1)What are charts and Different Types of Charts?

Ans- Charts are graphical representation of data, making complex information more accesible. Various types include

1.Bar Chart - Display data using rectangular bars.

2. Line Chart - Connects data points with lines useful for showing trends.

3. Pie Chart - Divides a circle into slices to represent prpotional parts of a whole.

4 Area Chart - Similar to a line chart but the area below the lines is filled.

5 Scatter Plot - Shows individual data points on a two dimensional graph.

6. Histogram - Presents data distribution using bars without gaps between them.

7. Bubble Chart - Adds a third dimension with the size of bubble representing additional data.

8. Gantt Chart - illustrates projects schedules with bars representing task over time.

9. Radar Chart - Displays multivarate data in the form of two dimensional chart with three or more quantitative variables.

10. Heatmap- Visualizes data in a matrix format using colors to represent values.

2)What are pivot Tables in Excel and their implementations?

Ans- in excel a pivot tables is a powerful tool for data analysis and summarization. It allows to rearrange nalyze and present data quickly and easily. Here a basic implementation guide:

1. Prepare your data - Organise your data in columns with headers. And ensure there are no blank rows or coloumns within the dataset.

2. Select Your data - Highlight the range of cells you want to include in the pivot table.

3. insert Pivot table - Go to "insert" tab on excel ribbon. Then cllick on "pivot table" and choose the range selected in step 2. After that Decide whether want the pivot table in a new worksheet or an existing one.

4. Design your pivot table - Drag and drop fields into the four areas:

***Values -** Numeric data to be summarized

*** Rows -** Categorical data to define the rows.

***Columns** - Categorical data to define the columns.

*** Filters -** Opyional to filter data based on specific criteria.

5.Customize and Analyze -

* Customize pivot table by formatting, sorting, and filtering.

* Use the " Value Field Setting" to change the summary function.

* Experiment with different arrangement to derive insights.

6. Refresh Data - Right click on pivot table and choose "Refresh" to update the pivot table.

3)What is Conditional Formatting? Distinguish 5 types of Conditional Formatting?

Ans - Conditional formating in excel is a feature that allows to apply formatting

rules based on specific criteria. This helps highlight, organize, and analyze data more effectivelly. Here are five types of conditional formatting:

1. Color Scales- Gradually applies different colors to cells based on their values, creating a visual representing data distribution.

***Use case -** It is use for identifying high and low values or trends in a range.

2. Icon sets - Assign icons to cells based on predefined rules, providing a quick visual indication of data charateristics.

***use case-** Ideal for showing performance levels or comparing values.

3. Data Bars- Adds horizontals bars to cells proportional to their values , offering aquick way to compare data visually.

***use case-** Suitable for visualizing the relative size of values within a range.

4.Highlight cells Rules- Applies formatting to cells that meets specific conditions.

***use case-** Helps emphasize important data points or outliers.

5. Formula based Formatting- Allows you to create custom formatting rules based on formulas you define.

***use case -** Offers flexibility for complex conditions not covered by built-in formatting options.

4)How to Clear Formatting in Excel without actually removing the Cell Content?

