TOTAL ACHIEVED VALUE BASED ON THE SALESMAN AND PRODUCT

Using the Array concepts in Excel find the Total Archived value based on the Salesman and Product for the below data.

	A	B	C	D	E	F	G
5	Sales	Product	Target	Achieved		Salesman	A
6	A	Mouse	648	915		Product	Laptop
7	B	Laptop	609	871		Total Achieved	557
8	C	Keyboard	737	544			
9	A	Laptop	986	557			
10	B	Mouse	526	670			
11	C	Paper	572	755			
12	A	Keyboard	748	783			
13	B	Bottles	958	698			
14	C	Mobiles	589	489			

Aim:

To find the total archived value based on the Salesman and Product for the given data using the array concepts in excel.

Algorithm:

Step 1: Open MS-EXCEL using the below menu, we can open the MS Excel.

Start -> All Programs -> Microsoft Office -> MS-Excel.

Step 2: Enter the given Salesman Name in Column A, Product in column B, Target Sales in Column C and Sales Achieved detail in Column D in the excel sheet.

Step 3: As an Input Parameter, enter the Salesman Name "A" in Cell G5

Step 4: Enter the Product details cell G3, for an example enter as "laptop".

Step 5: To find the value achieved by salesman "A" for the Product "laptop", Enter the below formula in cell B4 as below

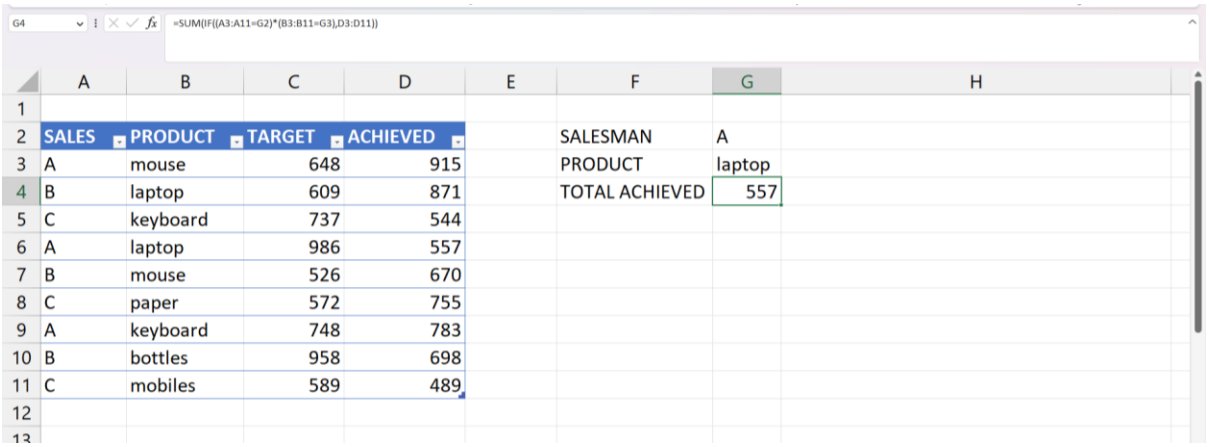
=SUM (IF ((A3:A11=G2)*(B3:B11=G3), D3:D11))

Step 6: Alter entering the above formula in cell B4 and Click "**Ctrl + Shift + Enter**" we will get the expected output.

Step 7: We will get the expected output **557** in the cell B4.

Step 8: With the help of this formula, we can find the total value achieved by different salesman for different products. Save and Close the File.

Output:



	A	B	C	D	E	F	G	H
1								
2	SALES	PRODUCT	TARGET	ACHIEVED		SALESMAN	A	
3	A	mouse	648	915		PRODUCT	laptop	
4	B	laptop	609	871		TOTAL ACHIEVED	557	
5	C	keyboard	737	544				
6	A	laptop	986	557				
7	B	mouse	526	670				
8	C	paper	572	755				
9	A	keyboard	748	783				
10	B	bottles	958	698				
11	C	mobiles	589	489				
12								

SUM OF OUTPUT OF A PERSON A

Calculate the Sum of Output of a person A, for the month of Jan, Feb and Mar using the below data dynamically.

	A	B	C	D	E	F	G	H	I	J	K	L	M
6	Sales Person	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
7	A	67	69	60	87	54	87	93	90	68	84	70	50
8	B	84	94	91	66	98	73	99	77	56	90	60	50
9	C	62	51	77	91	56	91	74	54	68	96	54	54
10	D	80	66	90	80	92	55	74	84	57	75	86	71
11	E	63	65	96	95	55	59	60	100	93	63	98	92
12	F	93	52	64	81	92	57	56	90	95	63	76	62
13	G	73	96	82	79	61	71	86	74	93	97	51	96
14	H	78	70	66	80	85	80	65	92	56	63	76	56
15													
16	Sales Person	A											
17	Output	196											
18													

Aim: To calculate the sum of output of a person A, for the month Jan, Feb and Mar using the given data, with the help of MS- EXCEL.

Algorithm:

Step 1: Open MS-EXCEL by using the command start- all programs- Microsoft office- MS-Excel

Start -> All Programs -> Microsoft Office -> MS-Excel.

Step 2: Type the given salesperson field and month's field with its values.

Step 3: In cell B16 type as salesperson and in cell C16 type as A and in cell B17 type as output.

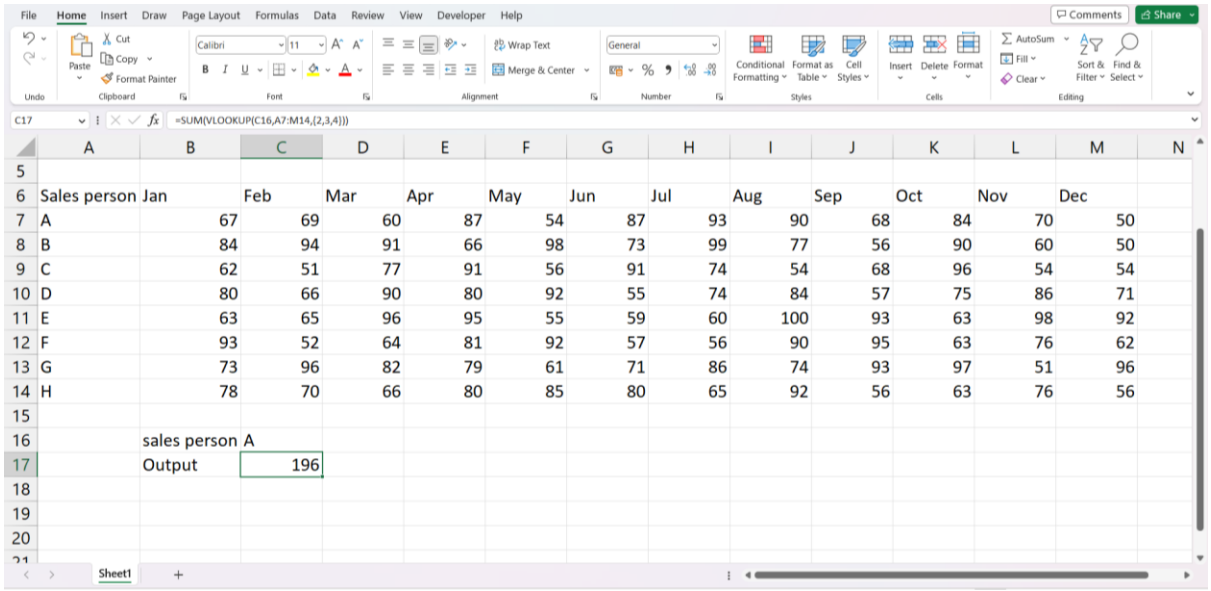
Step 4: To find the sum of sales made by salesperson A for the month Jan, Feb and Mar type formula as below:

{=SUM (VLOOKUP (C16, A7:M14, {2, 3, 4}, 0))}

Step 5: Click **"Ctrl+ Shift+ Enter"** buttons.

