

## WEEK 6 ASSIGNMENT DATA ANALYTICS

### TASK 1: Basic Excel Formulas

Calculate Total Sales using SUM()

```
=SUM(R2:R9994)
```

<b>Total Sales</b>	<b>2296919</b>
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Calculate Average Sales using AVERAGE()

```
=AVERAGE(R2:R9994)
```

<b>Average Sales</b>	<b>229.8528</b>
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Find the Highest and Lowest Sales using MAX() and MIN()

```
=MAX(R2:R9994)
```

```
=MIN(R2:R9994)
```

<b>Highest Sales</b>	<b>22638.48</b>
<b>Lowest Sales</b>	<b>0.444</b>

Count total number of sales records using: o COUNT() o COUNTA()

<b>=COUNT(R2:R9995)</b>	
<b>=COUNTA(R2:R9994)</b>	
<b>Total number of Sales</b>	<b>9993</b>
<b>number of sales ( use counta)</b>	<b>9993</b>

## TASK 2: Logical Functions

Use the IF() function to classify sales

<b>=IF(R:R &gt; 2000,"high","low")</b>	
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Use AND() or OR() to create a condition-based column

<b>=IF(AND(R:R &gt;1000,U:U &gt; 100),"Good Performance","Next time")</b>	
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## TASK 3: Data Cleaning in Excel

Clean the Customer / Product Name column using: o TRIM() o PROPER()

BEFORE USE OF TRIM AND PROPER

Order Date	Customer ID	Customer Name	Country	State	Postal Code	Region	Product ID	Category	Sub-Category	Product Name	Sales	Quantity	Discount	Profit	Performance	Performance 2
11/6/2016	CG-12520	Clare Gude	United States	Kentucky	42426	South	FUR-BO-100001786	Furniture	Bookcases	Bush Somerset Cc	261.96	2		0	41,9136	low
11/6/2016	CG-12520	Clare Gude	United States	Kentucky	42426	South	FUR-CH-100000464	Furniture	Chairs	Hon Delaney Fabric	751.94	3		0	219,350	low
6/12/2016	DV-13945	Derrin Van Huff	United States	California	90036	West	OFF-LA-100000240	Office Supplier	Labels	Self-Adhesive Ad	14.62	2		0	6,8754	low
5/12/2015	SO-20332	Sean O'Donnell	United States	Florida	33131	South	FUR-TA-100000577	Furniture	Tables	Breitbart CR4500 S	957.575	5		0.40	-263,031	low
5/12/2015	SO-20332	Sean O'Donnell	United States	Florida	33131	South	OFF-ST-100000760	Office Supplier	Storage	Eldon Fold N Roll	22.368	2		0.2	2,5164	low
6/9/2014	BH-11710	Bronia Hoffman	United States	California	90032	West	FUR-FU-10001467	Furniture	Furnishings	Eldon Expression	48.88	7		0	14,1094	low
6/9/2014	BH-11710	Bronia Hoffman	United States	California	90032	West	OFF-AR-100028182	Office Supplier	Art	Newell 322	7.28	4		0	1,9050	low
6/9/2014	BH-11710	Bronia Hoffman	United States	California	90032	West	TFC-PH-10002275	Technology	Phones	Mitel 5100 IP Pho	907.152	6		0.2	90,7152	low
6/9/2014	BH-11710	Bronia Hoffman	United States	California	90032	West	OFF-AR-100019102	Office Supplier	Binders	DSI-Angle-View R	18.504	3		0.2	2,7820	low
6/9/2014	BH-11710	Bronia Hoffman	United States	California	90032	West	OFF-AP-10002892	Office Supplier	Appliances	Belkin F5C05VTE	114.9	5		0	34,47	low
6/9/2014	BH-11710	Bronia Hoffman	United States	California	90032	West	FUR-TA-10001519	Furniture	Tables	Chromcraft Recta	1796.184	9		0.2	85,3970	low
6/9/2014	BH-11710	Bronia Hoffman	United States	California	90032	West	TFC-PH-10002010	Technology	Phones	Korffelt 200 Confie	911.424	4		0.2	66,2564	low
4/23/2017	AA-10480	Andrew Allen	United States	North Carolina	28027	South	OFF-PA-10002805	Office Supplier	Paper	Xerox 3967	15.552	3		0.2	1,4412	low