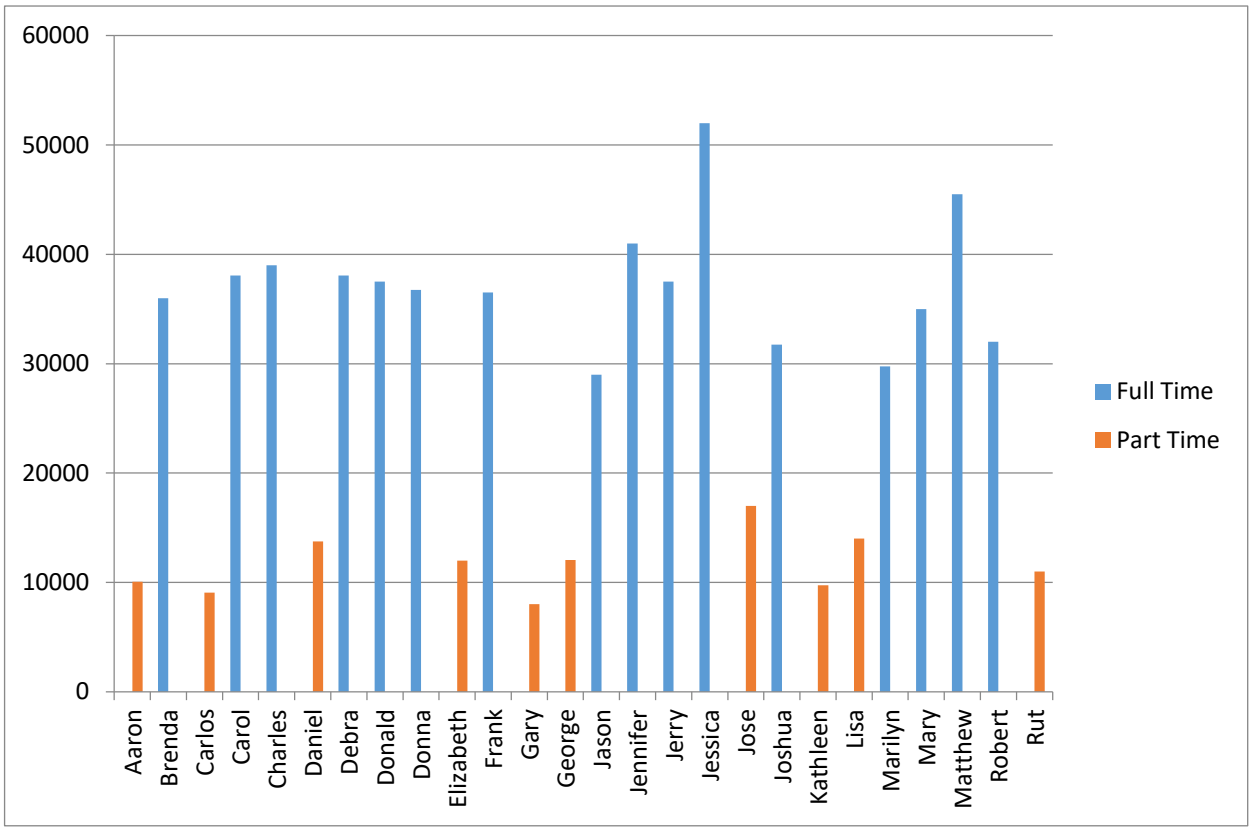
Ans- To clear formatting in excel without removing the cell content, select the cells, right-click choose "Format Cells", go to the "Number" tab, and select "General" under the category.

5)Create a Pivot Table and Chart for the Given Table?

Employee Details

Last Name	First Name	Status	Salary
Knowles	Aaron	Part Time	$10,050
Baxter	Brenda	Full Time	$36,000
Velazquez	Carlos	Part Time	$9,075
Schultz	Carol	Full Time	$38,050
Brown	Charles	Full Time	$39,000
Wood	Daniel	Part Time	$13,750
Boyle	Debra	Full Time	$38,050
Coleman	Donald	Full Time	$37,500
Steele	Donna	Full Time	$36,750
Wilson	Elizabeth	Part Time	$12,000
Morin	Frank	Full Time	$36,500
Brown	Gary	Part Time	$8,000
Perry	George	Part Time	$12,050
Chandler	Jason	Full Time	$29,000
Moore	Jennifer	Full Time	$41,000
Buckner	Jerry	Full Time	$37,500
Hensl	Jessica	Full Time	$52,000
Grimes	Jose	Part Time	$17,000