Step 6: Now you can find the value **196**. With the help of this formula you can dynamically calculate the sales amount of a sales person for first 3 months.

Output:



	A	B	C	D	E	F	G	H	I	J	K	L	M	N
5														
6	Sales person	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
7	A	67	69	60	87	54	87	93	90	68	84	70	50	
8	B	84	94	91	66	98	73	99	77	56	90	60	50	
9	C	62	51	77	91	56	91	74	54	68	96	54	54	
10	D	80	66	90	80	92	55	74	84	57	75	86	71	
11	E	63	65	96	95	55	59	60	100	93	63	98	92	
12	F	93	52	64	81	92	57	56	90	95	63	76	62	
13	G	73	96	82	79	61	71	86	74	93	97	51	96	
14	H	78	70	66	80	85	80	65	92	56	63	76	56	
15														
16		sales person	A											
17		Output	196											
18														
19														
20														
21														

CIRCULAR REFERENCE USING ARRAY CONCEPTS

Aim: To simulate the circular reference for the given data using array concepts in excel.

Algorithm:

Step 1: Open MS-EXCEL using the below menu, we can open the MS Excel.

Start -> All Programs -> Microsoft Office -> MS-Excel.

Step 2: Enter the Sales and Expense details in the cell B6 and B7.

Step 3: Enter the Tax details in the cell B9

Step 4: Enter the profit details formula as below:

= Sales – Expenses – Other Expenses - Tax

= C6 – C7 – C9 – C9

Step 5: Enter the formula for Other Expenses as below:

= 10% of Profit

= (10/100) * C10

Step 6: While entering the formula and Profit and Other Expenses, the Other Expense is not calculated.

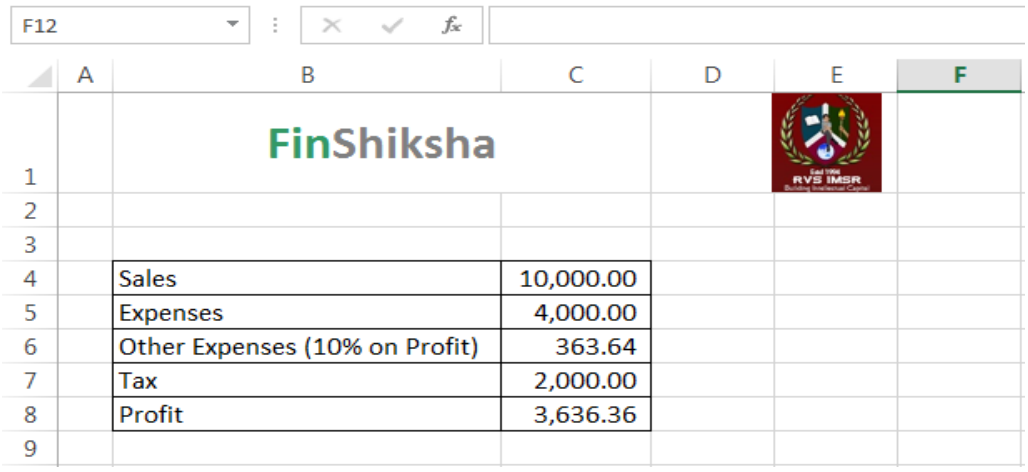
Step 7: For that we need to enable the Circular Reference option using the below menu:

File –> Options –> Formulas – Enable iterative calculation

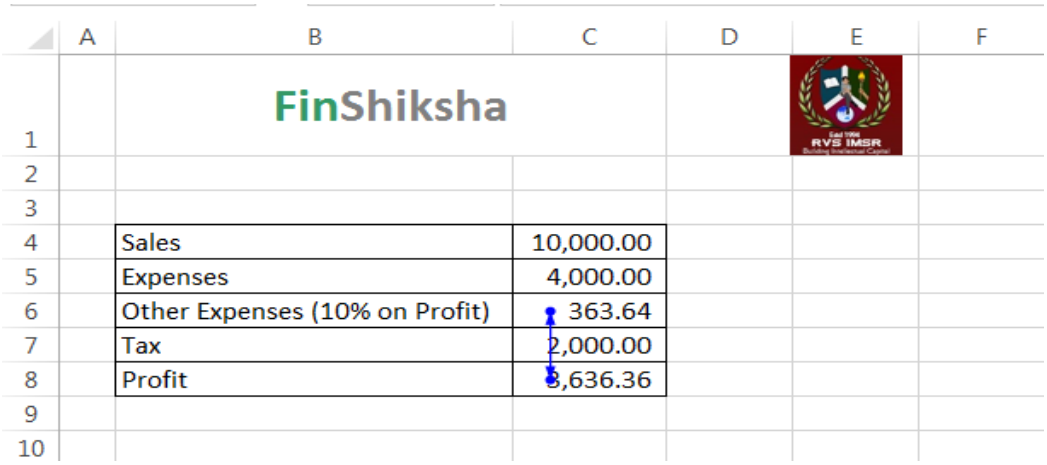
Check box to be clicked.

Step 8: We will get the expected outcome.

OUTPUT:



	A	B	C	D	E	F
1		FinShiksha				
2						
3						
4		Sales	10,000.00			
5		Expenses	4,000.00			
6		Other Expenses (10% on Profit)	363.64			
7		Tax	2,000.00			
8		Profit	3,636.36			
9						

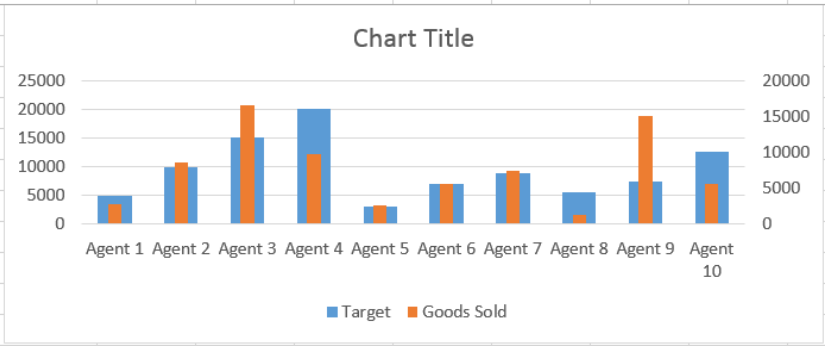


	A	B	C	D	E	F
1		FinShiksha				
2						
3						
4		Sales	10,000.00			
5		Expenses	4,000.00			
6		Other Expenses (10% on Profit)	363.64			
7		Tax	2,000.00			
8		Profit	3,636.36			
9						
10						

THERMOMETER CHART

Generate the below Thermometer Chart for the following data:

	B	C	D
3		Target	Goods Sold
4	Agent 1	5000	2800
5	Agent 2	10000	8600
6	Agent 3	15000	16500
7	Agent 4	20000	9800
8	Agent 5	3000	2670
9	Agent 6	7000	5530
10	Agent 7	8900	7387
11	Agent 8	5600	1288
12	Agent 9	7500	15000
13	Agent 10	12500	5625



Aim: To generate Thermometer chart for the given data using MS Excel.

Algorithm:

Step 1: Open MS Excel by using the command start – All Programs – Microsoft office – MS Excel.

Start -> All Programs -> Microsoft Office -> MS-Excel

Step 2: Type the given Agent name, Target and Goods sold fields and its values.

Step 3: Select the values of Agents, Target and Goods sold. Create a Column chart.

Step 4: To create a Column chart click

Insert -> Column chart.

Step 5: Now you can find two different bar charts for each agent. The Blue bar represents Target and the Orange bar represents Goods sold.

Step 6: Select the goods sold bar and right click the mouse. A popup menu appears. Select "Format Data Series" option from the menu.

Step 7: Enable **"Secondary axis"** radio button. Now you can find the orange bar overlaps the blue bar.