12/2/2016	RB-10170	Irma Madison	United States	Washington	98101	West	OFF-AR-100016048	Office Supplier	Binders	Fellowes #B300 P	407.976	3		0.2	112,5932	low
11/22/2015	HP-14815	Harold Pavlen	United States	Texas	76106	Central	OFF-AP-10003211	Office Supplier	Appliances	Holmes Replacer	68.81	5		0.8	-123,858	low
11/22/2015	HP-14815	Harold Pavlen	United States	Texas	76106	Central	OFF-BI-10000794	Office Supplier	Binders	Stora DuraTech F	2.544	3		0.8	-1,8336	low
11/21/2014	PK-10075	Pete King	United States	Wisconsin	53713	Central	OFF-ST-10001618	Office Supplier	Storage	Star-O-Star Storax	460.88	6		0	11,3216	low
5/13/2014	AG-10270	Alejandro Grove	United States	Utah	84084	West	OFF-ST-10000107	Office Supplier	Storage	Fellowes Super St	55.5	2		0	9,99	low
8/27/2014	DD-23521	Zachus Donatelli	United States	California	94209	West	OFF-AR-100002048	Office Supplier	Art	Newell 342	8.56	2		0	2,4808	low
8/27/2014	DD-23521	Zachus Donatelli	United States	California	94209	West	TFC-PH-10001949	Technology	Phones	Cisco SPA 3010 IP	213.48	3		0.2	16,811	low
8/27/2014	DD-23521	Zachus Donatelli	United States	California	94209	West	OFF-BI-10002221	Office Supplier	Binders	Wilson Jones Han	22.72	4		0.2	7,384	low
12/9/2016	EB-10585	Ken Black	United States	Nebraska	68025	Central	OFF-AR-100002048	Office Supplier	Art	Newell 338	19.46	7		0	5,0596	low
12/9/2016	EB-10585	Ken Black	United States	Nebraska	68025	Central	OFF-AP-10001492	Office Supplier	Appliances	Acia Six-Outlet P	60.34	7		0	15,6884	low
7/16/2017	SF-10060	Sandra Flanagan	United States	Pennsylvania	19140	East	FUR-CH-10000778	Furniture	Chairs	Global Deluxe Sta	71.172	2		0.1	-1,0106	low
2/25/2015	EB-13670	Emily Burns	United States	Utah	84057	West	FUR-TA-10000577	Furniture	Tables	Breitbart CR4500 S	1044.61	3		0	240,2449	low
1/16/2016	EX-11945	Eric Hoffmann	United States	California	90069	West	OFF-BI-10001614	Office Supplier	Binders	Wilson Jones Acti	11.448	2		0.1	4,2224	low
1/16/2016	EX-11945	Eric Hoffmann	United States	California	90069	West	TFC-AC-10002027	Technology	Accessories	Imation 8GB Mini	80.37	3		0	11,7761	low
9/17/2015	TR-21520	Tracy Blumstein	United States	Pennsylvania	19140	East	FUR-BO-10004814	Furniture	Bookcases	Riverside Palais R	3083.43	7		0.5	-1465,01	high
9/17/2015	TR-21520	Tracy Blumstein	United States	Pennsylvania	19140	East	OFF-AR-100004162	Office Supplier	Binders	Avery Rescript F1	9.618	2		0.2	-7,0501	low
9/17/2015	TR-21520	Tracy Blumstein	United States	Pennsylvania	19140	East	FUR-FU-10000468	Furniture	Furnishings	Howard Miller 13-	124.2	3		0.2	15,525	low
9/17/2015	TR-21520	Tracy Blumstein	United States	Pennsylvania	19140	East	OFF-EN-10001509	Office Supplier	Envelopes	Poly String Tie En	3.264	2		0.2	1,0160	low
9/17/2015	TR-21520	Tracy Blumstein	United States	Pennsylvania	19140	East	OFF-AR-100004162	Office Supplier	Art	BOXTON Model U	86.104	6		0.2	9,7091	low
9/17/2015	TR-21520	Tracy Blumstein	United States	Pennsylvania	19140	East	OFF-BI-10001525	Office Supplier	Binders	Acia Presboard C	4.858	6		0.7	-5,731	low
9/17/2015	TR-21520	Tracy Blumstein	United States	Pennsylvania	19140	East	OFF-AR-100016182	Office Supplier	Art	Lumber Crayons	15.76	2		0.2	1,546	low
10/19/2017	MA-17560	Matt Abelman	United States	Texas	77051	Central	OFF-PA-10000349	Office Supplier	Paper	Easy-staple paper	29.472	3		0.2	9,9468	low