	A	B	C	D	E	F	G	H
97	Huber	Joshua	Full Time	$31,750				
98	Tillman	Kathleen	Part Time	$9,750				
99	Price	Lisa	Part Time	$14,000				
100	Vang	Marilyn	Full Time	$29,750				
101	Williams	Mary	Full Time	$35,000				
102	Small	Matthew	Full Time	$45,500				
103	Brown	Robert	Full Time	$32,000				
104	Munoz	Rut	Part Time	$11,000				
105								
106		Last Name	(All)					
107								
108		**Sum of Sa**	Column Labels					
109		Row Label	Full Time	Part Time	Grand Total			
110		Aaron		10050	10050			
111		Brenda	36000		36000			
112		Carlos		9075	9075			
113		Carol	38050		38050			
114		Charles	39000		39000			
115		Daniel		13750	13750			
116		Debra	38050		38050			
117		Donald	37500		37500			
118		Donna	36750		36750			
119		Elizabeth		12000	12000			
120		Frank	36500		36500			
121		Gary		8000	8000			
122		George		12050	12050			
123		Jason	29000		29000			
124		Jennifer	41000		41000			
125		Jerry	37500		37500			
126		Jessica	52000		52000			
127		Jose		17000	17000			
128		Joshua	31750		31750			
129		Kathleen		9750	9750			
130		Lisa		14000	14000			
131		Marilyn	29750		29750			
132		Mary	35000		35000			
133		Matthew	45500		45500			
134		Robert	32000		32000			
135		Rut		11000	11000			
136		**Grand Tot**	**595350**	**116675**	**712025**			
137								
138								
139								
140								



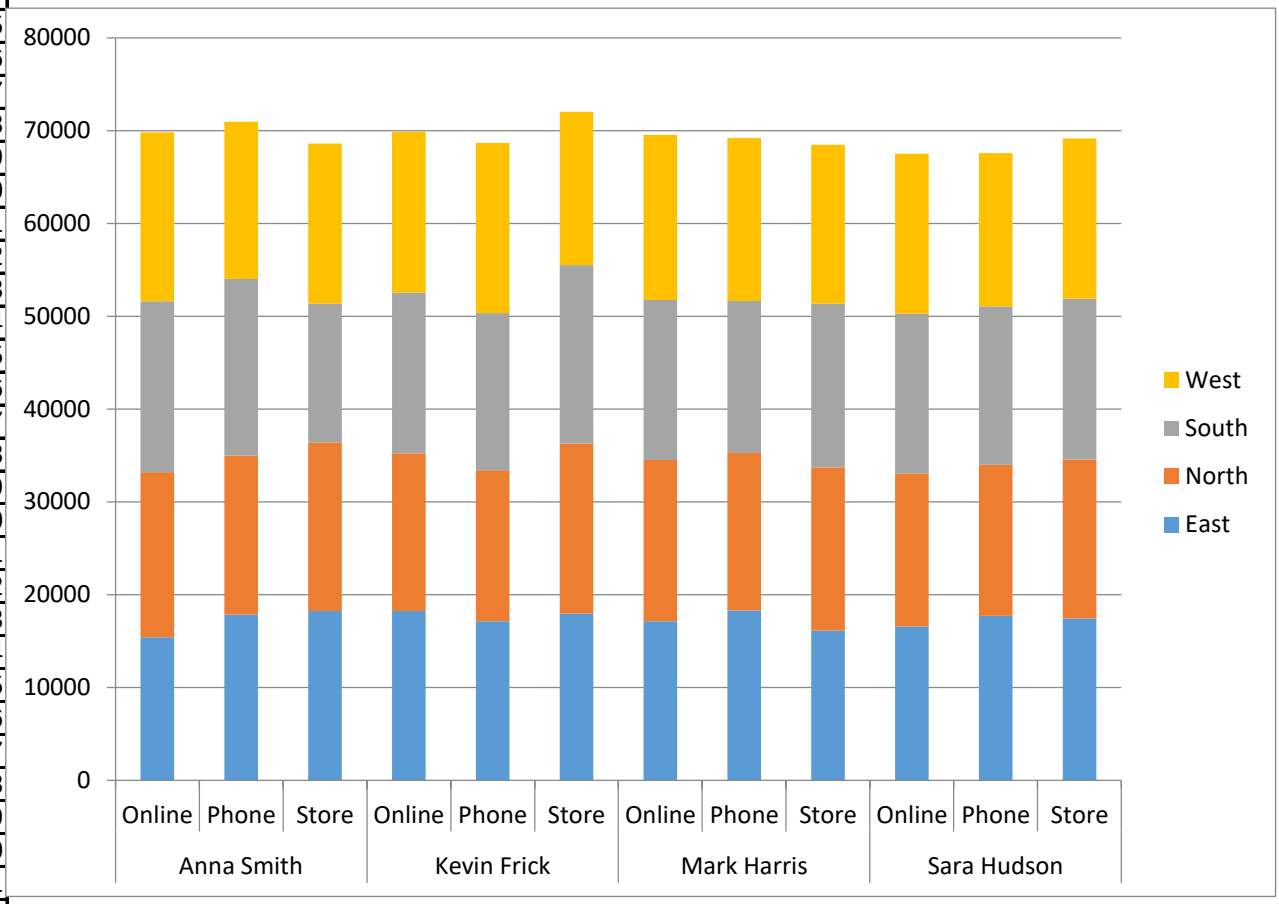
6) Create a Dashboard for the attached Excel Sheet