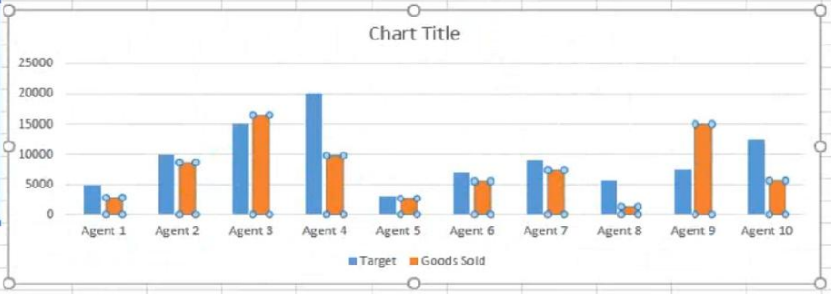
Step 8: Adjust its size by using "**gap width"** option to get the shape of Thermometer.

Step 9: Type the chart title as "Thermometer Chart".

Output:

FinShiksha

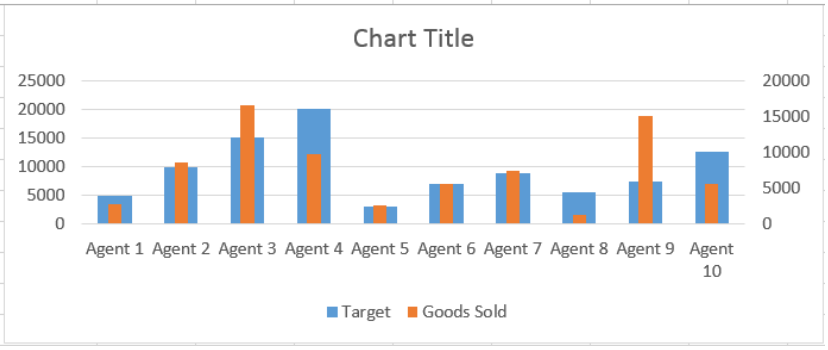
	Target	Goods Sold
Agent 1	5000	2800
Agent 2	10000	8600
Agent 3	15000	16500
Agent 4	20000	9800
Agent 5	3000	2670
Agent 6	7000	5530
Agent 7	8900	7387
Agent 8	5600	1288
Agent 9	7500	15000
Agent 10	12500	5625



FinShiksha

	Target	Goods Sold
Agent 1	5000	2800
Agent 2	10000	8600
Agent 3	15000	16500
Agent 4	20000	9800
Agent 5	3000	2670
Agent 6	7000	5530
Agent 7	8900	7387
Agent 8	5600	1288
Agent 9	7500	15000
Agent 10	12500	5625

	B	C	D
3		Target	Goods Sold
4	Agent 1	5000	2800
5	Agent 2	10000	8600
6	Agent 3	15000	16500
7	Agent 4	20000	9800
8	Agent 5	3000	2670
9	Agent 6	7000	5530
10	Agent 7	8900	7387
11	Agent 8	5600	1288
12	Agent 9	7500	15000
13	Agent 10	12500	5625



BULLET CHART

Aim: Generate the Bullet Chart for the below data:

	A	B	C	D
1				
2			Delivery Time	
3		Before Time	60%	
4		Just on Time	25%	
5		Late	7%	
6		Not Delivered	8%	
7		Target	90%	
8				

Algorithm:

Step 1: Open MS-EXCEL using the below menu:

Start -> All Programs -> Microsoft Office -> MS-Excel

Step 2: Enter the data into the worksheet.

Step 3: Select the entire data and use the below menu to create a Bar Chart

Insert -> Column Chart -> 2D Stacked Column Chart

Step 4: Using the menu change the Chart Type as Stacked Column Chart

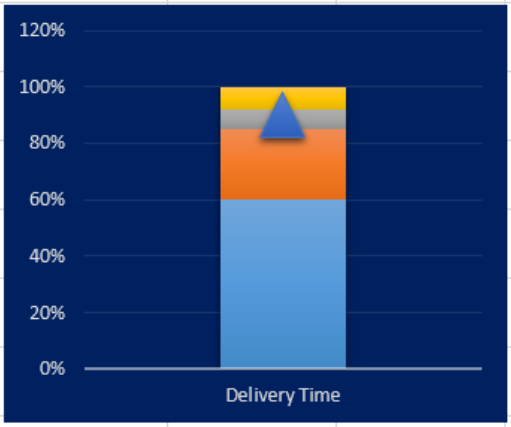
Step 5: Choose the Target Data Value and Change Series Chart Type -> Select Target Data Point and changed the Chart type as Line chart with Markers

Step 6: Select the Target Data Point and right click and Format Data Series menu. In that select Fill and Marker option, select the Built-in option and select the Symbol we want and select the Marker Size.

Step 7: Now we will get the Expected Results.

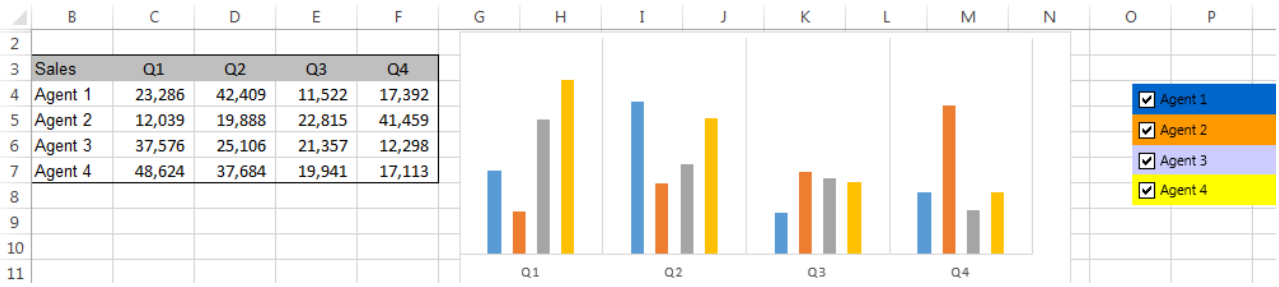
OUTPUT:

	Delivery Time
Before Time	60%
Just on Time	25%
Late	7%
Not Delivered	8%
Target	90%



DYNAMIC LINKED LEGEND CHART

Create the below Dynamic Linked Legend Chart for the following data.



Sales	Q1	Q2	Q3	Q4
Agent 1	23,286	42,409	11,522	17,392
Agent 2	12,039	19,888	22,815	41,459
Agent 3	37,576	25,106	21,357	12,298
Agent 4	48,624	37,684	19,941	17,113

Aim: **T**o create Dynamic Linked legend chart for the given data using MS Excel.

Algorithm:

Step 1: Open MS Excel by using the command start – All Programs – Microsoft office – MS Excel.

Start -> All Programs -> Microsoft Office -> MS-Excel

Step 2: Type the given Sales of agents for different quarters ie., Q1, Q2, Q3, Q4

Step 3: Select the values of sales, Q1, Q2, Q3 and Q4. Paste the values in another worksheet.

Step 4: Create checkbox for each Agents.

Step 5: To create a checkbox, use the command

Developer –> Insert –> Form controls –> Checkbox.

Step 6: Select the check box, drag it int the sheet. Name the check box as “Agent1”. Like this, create checkbox for Agent 2, Agent 3 and Agent 4.

Step 7: Assign a cell as cell link, Right click the mouse button and do as follows

Format control –> Cell link –>Select a cell.

Step 8: Set the cell A4 as a cell link for Agent 1 checkbox, A5 for Agent 2, A6 for Agent 3 and A7 for Agent 4.

Step 9: In the cell which is referred as cell link, it shows TRUE when the checkbox is enabled.