AFTER USE OF TRIM AND PROPER

Order Date	Customer ID	Customer Name	Country	State	Postal Code	Region	Product ID	Category	Sub-Category	Product Name	Sales	Quantity	Discount	Profit	Performance	Performance 2	Customer Name (new)
11/10/2015	CG-12520	Claire Gule	United States	Kentucky	42420	South	FUR-BO-10001798	Furniture	Bookcases	Bush Somerset Cc	261.96	2	0	41.9136	low	Next time	Claire Gule
6/12/2016	DV-13045	Darinn Van Huff	United States	Kentucky	42420	South	FUR-CH-10000454	Furniture	Chairs	Hon Deluxe Fabr	731.94	3	0	219.382	low	Next time	Claire Gule
6/12/2016	DV-13045	Darinn Van Huff	United States	California	90036	West	OFF-IA-10000240	Office Supplies	Labels	Self-Adhesive Ad	14.62	2	0	6.8714	low	Next time	Darinn Van Huff
6/12/2015	SO-20355	Sean O'Donnell	United States	Florida	33111	South	FUR-TA-10000577	Furniture	Tables	Bretford CH4500 S	937.775	3	0.43	383.031	low	Next time	Sean O'Donnell
10/1/2015	SO-20355	Sean O'Donnell	United States	Florida	33111	South	OFF-ST-10000760	Office Supplies	Storage	Eldon Fold 'N Roll	22.368	2	0.2	2.5164	low	Next time	Sean O'Donnell
6/9/2014	BH-11710	Brosina Hoffman	United States	California	90032	West	FUR-FU-10001487	Furniture	Furnishings	Eldon Expressions	48.86	7	0	14.1694	low	Next time	Brosina Hoffman
6/9/2014	BH-11710	Brosina Hoffman	United States	California	90032	West	TLC-HP-10001953	Technology	Phones	Metel 3200 IP	907.152	6	0.2	90.7322	low	Next time	Brosina Hoffman
6/9/2014	BH-11710	Brosina Hoffman	United States	California	90032	West	OFF-AR-10002893	Office Supply	Binders	DHL Angle-View E	18.5004	3	0.2	5.7025	low	Next time	Brosina Hoffman
6/9/2014	BH-11710	Brosina Hoffman	United States	California	90032	West	OFF-AR-10002892	Office Supply	Appliances	Baskin FSC200VTE	114.9	5	0	34.47	low	Next time	Brosina Hoffman
6/9/2014	BH-11710	Brosina Hoffman	United States	California	90032	West	FUR-TA-10001539	Furniture	Tables	Chromcraft Recta	1706.184	9	0.2	85.3092	low	Next time	Brosina Hoffman
4/15/2017	AA-10480	Andrew Allen	United States	North Carolina	28027	South	TLC-PA-10002035	Technology	Phones	Konftel 250 Conf	911.424	4	0.2	68.2568	low	Next time	Brosina Hoffman
12/1/2015	IM-15070	Inne Maddox	United States	Washington	98103	West	OFF-AR-10003856	Office Supply	Binders	Fellowes PB200 P	407.976	3	0.2	132.5922	low	Next time	Inne Maddox
11/22/2015	HP-14815	Harold Pawlan	United States	Texas	76106	Central	OFF-AP-10002311	Office Supply	Appliances	Holmes Replacem	68.81	5	0.8	123.858	low	Next time	Harold Pawlan
11/22/2015	HP-14815	Harold Pawlan	United States	Texas	76106	Central	OFF-AR-10002756	Office Supply	Binders	Stores DuraTech I	2.544	3	0.8	-3.816	low	Next time	Harold Pawlan
11/1/2014	PK-19075	Pete Kriz	United States	Wisconsin	53711	Central	OFF-ST-10004188	Office Supply	Storage	Star-D-Stor Shelv	665.88	6	0	13.1176	low	Next time	Pete Kriz
9/1/2014	AG-10270	Alejandro Grove	United States	Utah	84084	West	OFF-ST-10001037	Office Supply	Storage	Fellowes Super St	55.5	2	0	9.99	low	Next time	Alejandro Grove
8/27/2014	ZD-21925	Zuchus Donatelli	United States	California	94109	West	OFF-AR-10003056	Office Supply	Art	Newell 341	8.56	2	0	2.4824	low	Next time	Zuchus Donatelli
8/27/2014	ZD-21925	Zuchus Donatelli	United States	California	94109	West	TLC-PA-10001949	Technology	Phones	Cisco SPA 501G IP	213.48	3	0.2	16.011	low	Next time	Zuchus Donatelli
8/27/2014	ZD-21925	Zuchus Donatelli	United States	California	94109	West	OFF-AR-10002215	Office Supply	Binders	Wilson Jones Han	22.72	4	0.2	7.384	low	Next time	Zuchus Donatelli
12/9/2014	KB-16585	Ken Black	United States	Nebraska	68025	Central	OFF-AR-10002465	Office Supply	Art	Newell 318	19.46	7	0	5.0596	low	Next time	Ken Black
12/9/2014	KB-16585	Ken Black	United States	Nebraska	68025	Central	OFF-AR-10002462	Office Supply	Appliances	Acco Six-Outlet P	60.34	7	0	15.6884	low	Next time	Ken Black
7/16/2017	SP-20065	Sandra Flanagan	United States	Pennsylvania	19140	East	FUR-CH-10002774	Furniture	Chairs	Global Deluxe Sta	71.372	2	0.3	-1.0196	low	Next time	Sandra Flanagan
9/28/2015	EB-13870	Emily Burns	United States	Utah	84057	West	FUR-TA-10000577	Furniture	Tables	Bretford CH4500 S	1044.63	3	0	240.2649	low	Good Performance	Emily Burns
1/16/2016	EH-13945	Eric Hoffmann	United States	California	90049	West	OFF-BO-10001634	Office Supply	Binders	Wilson Jones Acti	11.648	2	0.2	4.2224	low	Next time	Eric Hoffmann
1/16/2016	EH-13945	Eric Hoffmann	United States	California	90049	West	TLC-AC-10003027	Technology	Accessories	Imation 8GB Mini	90.57	3	0	11.7741	low	Next time	Eric Hoffmann
9/17/2015	TB-21520	Tracy Blumstein	United States	Pennsylvania	19140	East	FUR-BO-10004834	Furniture	Bookcases	Riverside Palais R	3083.43	7	0.5	-1665.05	high	Next time	Tracy Blumstein
9/17/2015	TB-21520	Tracy Blumstein	United States	Pennsylvania	19140	East	OFF-BO-10000474	Office Supply	Binders	Avery Recycled F	9.618	2	0.7	-7.0532	low	Next time	Tracy Blumstein
9/17/2015	TB-21520	Tracy Blumstein	United States	Pennsylvania	19140	East	FUR-FU-10000484	Furniture	Furnishings	Howard Miller 13	124.2	3	0.2	15.525	low	Next time	Tracy Blumstein
9/17/2015	TB-21520	Tracy Blumstein	United States	Pennsylvania	19140	East	OFF-EN-10001509	Office Supply	Envelopes	Poly String Tie En	3.264	2	0.2	1.1016	low	Next time	Tracy Blumstein
9/17/2015	TB-21520	Tracy Blumstein	United States	Pennsylvania	19140	East	OFF-AR-10000402	Office Supply	Art	BOSTON Model JJ	86.304	6	0.2	9.7902	low	Next time	Tracy Blumstein
9/17/2015	TB-21520	Tracy Blumstein	United States	Pennsylvania	19140	East	OFF-AR-10001525	Office Supply	Binders	Acco Pressboard C	6.858	6	0.2	-5.715	low	Next time	Tracy Blumstein
9/17/2015	TB-21520	Tracy Blumstein	United States	Pennsylvania	19140	East	OFF-AR-10001683	Office Supply	Art	Lumber Crayons	15.76	2	0.2	3.546	low	Next time	Tracy Blumstein
6/9/19/2017	MA-17500	Matt Ableman	United States	Texas	77095	Central	OFF-PA-10000249	Office Supply	Paper	Easy-staple paper	29.472	3	0.2	9.9468	low	Next time	Matt Ableman