SALES DASHBOARD

Date	(All)
Product	(All)

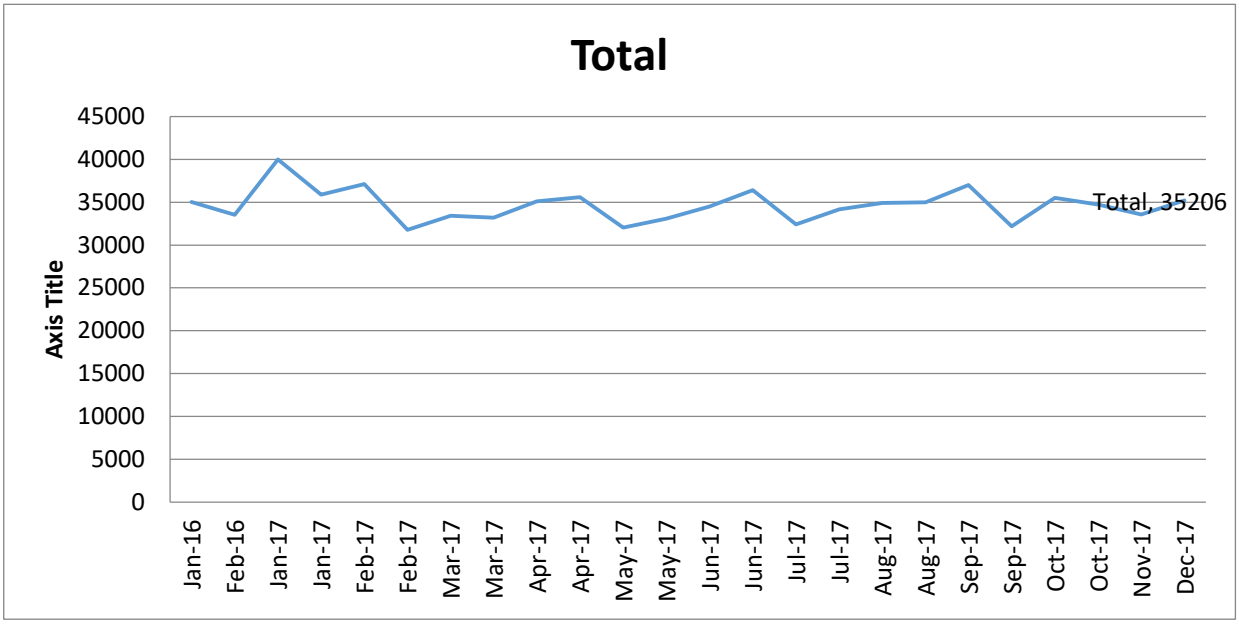
Total Sales	Region				
Sales Person	East	North	South	West	Grand Tota
Anna Smith	51466	53095	52388	52433	209382
Online	15402	17795	18392	18226	69815
Phone	17833	17148	19027	16939	70947
Store	18231	18152	14969	17268	68620
Kevin Frick	53297	51600	53488	52164	210549
Online	18238	16995	17307	17330	69870
Phone	17105	16297	16941	18314	68657
Store	17954	18308	19240	16520	72022
Mark Harris	51522	51905	51326	52467	207220
Online	17114	17370	17269	17796	69549
Phone	18285	16958	16384	17580	69207
Store	16123	17577	17673	17091	68464
Sara Hudson	51690	49879	51614	51040	204223
Online	16553	16501	17193	17258	67505
Phone	17712	16279	17065	16512	67568
Store	17425	17099	17356	17270	69150