Step 10: To find the value of Agent 1 for Q1 type formula as below:

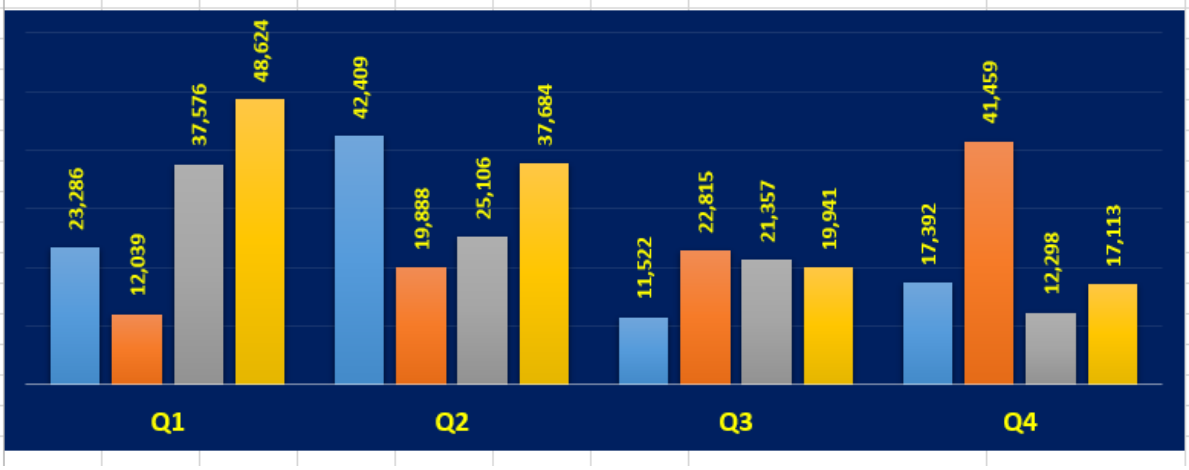
=IF (A4=TRUE, Data! C4, NA())

Step 11: By using the above formula, find the values of sales for all the Agents in different quarters.

OUTPUT:

FinShiksha

	Sales	Q1	Q2	Q3	Q4
TRUE	Agent 1	23,286	42,409	11,522	17,392
TRUE	Agent 2	12,039	19,888	22,815	41,459
TRUE	Agent 3	37,576	25,106	21,357	12,298
TRUE	Agent 4	48,624	37,684	19,941	17,113



DYNAMIC GRAPH CONTROL CHART

Aim: Generate the dynamic graph control chart for the below given data:

	A	B	C	D	E	F
1	FinShiksha					
2						
3						
4						
5			Q1	Q2	Q3	Q4
6		Sales	23,286	42,409	11,522	17,392
7		Profit	2,341	2,432	1,146	1,508

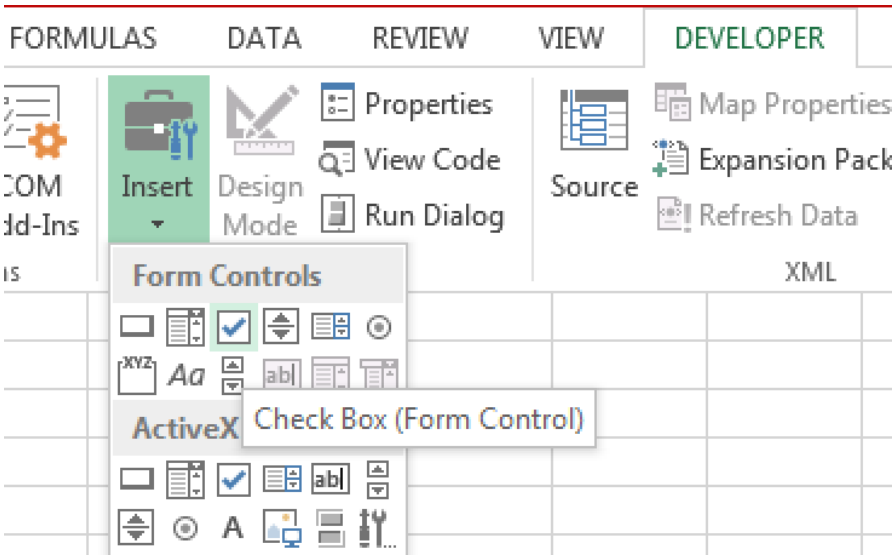
Algorithm:

Step 1: Open MS-EXCEL by using the command start- all programs- Microsoft office- MS-excel.

Start -> All Programs -> Microsoft Office -> MS-Excel.

Step 2: Enter the above data in the Excel.

Step 3: Using Developer Menu, select the Form Control and pick the Check Box control and place it in the excel sheet.



Step 4: Change the Label as “Agent 1”

Step 5: Right click the control and select the Format Control Menu -> Control tab select the cell link for the Unchecked option as A4. This means while selecting the check box checked then the value “TRUE” will be placed in the cell A4. Similarly do the same steps for Profit.

Step 6: Use below if condition to link the values with checkboxes and show the Agent 1 Sales data or show as “#NA”.

=IF ($A4=TRUE, ‘Data 1'! C6, NA ())

Step 7: Copy the above formula to Q2, Q3 and Q4 and check the values are shown as well as NA shown for unchecked option chosen.

Step 8: Follow the same steps for Profit

Step 9: After populating the data select the Data Range and use the below menu to generate the column chart.

Insert - > Charts -> 2D Column Charts

Step 10: Now the Sales and Profit will be shown as Column data bars

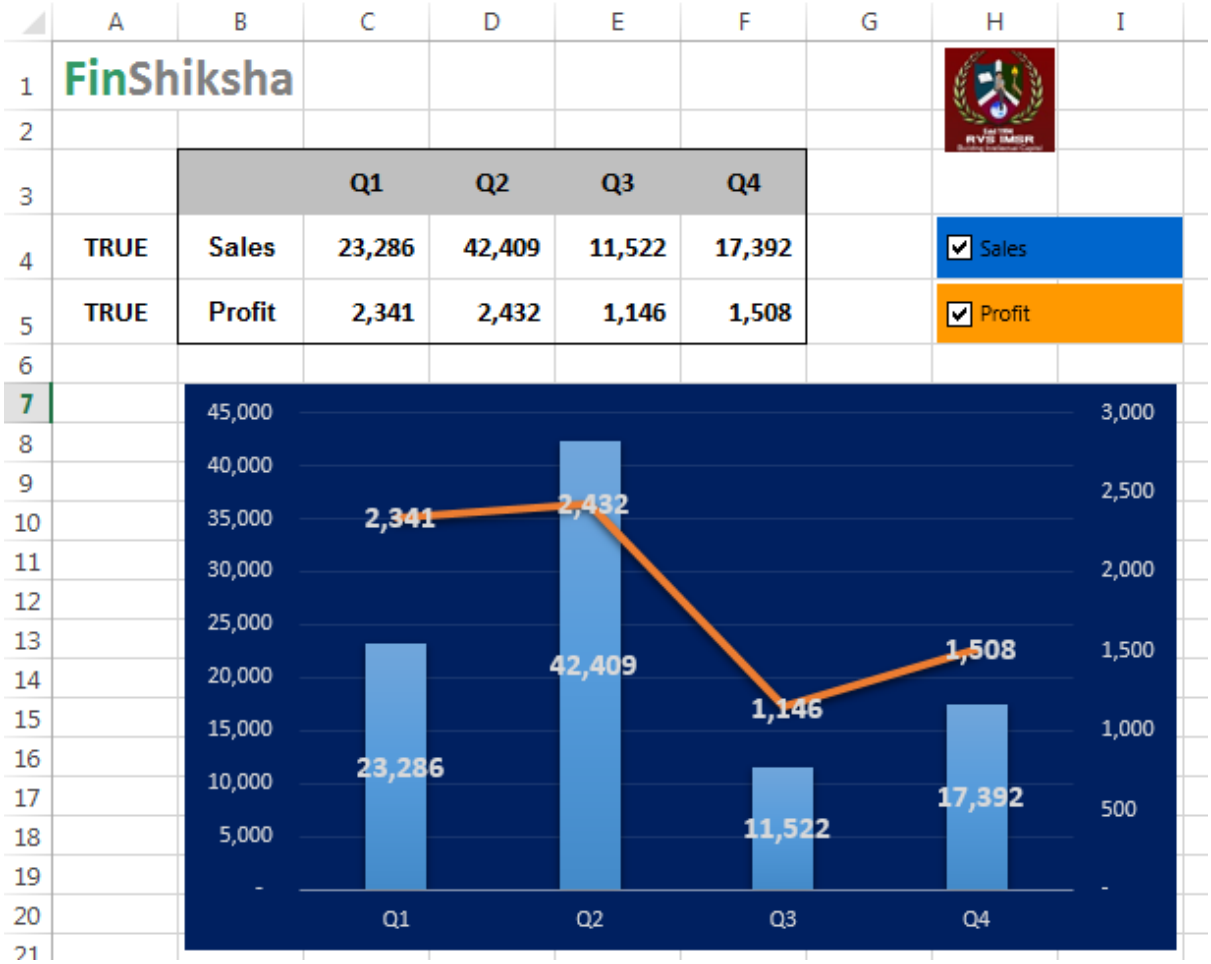
Step 11: Select the Profit Data Points and select “Change Series Chart Type” menu