Remove duplicate records from the dataset

Order Date	Customer ID	Customer Name	Country	State	Postal Code	Region	Product ID	Category	Sub-Category	Product Name	Sales	Quantity	Discount	Profit	Performance	Performance 2	Customer Name (new)
11/10/2015	CG-12520	Claire Gule	United States	Kentucky	42420	South	FUR-BO-10001798	Furniture	Bookcases	Bush Somerset Cc	261.96	2	0	41.9136	low	Next time	Claire Gule
11/10/2016	CG-12520	Claire Gule	United States	Kentucky	42420	South	FUR-CH-10000454	Furniture	Chairs	Hon Deluxe Fabr	731.94	3	0	219.382	low	Next time	Claire Gule
6/12/2016	DV-13045	Darinn Van Huff	United States	California	90036	West	OFF-IA-10000240	Office Supplies	Labels	Self-Adhesive Ad	14.62	2	0	6.8714	low	Next time	Darinn Van Huff
6/12/2015	SO-20355	Sean O'Donnell	United States	Florida	33111	South	FUR-TA-10000577	Furniture	Tables	Bretford CH4500 S	937.775	3	0.43	383.031	low	Next time	Sean O'Donnell
10/1/2015	SO-20355	Sean O'Donnell	United States	Florida	33111	South	OFF-ST-10000760	Office Supplies	Storage	Eldon Fold 'N Roll	22.368	2	0.2	2.5164	low	Next time	Sean O'Donnell
6/9/2014	BH-11710	Brosina Hoffman	United States	California	90032	West	FUR-FU-10001487	Furniture	Furnishings	Eldon Expressions	48.86	7	0	14.1694	low	Next time	Brosina Hoffman
6/9/2014	BH-11710	Brosina Hoffman	United States	California	90032	West	OFF-AR-10002893	Office Supply	Binders	Metel 3200 IP	907.152	6	0.2	90.7322	low	Next time	Brosina Hoffman
6/9/2014	BH-11710	Brosina Hoffman	United States	California	90032	West	OFF-AR-10002893	Office Supply	Binders	DHL Angle-View E	18.5004	3	0.2	5.7025	low	Next time	Brosina Hoffman
6/9/2014	BH-11710	Brosina Hoffman	United States	California	90032	West	OFF-AR-10002893	Office Supply	Binders	Baskin FSC200VTE	114.9	5	0	34.47	low	Next time	Brosina Hoffman
6/9/2014	BH-11710	Brosina Hoffman	United States	California	90032	West	FUR-TA-10001539	Furniture	Tables	Chromcraft Recta	1706.184	9	0.2	85.3092	low	Next time	Brosina Hoffman
4/15/2017	AA-10480	Andrew Allen	United States	North Carolina	28027	South	TLC-PA-10002033	Technology	Phones	Konftel 250 Conf	911.424	4	0.2	68.2568	low	Next time	Brosina Hoffman
12/1/2015	IM-15070	Inne Maddox	United States	Washington	98103	West	OFF-AR-10003856	Office Supply	Binders	Fellowes PB200 P	407.976	3	0.2	132.5922	low	Next time	Inne Maddox
11/22/2015	HP-14815	Harold Pawlan	United States	Texas	76106	Central	OFF-AP-10002311	Office Supply	Appliances	Holmes Replacem	68.81	5	0.8	123.858	low	Next time	Harold Pawlan
11/22/2015	HP-14815	Harold Pawlan	United States	Texas	76106	Central	OFF-AR-10002756	Office Supply	Binders	Stores DuraTech I	2.544	3	0.8	-3.816	low	Next time	Harold Pawlan
11/1/2014	PK-19075	Pete Kriz	United States	Wisconsin	53711	Central	OFF-ST-10004188	Office Supply	Storage	Star-D-Stor Shelv	665.88	6	0	13.1176	low	Next time	Pete Kriz
9/1/2014	AG-10270	Alejandro Grove	United States	Utah	84084	West	OFF-ST-10001037	Office Supply	Storage	Fellowes Super St	55.5	2	0	9.99	low	Next time	Alejandro Grove
8/27/2014	ZD-21925	Zuchus Donatelli	United States	California	94109	West	OFF-AR-10003056	Office Supply	Art	Newell 341	8.56	2	0	2.4824	low	Next time	Zuchus Donatelli
8/27/2014	ZD-21925	Zuchus Donatelli	United States	California	94109	West	TLC-PA-10001949	Technology	Phones	Cisco SPA 501G IP	213.48	3	0.2	16.011	low	Next time	Zuchus Donatelli
8/27/2014	ZD-21925	Zuchus Donatelli	United States	California	94109	West	OFF-AR-10002215	Office Supply	Binders	Wilson Jones Han	22.72	4	0.2	7.384	low	Next time	Zuchus Donatelli
12/9/2014	KB-16585	Ken Black	United States	Nebraska	68025	Central	OFF-AR-10002465	Office Supply	Art	Newell 318	19.46	7	0	5.0596	low	Next time	Ken Black
12/9/2014	KB-16585	Ken Black	United States	Nebraska	68025	Central	OFF-AR-10002465	Office Supply	Art	Acco Six-Outlet P	60.34	7	0	15.6884	low	Next time	Ken Black
7/16/2017	SP-20065	Sandra Flanagan	United States	Utah	84057	West	FUR-CH-10002774	Furniture	Chairs	Global Deluxe Sta	71.372	2	0.3	-1.0196	low	Next time	Sandra Flanagan
9/28/2015	EB-13870	Emily Burns	United States	Utah	84057	West	FUR-TA-10000577	Furniture	Tables	Bretford CH4500 S	1044.63	3	0	240.2649	low	Good Performance	Emily Burns
1/16/2016	EH-13945	Eric Hoffmann	United States	California	90049	West	OFF-BO-10001634	Office Supply	Binders	Wilson Jones Acti	11.648	2	0.2	4.2224	low	Next time	Eric Hoffmann
1/16/2016	EH-13945	Eric Hoffmann	United States	California	90049	West	TLC-AC-10003027	Technology	Accessories	Imation 8GB Mini	90.57	3	0	11.7741	low	Next time	Eric Hoffmann
9/17/2015	TB-21520	Tracy Blumstein	United States	Pennsylvania	19140	East	FUR-BO-10004834	Furniture	Bookcases	Riverside Palais R	3083.43	7	0.5	-1665.05	high	Next time	Tracy Blumstein
9/17/2015	TB-21520	Tracy Blumstein	United States	Pennsylvania	19140	East	OFF-BO-10000474	Office Supply	Binders	Avery Recycled F	9.618	2	0.7	-7.0532	low	Next time	Tracy Blumstein
9/17/2015	TB-21520	Tracy Blumstein	United States	Pennsylvania	19140	East	FUR-BO-10004848	Furniture	Furnishings	Holloway Miller 13	134.2	3	0.2	3.3529	low	Next time	Tracy Blumstein
9/17/2015	TB-21520	Tracy Blumstein	United States	Pennsylvania	19140	East	OFF-BO-10000474	Office Supply	Binders	Wilson Jones Han	22.72	4	0.2	7.384	low	Next time	Tracy Blumstein
9/17/2015	TB-21520	Tracy Blumstein	United States	Pennsylvania	19140	East	OFF-AR-10000462	Office Supply	Art	BOSTON MODEL 1	36.304	6	0	15.7922	low	Next time	Tracy Blumstein
9/17/2015	TB-21520	Tracy Blumstein	United States	Pennsylvania	19140	East	OFF-AR-10000125	Office Supply	Binders	Acco Pressboard C	6.898	6	0.7	-5.7135	low	Next time	Tracy Blumstein
9/17/2015	TB-21520	Tracy Blumstein	United States	Pennsylvania	19140	East	OFF-AR-10000383	Office Supply	Binders	Lumbar Crayon C	15.3	3	0.2	4.464	low	Next time	Tracy Blumstein
10/19/2017	MA-17560	Matt Abbleman	United States	Texas	77005	Central	OFF-PA-10000149	Office Supply	Paper	Easy-Step Paper	294.72	3	0.2	9.5468	low	Next time	Matt Abbleman

