

The dataset contains data of the 12th std commerce stream where it has 5 subjects Accountancy, English, Maths, Economics, and Business Studies. And their marks are out of 100.
It has 120 students total and is divided into 4 divisions A, B, C, and D equally

Sr. No.	Division	Roll No	Name	Accountancy	English	Maths	Economics	Business Studies
1	A	1	Akhilesh	97	36	47	13	34
2	A	2	Ruchi	69	85	86	51	53
3	A	3	Bhawna	19	72	41	53	40
4	A	4	Isha	76	68	46	11	22
5	A	5	Chetan	55	31	56	99	93
6	A	6	Neeti	84	57	68	30	31
7	A	7	Chanchal	18	46	51	63	22
8	A	8	Preeti	93	93	31	93	20
9	A	9	Richa	33	89	55	46	69
10	A	10	Manish	21	27	84	82	96
11	A	11	Karun	13	48	27	26	38
12	A	12	Madhur	85	74	26	53	84
13	A	13	Nitesh	28	31	27	77	17
14	A	14	Suresh	75	61	78	30	78
15	A	15	Tina	69	35	64	90	55
16	A	16	Pooja	39	10	27	90	34
17	A	17	Sunny	84	17	63	77	69
18	A	18	Nancy	30	14	33	52	84
19	A	19	Komal	33	33	33	33	33
20	A	20	Vipul	64	81	50	37	59
21	A	21	Meena	61	36	59	98	68
22	A	22	Diskha	65	55	75	95	71
23	A	23	Deepak	41	54	22	51	78
24	A	24	Chinki	87	69	42	52	67
25	A	25	Chhavi	19	32	20	62	80
26	A	26	Manisha	50	95	93	57	31

Perform the following tasks:

1. Load the given datasets into a tableau workbook
2. Create new calculated fields as “total” and add the total of all subjects
3. Create new calculated fields as “percentage” and find the student’s percentage in the exam with help of “total”
4. Create new calculated fields as “grade” and give them labels as if the percentage is < 40 then “F”, if < 50 then “D”, if < 60 then” C”, if < 70 then “B”, if < 80 then “A”, if <90 then” A+”, if >= 90 then “0”
5. Create new calculated fields as “result” and give a pass if the student passed in every subject,” ER” if the student just failed in a single subject, and “failed” if they got failed in more than one subject.
6. Use a packed bubble graph and figure out how many students are passed/fail or got ER
7. Use the vertical bar plot to distinguish students by their grades in each division
8. Find out the top 5 students from each division
9. Filter out data where students got more than 60% and less than 80% as result and sort them in descending order

Problem Statement 4: Use the given dataset UK BANK DATA.csv and load it into a tableau workbook. The following are the tasks that are to be taken into consideration while constructing graphs and charts in the worksheets.

Perform the following tasks:

1. Create a Map chart showing the number of transactions processed in each region.
   Hints:
   - Right-click on the Region field. Go to Geographic role within that select "State/Province".
   - In Edit locations select the Country/Region menu and change the Country to the United Kingdom.
2. Create a Pie chart displaying the percentage of each transaction processed between genders.
3. Create a Histogram displaying the distribution of age and transactions processed.
4. Create a Histogram displaying the distribution of balance and transactions processed.
5. Create a Tree-map displaying the number of transactions processed within the classification of each job.
6. Create a Dashboard using all the charts. Make use of Action Filters as it will further improve the analysing experience for the management.