Step 12: We can see the Chart Type and Secondary Axis check Box. Change the Chart type of Profit into “Line Chart” and click the Secondary Axis check box

Step 13: Select Profit and Sales Data Points and enable the data labels.

Step 14: We will get the expected Output.

OUTPUT:


FinShiksha
Q1
Q2
Q3
Q4
TRUE
Sales
23,286
42,409
11,522
17,392
TRUE
Profit
2,341
2,432
1,146
1,508
Sales
Profit
45,000
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
-
3,000
2,500
2,000
1,500
1,000
500
-
2,341
2,432
1,146
1,508
23,286
42,409
11,522
17,392
Q1
Q2
Q3
Q4

DASHBOARD CREATION

Create a Dashboard for the below data:

FinShiksha				
Economic Strength	Unemployment	10.50%	10.90%	44
	Gross Domestic Product (GDP)	-5.20%	2.90%	25
	Percent of Structurally Deficient Bridges	13.50%	13.20%	25
	Real Personal Income per Capita	$ 28,250	$ 27,558	25
	Children Living in Poverty	19%	23%	25
Health and Education	Infant Mortality (per 1,000 births)	7.6	7.7	25
	Obesity in Population	30.30%	31.70%	43
	3rd Graders Reading at Grade Level	90%	87%	
	ACT College Readiness Benchmarks	16%	17.30%	
	Population with Bachelor's Degree or Higher (25+ years old)	24.70%	24.60%	21
Value for Money Government	Bond Rating (S&Ps)	AA-	AA-	
	Government Debt Burden per Capita	$ 748	$ 762	29
	State Government Operating Cost as a Percent of GDP	11.90%	12.50%	
	State and Local Government Operating Cost as a Percent of GD	20.90%	21.90%	
	Access to State Government - Number of Online Services	325	357	
Quality of Life	State Park Popularity - Annual visits per citizen	2.1	2.1	
	Population Growth (Ages 25-34)	-1.90%	-1.60%	
	Clean and Safe Water Resources - water quality index	83	88	
Public Safety	Violent Crimes per 100,000	502	497	25
	Property Crimes per 100,000	2,935	2,838	25
	Individuals fatally or serious injured in traffic accidents	7,382	6,917	

Economic Strength	Prior	Current	Rank	Progress
Unemployment	10.5%	10.9%		⇩
Gross Domestic Product (GDP)	-5.2%	2.9%		⇧
Percent of Structurally Deficient Bridges	13.5%	13.2%		⇧
Real Personal Income per Capita	$28,250	$27,558		⇩
Children Living in Poverty	19.0%	23.0%		⇩

Quality of Life	Prior	Current	Rank	Progress
State Park Popularity - Annual visits per citizen	2	2		⇔
Population Growth (Ages 25-34)	0	0		⇧
Clean and Safe Water Resources - water quality	83	88		⇧

Aim: To create a Dashboard for the given data using MS – Excel.

Step 1: Open MS Excel by using the command start – All Programs – Microsoft office – MS Excel.

Start -> All Programs -> Microsoft Office -> MS-Excel.

Step 2: Create a separate sheet called Dashboard.

Step 3: Type the given area separately and type subtopics under each area.

Step 4: To copy the value of metric for Economic strength type formula as below

='Data Dashboard'! B5

By using the above steps create separate table for each area and copy its metric value.

Step 5: To get the value of prior for each table, type formula as below:

=VLOOKUP (metric value, 'Data Dashboard'! $B$5:$E$25, 2, 0)

By using the given formula retrieve the value of prior for each metric.

Step 6: To get the value of current for each table, type formula as below:

=VLOOKUP (Metric Value, 'Data Dashboard'! $B$5: $E$25, 3, 0)

Step 7: To get the value of Rank for each table, type formula as below:

=VLOOKUP (Metric Value, 'Data Dashboard'! $B$5:$E$25, 4, 0)

Step 8: To find the value of progress type formula as below:

= Current - Prior.

By using the given formula retrieve the value of progress for each area.

Step 9: To set icons, select the Rank value do as follows,

Home –> Conditional formatting –> Icon sets –> Shapes –> Circle.

To set Icons, select the Progress and do as follows,

Home –> Conditional formatting –> Icon sets –> Shapes –> Arrows.

By using the above steps set Icons for Rank and Progress in each area.

OUTPUT:

FinShiksha

Economic Strength	Prior	Current	Rank	Progress
Unemployment	10.50%	10.90%		
Gross Domestic Product (GDP)	-5.20%	2.90%		
Percent of Structurally Deficient Bridges	13.50%	13.20%		
Real Personal Income per Capita	$ 28,250.00	##########		
Children Living in Poverty	19.00%	23.00%		

Health and Education	Prior	Current	Rank	Progress
Infant Mortality (per 1,000 births)	7.60	7.70		
Obesity in Population	30.30%	31.70%		
3rd Graders Reading at Grade Level	90.00%	87.00%		
ACT College Readiness Benchmarks	16.00%	17.30%		
Population with Bachelor's Degree or Higher (25+ years old)	24.70%	24.60%		

Value for Money Government	Prior	Current	Rank	Progress
Bond Rating (S&Ps)	AA-	AA-		#VALUE!
Government Debt Burden per Capita	$ 748.00	$ 762.00		14.00
State Government Operating Cost as a Percent of GDP	11.90%	12.50%		0.01
State and Local Government Operating Cost as a Percent of GDP	20.90%	21.90%		0.01
Access to State Government - Number of Online Services	325.00	357.00		32.00

Quality of Life	Prior	Current	Rank	Progress
State Park Popularity - Annual visits per citizen	2.10	2.10	0	
Population Growth (Ages 25-34)	-1.90%	-1.60%	0	
Clean and Safe Water Resources - water quality index	83.00	88.00	0	

Public Safety	Prior	Current	Rank	Progress
Violent Crimes per 100,000	502.00	497.00		
Property Crimes per 100,000	2935.00	2838.00		
Individuals fatally or serious injured in traffic accidents	7382.00	6917.00		

DASHBOARD CREATION USING COMPANY AND VARIABLE COST

AIM:

To create a dashboard for the following data:

	A	B	C	D	E	F	G
1	Company	Variable	2011	2012	2013	2014	2015
2	ACC Ltd	Fixed Cost	27	26	29	29	30
3	ACC Ltd	Freight & Forwarding	20	20	21	22	23
4	ACC Ltd	Other variable cost	15	18	22	20	19
5	ACC Ltd	Power & Fuel	23	21	21	21	20
6	ACC Ltd	Profit	15	15	7	8	8
7	Ambuja Cement	Fixed Cost	25	25	27	27	30
8	Ambuja Cement	Freight & Forwarding	23	23	25	24	27
9	Ambuja Cement	Other variable cost	11	9	13	12	11
10	Ambuja Cement	Power & Fuel	23	24	22	23	22
11	Ambuja Cement	Profit	18	19	13	14	10
12	JK Lakshmi Cement	Fixed Cost	19	20	19	19	18
13	JK Lakshmi Cement	Freight & Forwarding	20	19	21	22	22
14	JK Lakshmi Cement	Other variable cost	23	25	26	30	29
15	JK Lakshmi Cement	Power & Fuel	30	24	20	21	21
16	JK Lakshmi Cement	Profit	8	12	14	8	10
17	Ultratech Cement	Fixed Cost	24	22	22	24	24
18	Ultratech Cement	Freight & Forwarding	22	20	21	23	24
19	Ultratech Cement	Other variable cost	16	17	18	19	18
20	Ultratech Cement	Power & Fuel	23	24	21	20	21
21	Ultratech Cement	Profit	17	17	8	9	9

Data | Working Sheet | DB

ALGORITHM:

Step 1: Open MS-EXCEL using the below menu:

Start -> All Programs -> Microsoft Office -> MS-Excel

Step 2: Enter the data in the Excel Sheet.

Step 3: Select the entire data and use the below menu to create the Pivot table in the working sheet:

Insert -> Pivot Table

Step 4: Select Company in the Filter option the Pivot table will be created.

Step 5: Now insert slicer using Analyze menu for company & variable fields

Step 6: Again create a pivot table for year wise data based on the company and variable cost

Step 7: For that select variable cost in filters, Company in Rows and Year 2011 data in Σ Values.

Step 8: Proceed with the same process for 2012, 2013, 2014 and 2015 data in the similar manner.

Step 9: The above things has been done in working sheet. Now we have to create a Dashboard Sheet and copy the Variable Cost Slicer and Company Slicers.

Step 10: Now use the Vlookup formula to get values from pivot table for each year for the Dashboard Sheet.

Step 11: After completing that process, we need to attach the variable cost slicer with the year 2011, 2012, 2013, 2014 and 2015 pivot tables. For that select the variable cost slicer then the Options menu has been enabled. From that Options menu, select the Report Connections, that will show the pivot tables created for year wise data. Click that check box and click Ok, then the Slicer will be connected with the Year wise Pivot tables and show the related data.

Step 12: Using the Conditional Formatting Techniques, we will highlight the selected company. This will be the expected result.

OUTPUT:

Company	Variable	2011	2012	2013	2014	2015
ACC Ltd	Fixed Cost	27	26	29	29	30
ACC Ltd	Freight & Forwarding	20	20	21	22	23
ACC Ltd	Other variable cost	15	18	22	20	19
ACC Ltd	Power & Fuel	23	21	21	21	20
ACC Ltd	Profit	15	15	7	8	8
Ambuja Cement	Fixed Cost	25	25	27	27	30
Ambuja Cement	Freight & Forwarding	23	23	25	24	27
Ambuja Cement	Other variable cost	11	9	13	12	11
Ambuja Cement	Power & Fuel	23	24	22	23	22
Ambuja Cement	Profit	18	19	13	14	10
JK Lakshmi Cement	Fixed Cost	19	20	19	19	18
JK Lakshmi Cement	Freight & Forwarding	20	19	21	22	22
JK Lakshmi Cement	Other variable cost	23	25	26	30	29
JK Lakshmi Cement	Power & Fuel	30	24	20	21	21
JK Lakshmi Cement	Profit	8	12	14	8	10
Ultratech Cement	Fixed Cost	24	22	22	24	24
Ultratech Cement	Freight & Forwarding	22	20	21	23	24
Ultratech Cement	Other variable cost	16	17	18	19	18
Ultratech Cement	Power & Fuel	23	24	21	20	21
Ultratech Cement	Profit	17	17	8	9	9

Data | Working Sheet | DB

Company

ACC Ltd | Ambuja Cement | JK Lakshmi Cement | Ultratech Cement

Variable

Fixed Cost | Freight & Forwarding | Other variable cost | Power & Fuel | Profit

2011		2012		2013		2014		2015	
ACC Ltd	15	ACC Ltd	15	ACC Ltd	7	ACC Ltd	8	ACC Ltd	8
Ambuja Cement	18	Ambuja Cement	19	Ambuja Cement	13	Ambuja Cement	14	Ambuja Cement	10
JK Lakshmi Cement	8	JK Lakshmi Cement	12	JK Lakshmi Cement	14	JK Lakshmi Cement	8	JK Lakshmi Cement	10
Ultratech Cement	17	Ultratech Cement	17	Ultratech Cement	8	Ultratech Cement	9	Ultratech Cement	9

DASHBOARD CREATION USING SLICER

Write down the complete steps to create a Dashboard for the below data:

	A	B	C	D	E	F	G
6	Company	Variable	2011	2012	2013	2014	2015
7	ACC Ltd	Other variable cost	15	18	22	20	19
8	ACC Ltd	Power & Fuel	23	21	21	21	20
9	ACC Ltd	Freight & Forwarding	20	20	21	22	23
10	ACC Ltd	Fixed Cost	27	26	29	29	30
11	ACC Ltd	Profit	15	15	7	8	8

Aim: To Create a Dashboard for the given data using MS – Excel.

Algorithm:

Step 1: Open MS – Excel by using the command Start – All programs – Microsoft Office – MS-Excel.

Start -> All Programs -> Microsoft Office -> MS-Excel

Step 2: Type the given company field, Variable field, 2011, 2012, 2013, 2014, 2015 and its values.

Step 3: Create a Pivot Chart by selecting the value form **A6:A26** and click

Insert –> Pivot Chart –> Pivot table –> Pivot chart.

Step 4: Select new worksheet Radio button and click OK.

Step 5: Create Slicer for Company and variable by using the command select the below:

Pivot table –> Analyze –> Insert slicer –> Enable company check box.

Step 6: Create another pivot table for variable by using the command

Insert – Pivot chart – Pivot table – Pivot chart.

Step 7: Select Existing worksheet Radio Button select Location and click OK button.

Step 8: Create a slicer for variable by using the command select the variable

Pivot table – Analyze – Insert slicer – Enable company check box.

Step 9: Cut the slicers of Company and variable and paste it in a new sheet.

Step 10: Type 2011, 2012, 2013, 2014, 2015 as field names.

Step 11: Create a separate table for variable from O8 to O12 consists of Fixed Cost, Freight and Forwarding, Other variable cost, power and fuel, profit.