Use Text to Columns to split:  
o Email ID OR o Product Code

BEFORE USE OF TEXT TO COLUMNS

T16																
	I	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	
	Country	State	Postal Code	Region	Product ID	Category	Sub-Category	Product Name	Sales	Quantity	Discount	Profit	Performance	Performance 2	Customer Name (new)	
1	United States	Kentucky	42420	South	FUR-BO-10001798	Furniture	Bookcases	Bush Somerset Cc	261.96	2		0	41.9136	low	Next time	Claire Gute
2	United States	Kentucky	42420	South	FUR-CH-10000454	Furniture	Chairs	Hon Deluxe Fabri	731.94	3		0	219.582	low	Next time	Claire Gute
3	United States	California	90036	West	OFF-LA-10000240	Office Supplier	Labels	Self-Adhesive Ad	14.62	2		0	6.8714	low	Next time	Darrin Van Huff
4	United States	Florida	33311	South	FUR-TA-10000577	Furniture	Tables	Bretford CR4500 S	957.5775	5		0.45	-383.031	low	Next time	Sean O'Donnell
5	United States	Florida	33311	South	OFF-ST-10000760	Office Supplier	Storage	Eldon Fold 'N Roll	22.368	2		0.2	2.5164	low	Next time	Sean O'Donnell
6	United States	California	90032	West	FUR-FU-10001487	Furniture	Furnishings	Eldon Expression	48.86	7		0	14.1694	low	Next time	Brosina Hoffman
7	United States	California	90032	West	OFF-AR-10002833	Office Supplier	Art	Newell 322	7.28	4		0	1.9656	low	Next time	Brosina Hoffman
8	United States	California	90032	West	TEC-PH-10002275	Technology	Phones	Mitel 5320 IP Phoi	907.152	6		0.2	90.7152	low	Next time	Brosina Hoffman
9	United States	California	90032	West	OFF-BI-10003910	Office Supplier	Binders	DXL Angle-View E	18.504	3		0.2	5.7825	low	Next time	Brosina Hoffman
10	United States	California	90032	West	OFF-AP-10002892	Office Supplier	Appliances	Belkin F5C206VTE	114.9	5		0	34.47	low	Next time	Brosina Hoffman
11	United States	California	90032	West	FUR-TA-10001539	Furniture	Tables	Chromcraft Recta	1706.184	9		0.2	85.3092	low	Next time	Brosina Hoffman
12	United States	California	90032	West	TEC-PH-10002033	Technology	Phones	Konftel 250 Confe	911.424	4		0.2	68.3568	low	Next time	Brosina Hoffman
13	United States	North Carolina	28027	South	OFF-PA-10002365	Office Supplier	Paper	Xerox 1967	15.552	3		0.2	5.4432	low	Next time	Andrew Allen
14	United States	Washington	98103	West	OFF-BI-10003656	Office Supplier	Binders	Fellowes PB200 P	407.976	3		0.2	132.5922	low	Next time	Irene Maddox
15	United States	Texas	76106	Central	OFF-AP-10002311	Office Supplier	Appliances	Holmes Replacem	68.81	5		0.8	-123.858	low	Next time	Harold Pawlan
16	United States	Texas	76106	Central	OFF-BI-10000756	Office Supplier	Binders	Storex DuraTech I	2.544	3		0.8	-3.816	low	Next time	Harold Pawlan
17	United States	Wisconsin	53711	Central	OFF-ST-10004186	Office Supplier	Storage	Stur-D-Stor Shelv	665.88	6		0	13.3176	low	Next time	Pete Kriz
18	United States	Utah	84084	West	OFF-ST-10000107	Office Supplier	Storage	Fellowes Super SI	55.5	2		0	9.99	low	Next time	Alejandro Grove
19	United States	California	94109	West	OFF-AR-10003056	Office Supplier	Art	Newell 341	8.56	2		0	2.4824	low	Next time	Zuschuss Donatelli
20	United States	California	94109	West	TEC-PH-10001949	Technology	Phones	Cisco SPA 501G IP	213.48	3		0.2	16.011	low	Next time	Zuschuss Donatelli
21	United States	California	94109	West	OFF-BI-10002215	Office Supplier	Binders	Wilson Jones Han	22.72	4		0.2	7.384	low	Next time	Zuschuss Donatelli
22	United States	Nebraska	68025	Central	OFF-AR-10000246	Office Supplier	Art	Newell 318	19.46	7		0	5.0596	low	Next time	Ken Black
23	United States	Nebraska	68025	Central	OFF-AP-10001492	Office Supplier	Appliances	Acco Six-Outlet Pi	60.34	7		0	15.6884	low	Next time	Ken Black
24	United States	Pennsylvania	19140	East	FUR-CH-10002774	Furniture	Chairs	Global Deluxe Sta	71.372	2		0.3	-1.0196	low	Next time	Sandra Flanagan
25	United States	Utah	84057	West	FUR-TA-10000577	Furniture	Tables	Bretford CR4500 S	1044.63	3		0	240.2649	low	Good Performance	Emily Burns
26	United States	California	90049	West	OFF-BI-10001634	Office Supplier	Binders	Wilson Jones Acti	11.648	2		0.2	4.2224	low	Next time	Eric Hoffmann
27	United States	California	90049	West	TEC-AC-10003027	Technology	Accessories	Imation 8GB Mini	90.57	3		0	11.7741	low	Next time	Eric Hoffmann
28	United States	Pennsylvania	19140	East	FUR-BO-10004834	Furniture	Bookcases	Riverside Palais R	3083.43	7		0.5	-1665.05	high	Next time	Tracy Blumstein
29	United States	Pennsylvania	19140	East	OFF-BI-10000474	Office Supplier	Binders	Avery Recycled FI	9.618	2		0.7	-7.0532	low	Next time	Tracy Blumstein
30	United States	Pennsylvania	19140	East	FUR-FU-10004848	Furniture	Furnishings	Howard Miller 13-	124.2	3		0.2	15.525	low	Next time	Tracy Blumstein
31	United States	Pennsylvania	19140	East	OFF-EN-10001509	Office Supplier	Envelopes	Poly String Tie Em	3.264	2		0.2	1.1016	low	Next time	Tracy Blumstein
32	United States	Pennsylvania	19140	East	OFF-AR-10004042	Office Supplier	Art	BOSTON Model 1I	86.304	6		0.2	9.7092	low	Next time	Tracy Blumstein
33	United States	Pennsylvania	19140	East	OFF-BI-10001525	Office Supplier	Binders	Acco Pressboard C	6.858	6		0.7	-5.715	low	Next time	Tracy Blumstein
34	United States	Pennsylvania	19140	East	OFF-AR-10001683	Office Supplier	Art	Lumber Crayons	15.76	2		0.2	3.546	low	Next time	Tracy Blumstein
35	United States	Texas	77095	Central	OFF-PA-10000249	Office Supplier	Paper	Easy-staple paper	29.472	3		0.2	9.9468	low	Next time	Matt Abelman
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Country	State	Postal Code	Region	Product ID	Category	Sub-Category	Product Name	Sales	Quantity	Discount		Profit	Performance	Performance 2	Customer Name (new)	Product ID	