	A	B	C	D	E	F	G	H
193	**Grand Total**	**207975**	**206479**	**208816**	**208104**	**831374**		



DATE	Sum of Sales
Jan-16	35,015
Feb-16	33,549
Jan-17	39,987
Jan-17	35,870
Feb-17	37,122
Feb-17	31,768
Mar-17	33,437
Mar-17	33,184
Apr-17	35,097
Apr-17	35,582
May-17	32,025
May-17	33,101
Jun-17	34,519
Jun-17	36,394
Jul-17	32,407
Jul-17	34,174
Aug-17	34,929
Aug-17	34,983
Sep-17	37,016
Sep-17	32,197
Oct-17	35,503
Oct-17	34,723

	A	B
247	Nov-17	33,586
248	Dec-17	35,206
249	**Grand Total**	**831,374**



7) Define Statistics?

Ans- In Excel, statistics refer to the set of functions and tools used for analyzing and summarizing data.

Excel provides function like AVERAGE, SUM, COUNT, and various others, as welll as features such as charts and pivot tables, to help users perform statistical calculation and visualize data easily.

8) Explain about any two Data Analysis Tool Pak?

Ans- in Excel, two commonly used data analysis tools are:

1. Analysis toolPak:

*** Purpose:** Analysis ToolPak is an excel add-in that provides advanced statistical and analytocal functions.

*** Features:** it includes tools for regression analysis, moving averages, t-test, ANOVA, and more. The capabilities, allowing users to perform complex statistical analysis without manual calculation.

*** Activation:** To use it, one need to activate Analysis ToolPak inExcel. Go to the "File" tab, select "option", choose "Add-ins", and then manage Excel add-ins to enable the Analysis ToolPak.

2. Solver:

*** Purpose:** While not exclusively for data analysis, Solver is an Excel add-in used for optimization and what-if analysis.

*** Features:** it allows users to find the optimal solution for a problem by adjusting certain variables,subject to specified constraints. This tool is handy for scenarios like resourceallocation, budget optimization, or production planning.

*** Activation:** Similar to Analysis ToolPak, you need to activate Solver in Excel

through the "File" tab, "Options", "Add-Ins", and then manage Excel add-ins.

9) Explain about Histogram?

Ans- A histogram Is a graphical reprensentation of the distribution of a dataset.
it's used to visualize the frequency distribution of continous data Here's how it works:

*** X-Axis:** Represents the range of values in the dataset, divided into intervals or bins.

*** Y-Axis:** Represents the frequency or count of data points falling each bin.

Key Steps to Create a Histogram:

1. Data Preparation: Organize your data into a single column in Excel.

2. Define Bins: Decide on the range of values you want to analyze and divide it into intervals or bins.

3. Data Grouping : Group your data into these bins, counting how many data points fall into each bin.

4. Create the Histogram: In excel, you can use the "Histogram" chart type to create the visual representation.
Select your data , go to the "Insert" tab, choose "Charts", and then select "Histogram".

Interpreting a Histogram:

***** A histogram visually shows the shape of the data distribution-whether it's symmetric, skewed, or has multiple peaks.

***** The height of each bar represent the frequencyof data points within a specific range.

***** Bins with higher bars indicate where the data is more concentrated.

Histograms are valuable for understanding the underlying patterns and characteristics of a dataset, helping in data analysis and decision -making.