United States Kentucky		42420	South	FUR-BO-10001798	Furniture	Bookcases	Bush Somerset Cc	261.96	2		0	41.9136	low	Next time	Claire Gute	FUR-BO-10001798	
United States Kentucky		42420	South	FUR-CH-10000454	Furniture	Chairs	Hon Deluxe Fabri	731.94	3		0	219.582	low	Next time	Claire Gute	FUR-CH-10000454	
United States California		90036	West	OFF-LA-10000240	Office Supplier	Labels	Self-Adhesive Ad	14.62	2		0	6.8714	low	Next time	Darrin Van Huff	OFF-LA-10000240	
United States Florida		33311	South	FUR-TA-10000577	Furniture	Tables	Bretford CR4500 S	957.5775	5		0.45	-383.031	low	Next time	Sean O'Donnell	FUR-TA-10000577	
United States Florida		33311	South	OFF-ST-10000760	Office Supplier	Storage	Eldon Fold 'N Roll	22.368	2		0.2	2.5164	low	Next time	Sean O'Donnell	OFF-ST-10000760	
United States California		90032	West	FUR-FU-10001487	Furniture	Furnishings	Eldon Expressions	48.86	7		0	14.1694	low	Next time	Brosina Hoffman	FUR-FU-10001487	
United States California		90032	West	OFF-AR-10002833	Office Supplier	Art	Newell 322	7.28	4		0	1.9656	low	Next time	Brosina Hoffman	OFF-AR-10002833	
United States California		90032	West	TEC-PH-10002275	Technology	Phones	Mitel 5320 IP Phoi	907.152	6		0.2	90.7152	low	Next time	Brosina Hoffman	TEC-PH-10002275	
United States California		90032	West	OFF-BI-10003910	Office Supplier	Binders	DXL Angle-View E	18.504	3		0.2	5.7825	low	Next time	Brosina Hoffman	OFF-BI-10003910	
United States California		90032	West	OFF-AP-10002892	Office Supplier	Appliances	Belkin F5C206VTE	114.9	5		0	34.47	low	Next time	Brosina Hoffman	OFF-AP-10002892	
United States California		90032	West	FUR-TA-10001539	Furniture	Tables	Chromcraft Recta	1706.184	9		0.2	85.3092	low	Next time	Brosina Hoffman	FUR-TA-10001539	
United States California		90032	West	TEC-PH-10002033	Technology	Phones	Konftel 250 Confe	911.424	4		0.2	68.3568	low	Next time	Brosina Hoffman	TEC-PH-10002033	
United States North Carolina		28027	South	OFF-PA-10002365	Office Supplier	Paper	Xerox 1967	15.552	3		0.2	5.4432	low	Next time	Andrew Allen	OFF-PA-10002365	
United States Washington		98103	West	OFF-BI-10003656	Office Supplier	Binders	Fellowes PB200 P	407.976	3		0.2	132.5922	low	Next time	Irene Maddox	OFF-BI-10003656	
United States Texas		76106	Central	OFF-AP-10002311	Office Supplier	Appliances	Holmes Replacem	68.81	5		0.8	-123.858	low	Next time	Harold Pawlan	OFF-AP-10002311	
United States Texas		76106	Central	OFF-BI-10000756	Office Supplier	Binders	Storex DuraTech I	2.544	3		0.8	-3.816	low	Next time	Harold Pawlan	OFF-BI-10000756	
United States Wisconsin		53711	Central	OFF-ST-10004186	Office Supplier	Storage	Stur-D-Stor Shelv	665.88	6		0	13.3176	low	Next time	Pete Kriz	OFF-ST-10004186	
United States Utah		84084	West	OFF-ST-10000107	Office Supplier	Storage	Fellowes Super SI	55.5	2		0	9.99	low	Next time	Alejandro Grove	OFF-ST-10000107	
United States California		94109	West	OFF-AR-10003056	Office Supplier	Art	Newell 341	8.56	2		0	2.4824	low	Next time	Zuschuss Donatelli	OFF-AR-10003056	
United States California		94109	West	TEC-PH-10001949	Technology	Phones	Cisco SPA 501G IP	213.48	3		0.2	16.011	low	Next time	Zuschuss Donatelli	TEC-PH-10001949	
United States California		94109	West	OFF-BI-10002215	Office Supplier	Binders	Wilson Jones Han	22.72	4		0.2	7.384	low	Next time	Zuschuss Donatelli	OFF-BI-10002215	
United States Nebraska		68025	Central	OFF-AR-10000246	Office Supplier	Art	Newell 318	19.46	7		0	5.0596	low	Next time	Ken Black	OFF-AR-10000246	
United States Nebraska		68025	Central	OFF-AP-10001492	Office Supplier	Appliances	Acco Six-Outlet Pi	60.34	7		0	15.6884	low	Next time	Ken Black	OFF-AP-10001492	
United States Pennsylvania		19140	East	FUR-CH-10002774	Furniture	Chairs	Global Deluxe Sta	71.372	2		0.3	-1.0196	low	Next time	Sandra Flanagan	FUR-CH-10002774	
United States Utah		84057	West	FUR-TA-10000577	Furniture	Tables	Bretford CR4500 S	1044.63	3		0	240.2649	low	Good Performance	Emily Burns	FUR-TA-10000577	
United States California		90049	West	OFF-BI-10001634	Office Supplier	Binders	Wilson Jones Acti	11.648	2		0.2	4.2224	low	Next time	Eric Hoffmann	OFF-BI-10001634	
United States California		90049	West	TEC-AC-10003027	Technology	Accessories	Imation 8GB Mini	90.57	3		0	11.7741	low	Next time	Eric Hoffmann	TEC-AC-10003027	
United States Pennsylvania		19140	East	FUR-BO-10004834	Furniture	Bookcases	Riverside Palais R	3083.43	7		0.5	-1665.05	high	Next time	Tracy Blumstein	FUR-BO-10004834	
United States Pennsylvania		19140	East	OFF-BI-10000474	Office Supplier	Binders	Avery Recycled FI	9.618	2		0.7	-7.0532	low	Next time	Tracy Blumstein	OFF-BI-10000474	
United States Pennsylvania		19140	East	FUR-FU-10004848	Furniture	Furnishings	Howard Miller 13-	124.2	3		0.2	15.525	low	Next time	Tracy Blumstein	FUR-FU-10004848	
United States Pennsylvania		19140	East	OFF-EN-10001509	Office Supplier	Envelopes	Poly String Tie Em	3.264	2		0.2	1.1016	low	Next time	Tracy Blumstein	OFF-EN-10001509	
United States Pennsylvania		19140	East	OFF-AR-10004042	Office Supplier	Art	BOSTON Model 1I	86.304	6		0.2	9.7092	low	Next time	Tracy Blumstein	OFF-AR-10004042	
United States Pennsylvania		19140	East	OFF-BI-10001525	Office Supplier	Binders	Acco Pressboard C	6.858	6		0.7	-5.715	low	Next time	Tracy Blumstein	OFF-BI-10001525	
United States Pennsylvania		19140	East	OFF-AR-10001683	Office Supplier	Art	Lumber Crayons	15.76	2		0.2	3.546	low	Next time	Tracy Blumstein	OFF-AR-10001683	
United States Texas		77095	Central	OFF-PA-10000249	Office Supplier	Paper	Easy-staple paper	29.472	3		0.2	9.9468	low	Next time	Matt Abelman	OFF-PA-10000249	

#### TASK 4: Lookup & Date Functions

##### 11. Use VLOOKUP / XLOOKUP to fetch:

- Category based on Product ID OR
- Region based on Customer ID

```
=VLOOKUP(N:N,N:O,2,FALSE)
```

##### USED VLOOKUP BECAUSE

Excel lookup functions for finding and retrieving data from tables. Supports every excel version on the other side XLOOKUP Supports only 2021 excel version.

Extract: • Year using YEAR() • Month using MONTH() or TEXT()

```
=YEAR(C9377)
```

2015



```
=MONTH(C1500)
```

10

## TASK 5: Pivot Tables & Charts

Create a Pivot Table showing:

- Total Sales by Region

Regions	Sales (in Rupees)
Central	501239.8908
East	678499.868
South	391721.905
West	725457.8245
<b>Grand Total</b>	<b>2296919.488</b>

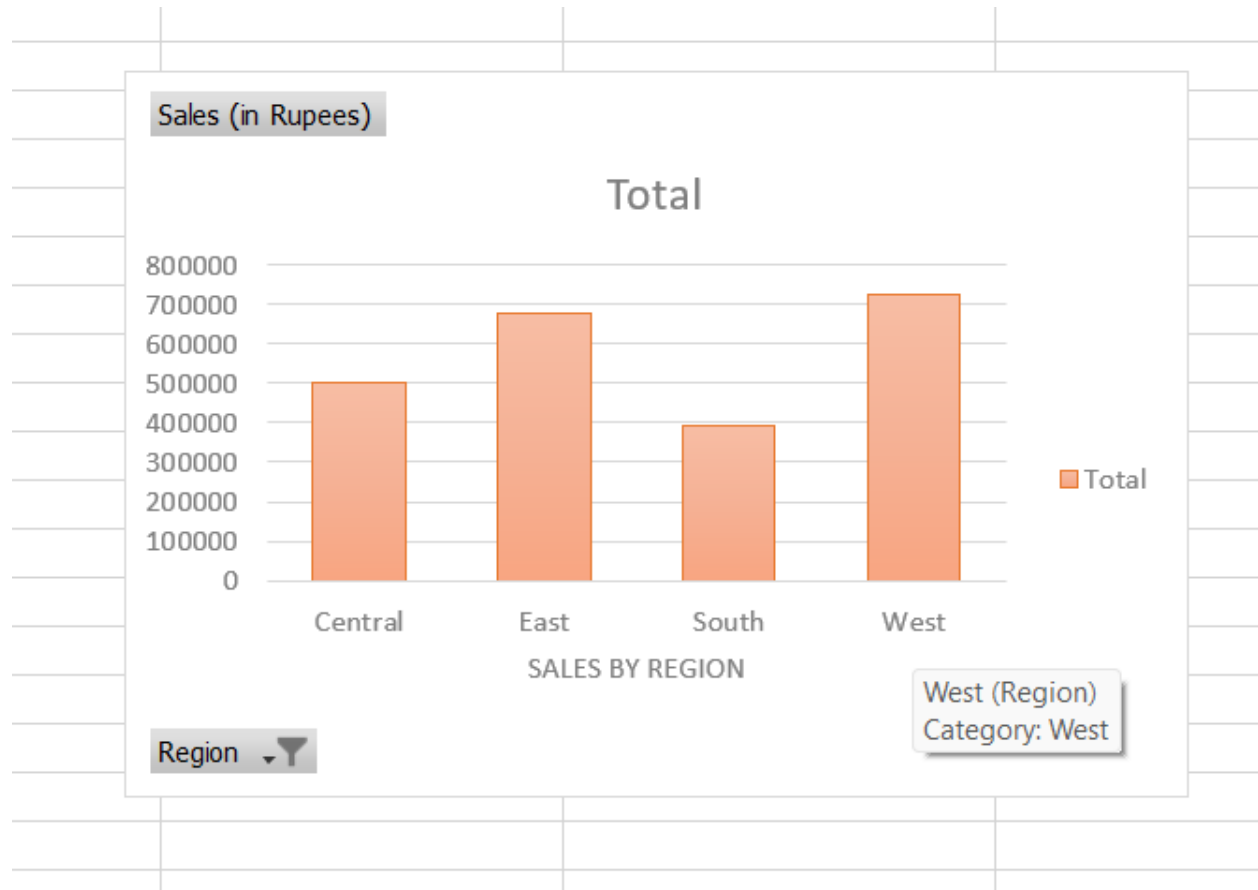
Create a Pivot Table showing:

- Profit by Category

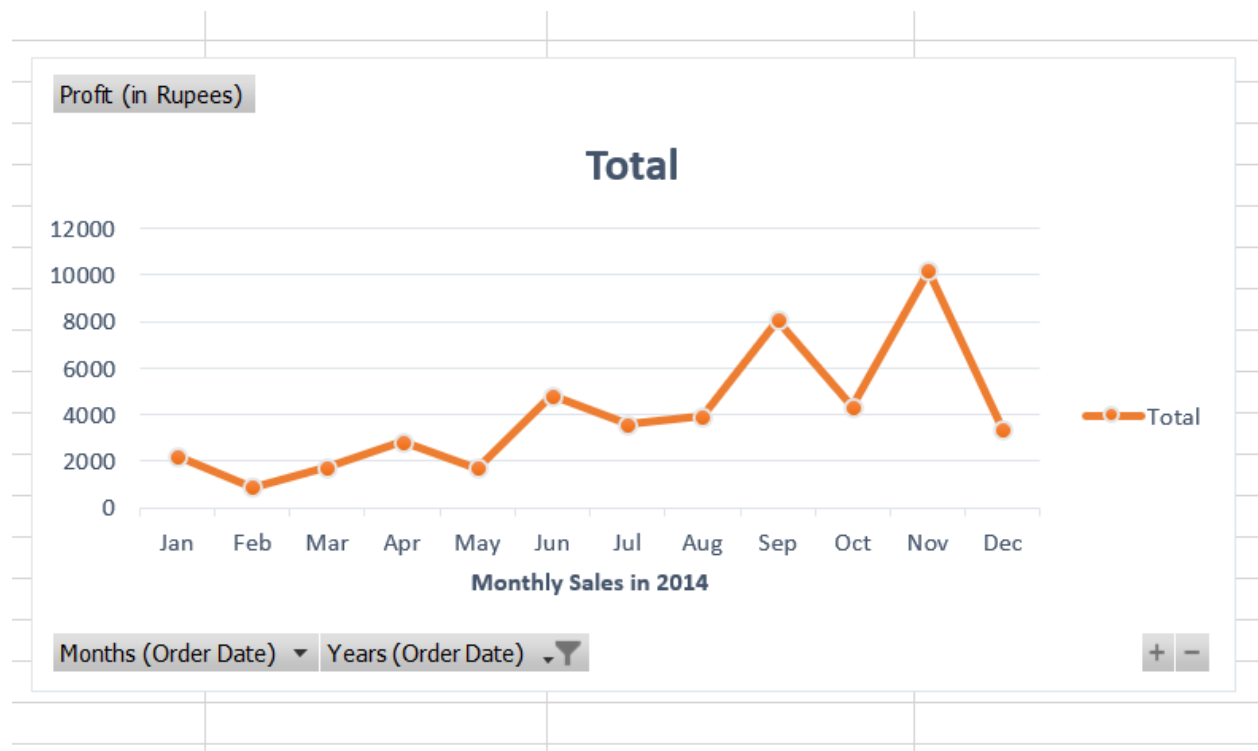
Category	Profit (in Rupees)
Furniture	18463.3316
Office Supplies	122490.8008
Technology	145454.9481
<b>Grand Total</b>	<b>286409.0805</b>

Create Pivot Charts for:

- Sales by Region (Bar/Column Chart)



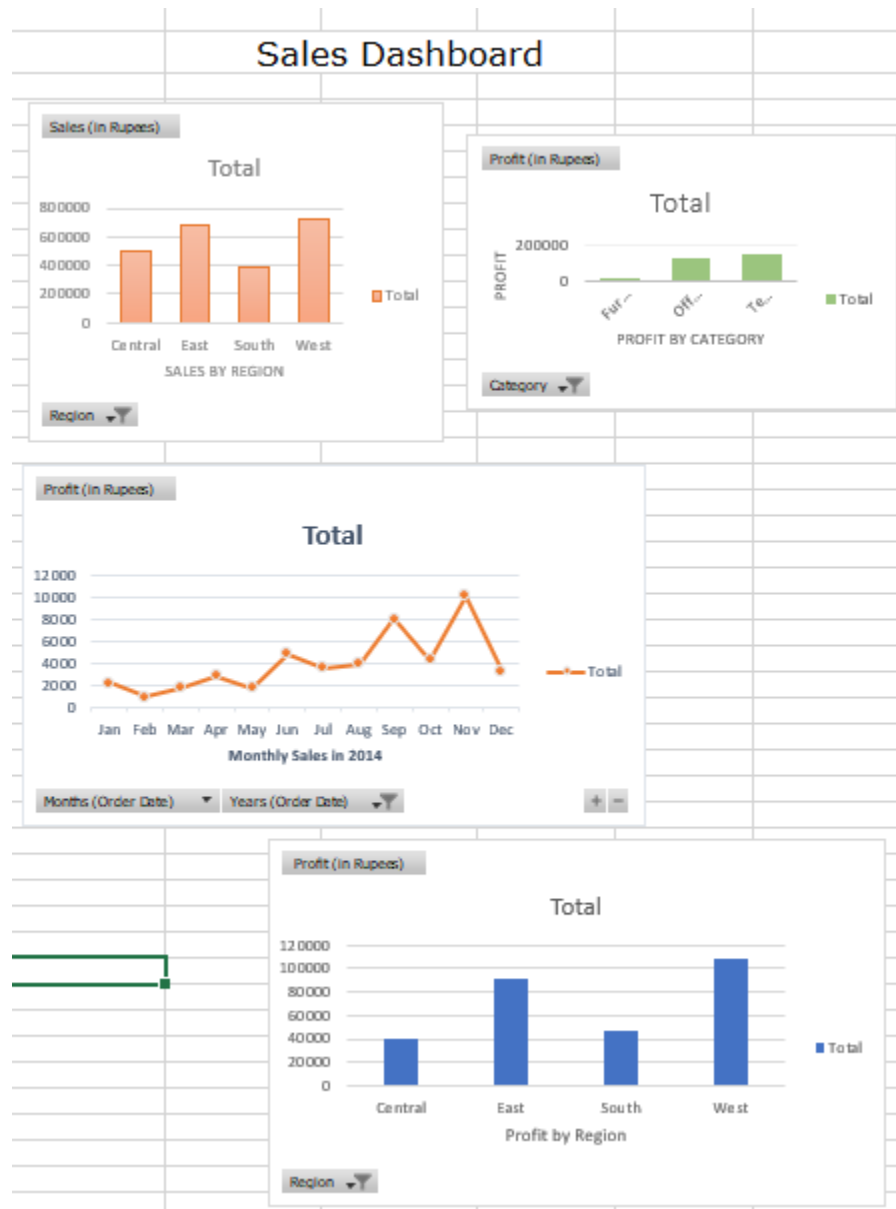
- **Monthly Sales Trend (Line Chart)**



## TASK 6: Dashboard Creation

Create ONE Dashboard Sheet containing:

- At least 3 Pivot Charts
- At least 2 Slicers (Region, Category, or Year)
- Proper titles and clean layout



## TASK 7: Conceptual Questions

### **Why is Excel still widely used in Data Analytics?**

Excel is still widely used in data analytics because it offers a simple yet powerful environment for handling, analyzing, and visualizing data. It allows users to perform data cleaning, calculations, and exploratory analysis using formulas, charts, and Pivot Tables without requiring programming expertise. Excel's compatibility with various data sources and analytics tools, along with its widespread acceptance across industries, makes it a reliable and efficient tool for both beginners and professionals.

### **What is the difference between COUNT() and COUNTA()?**

The COUNT() function counts only cells that contain numeric values, including numbers and dates stored in numeric format.

The COUNTA() function, on the other hand, counts all non-empty cells, regardless of whether they contain text, numbers, logical values, or errors.

Thus, COUNT() is used when analyzing numeric data, while COUNTA() is useful for measuring data completeness.

### **What is a Pivot Table and why is it important?**

A Pivot Table is an Excel feature used to summarize and analyze large datasets by grouping and aggregating data across different categories. It enables users to calculate totals, averages, and other metrics dynamically without modifying the original dataset.

Pivot Tables are important because they simplify complex data, support quick analysis, and help identify trends and patterns, making them an essential tool in data-driven decision-making.

### **What are slicers and how do they help in dashboards?**

Slicers are visual filtering tools that allow users to interactively filter data displayed in Pivot Tables and dashboards. They provide a clear and intuitive way to control which data is shown by using clickable buttons.

Slicers improve dashboards by enhancing interactivity, improving user experience, and allowing users to analyze data from different perspectives without technical complexity.

**Why is data cleaning important before analysis?**

Data cleaning is important because datasets often contain missing values, duplicates, inconsistencies, and errors that can negatively impact analysis results. Cleaning the data ensures accuracy, reliability, and consistency, which are essential for meaningful analysis.

Without proper data cleaning, conclusions drawn from the analysis may be inaccurate or misleading, leading to poor decision-making. Therefore, data cleaning is a critical step in the data analytics process.