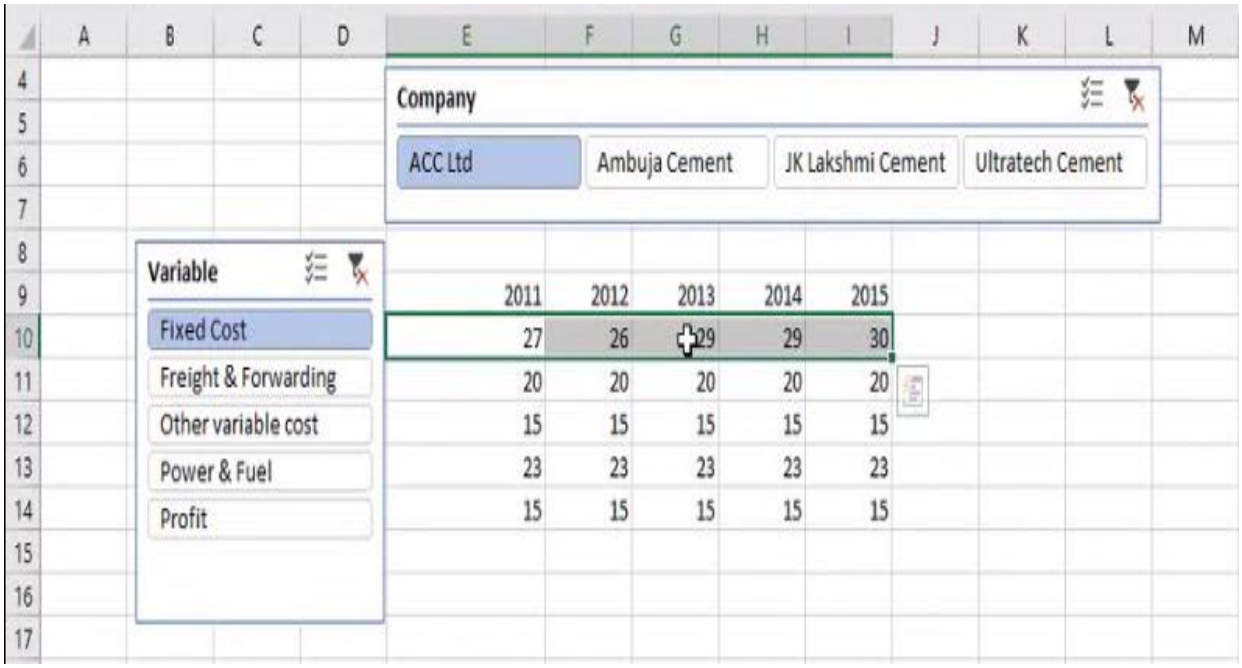
Step 12: To get the values for 2011 type formula as below:

= OFFSET (INDEX (Data! $A$6:$A$25, MATCH ('Workingsheet2'! $B$1, Data! $A$6:$A$25, 0),), MATCH (08, Data! $B$6:$B$25, 0)-1, 2)

Use the same formula for all the columns, except the column number and variable reference. Change the column number to 3 when you drag and copy the formula to the next column and after O12, O8, O9, and O10. When you copy the formula to other rows.

Step 13: Now based on the selections in company and variable slicers, the value changes dynamically.

Output:



PERFORMING MATEMATICAL AND STATISTICAL CALCULATIONS USING MACRO

Create a macro called basic_math to perform mathematical functions like product, sum and Statistical measures like average and standard deviation of an Array using the below data:

	A	B	C	D	E	F
1	FinShiksha					
2	Array 1	Array 2				
3	100	1		Total Output		
4	400	56		Mean 1		
5	200	78		Mean 2		
6	45	90		SD 1		
7	34	34		SD 2		

Aim: To create a macro called Basic_math to perform mathematical functions like Product, Sum, Average and Standard deviation of an array for the given data.

Algorithm:

Step 1: Open MS – Excel by using the command Start – All programs – Microsoft Office – MS-Excel.

Start -> All Programs -> Microsoft Office -> MS-Excel

Step 2: Type the given values of array1 and array2.

Step 3: To create a basic_math macro click the below:

Developer tab –> Record Macro

Step 4: Type the Macro name as Basic_math.

Step 5: Set a shortcut key like ctrl+L

Step 6: Set description and click OK button. Now your actions get recorded.

Step 7: Find the sum of two arrays by using the below function:

= SUM (Array1, Array2)

Step 8: To find Mean1, type formula as below:

=AVERAGE (Array1)

Step 9: To find Mean2, type formula as below:

=AVERAGE (Array2)

Step 10: To find the Total Output, type formula as below:

=SUMPRODUCT (Array1, Array2)

Step 11: To find SD1 type formula as below:

=STDEV (Array1)

Step 12: To find SD2 type formula as below:

=STDEV (Array2)

Step 13: To stop Macro recording, click Developer – Stop Macro.

Step 14: Now you can use the Basic_math macro to get the values whenever it's needed.

OUTPUT:

	A	B	C	D	E	F	G
1	FinShiksha						
2							
3							
4							
5							
6	Array 1	Array 2					
7	100	1		Total Output	43306		
8	400	56		Mean 1	155.8		
9	200	78		Mean 2	51.8		
10	45	90		SD 1	151.5031		
11	34	34		SD 2	35.56965		
12							
13							
14							

CALCULATE THE EMI USING MACRO

Create a macro to calculate the EMI and repayment schedule for the below data:

	A	B	C	D	E	F
1	FinShiksha					
2	Loan Amount	10000				
3	Interest	10%				
4	Tenure	10				
5	EMI					
6						
7	Years	Loan Amount	EMI	Interest	P Payment	
8	1					
9	2					
10	3					
11	4					
12	5					
13	6					
14	7					
15	8					
16	9					
17	10					
18						

Aim: To Create a macro to calculate EMI and repayment schedule for the given data.

Algorithm:

Step 1: Open MS – Excel by using the command Start – All programs – Microsoft Office – MS-Excel.

Start -> All Programs -> Microsoft Office -> MS-Excel

Step 2: Type the given Loan amount, Interest, Tenure and its values.

Step 3: Type field names as years, Loan amount, EMI, Interest, p payment

Step 4: Create a Macro in the name of Amortization_Schedule.

Step 5: To create a Macro, click the below menu.

Developer –> Record Macro.

Step 6: Set Macro name as “Amortization_Schedule”, set a shortcut key and description, then click OK.

Step 7: To find EMI using the below formula:

=PMT (Interest Rate, Tenure, -loan amount, 0)

Step 8: Type 1 to 20 in year's column.

Step 9: To find loan amount, type formula as below:

=loan amount

Step 10: To find EMI, type formula as below:

=PMT.

Step 11: To calculate Interest type formula as below:

=Interest rate * loan amount

Step 12: To calculate P.Payment, type formula as below:

=EMI – Interest amount

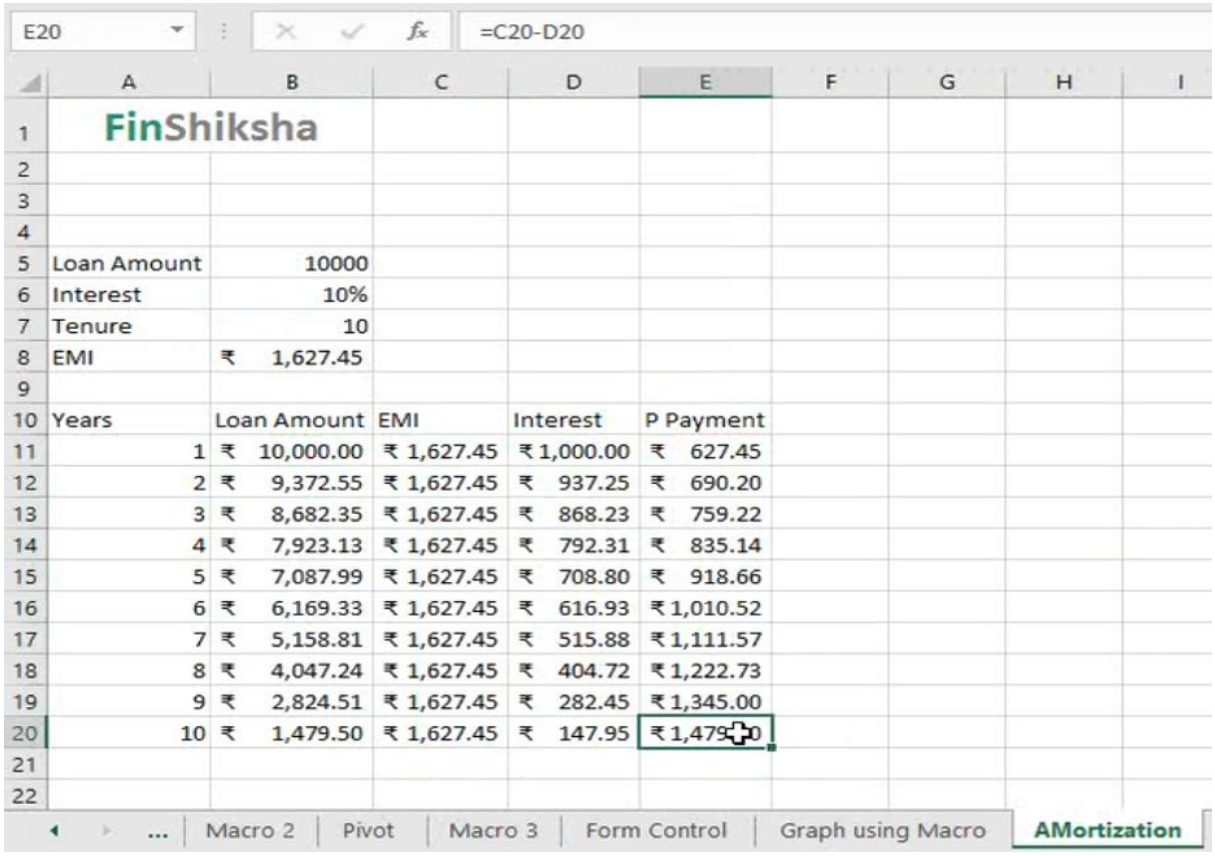
Step 13: To calculate loan amount for 2nd year, type formula as below:

=1st year loan amount – P.Payment

Step 14: To stop Macro recording, click

Developer –> stop Macro.

OUTPUT:



E20 | =C20-D20

	A	B	C	D	E	F	G	H	I
1	FinShiksha								
2									
3									
4									
5	Loan Amount	10000							
6	Interest	10%							
7	Tenure	10							
8	EMI	₹ 1,627.45							
9									
10	Years	Loan Amount	EMI	Interest	P Payment				
11	1	₹ 10,000.00	₹ 1,627.45	₹ 1,000.00	₹ 627.45				
12	2	₹ 9,372.55	₹ 1,627.45	₹ 937.25	₹ 690.20				
13	3	₹ 8,682.35	₹ 1,627.45	₹ 868.23	₹ 759.22				
14	4	₹ 7,923.13	₹ 1,627.45	₹ 792.31	₹ 835.14				
15	5	₹ 7,087.99	₹ 1,627.45	₹ 708.80	₹ 918.66				
16	6	₹ 6,169.33	₹ 1,627.45	₹ 616.93	₹ 1,010.52				
17	7	₹ 5,158.81	₹ 1,627.45	₹ 515.88	₹ 1,111.57				
18	8	₹ 4,047.24	₹ 1,627.45	₹ 404.72	₹ 1,222.73				
19	9	₹ 2,824.51	₹ 1,627.45	₹ 282.45	₹ 1,345.00				
20	10	₹ 1,479.50	₹ 1,627.45	₹ 147.95	₹ 1,479.00				
21									
22									

... | Macro 2 | Pivot | Macro 3 | Form Control | Graph using Macro | AMortization

SEARCHING A STRING / VALUE USING MACROS

Aim: To search a given string / value from the list of values using Macros.

Algorithm:

Step 1: Open MS-EXCEL by using the below menu:

Start -> All Programs -> Microsoft Office -> MS-Excel

Step 2: Enter the list of values in the excel sheet.

Step 3: Create a Command Button using the Developer Menu **and name it as "Find String"**

Step 4: Using the view Code option write the below VBA Code for searching a given string from a set of values.

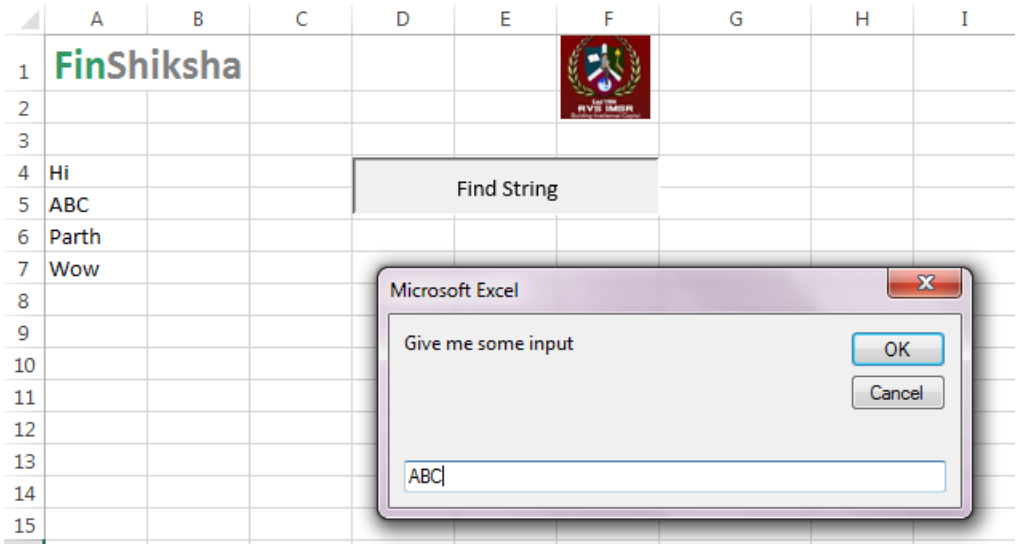
```
Sub FindString()
    Dim i As Integer            ' Integer used in 'For' loop
    Dim iRowNumber As Integer   ' Integer to store result in
    Dim sFindText As String
    iRowNumber = 0
    ' Loop through cells A1-A100 until 'sFindText' is found
    sFindText = InputBox("Give me some input")
    For i = 1 To 100
        If Cells(i, 1).Value = sFindText Then
            ' A match has been found to the supplied string
            ' Store the current row number and exit the 'For' Loop
            iRowNumber = i
            Exit For
        End If
    Next i
    ' Pop up a message box to let the user know if the text
    ' string has been found, and if so, which row it appears on
    If iRowNumber = 0 Then
        MsgBox "String " & sFindText & " not found"
    Else
    MsgBox "String " & sFindText & " found in cell A" & iRowNumber
    End If
End Sub
```

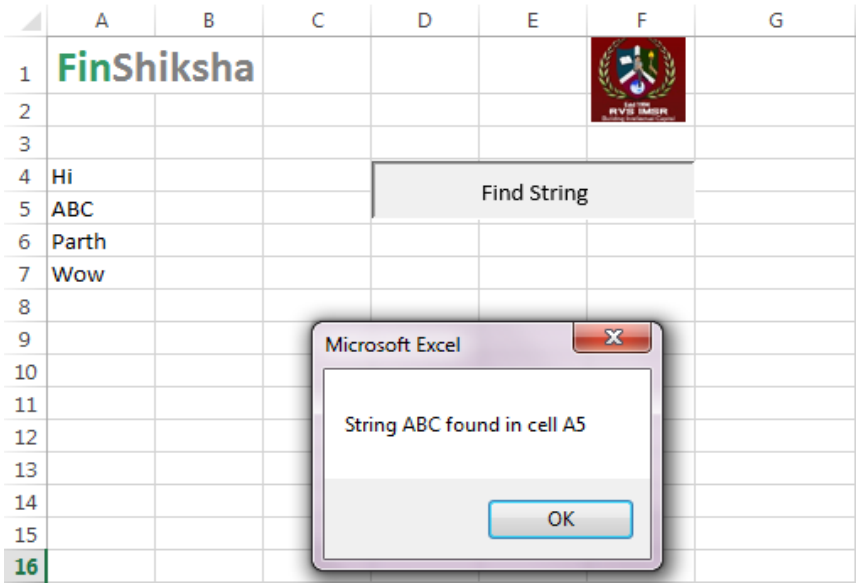
Step 5: Map this Function with the Command Button Find String and click on that button, the system will show a dialogue box and expect the input value which has to be search.

Step 6: Enter the input value and click Ok the system will check that value is available in the list of values. If that value found in the list, the system will show the cell address which the value will be present. Otherwise the system will show the message that the given input value is not present in the list.

Step 7: This is the expected output.

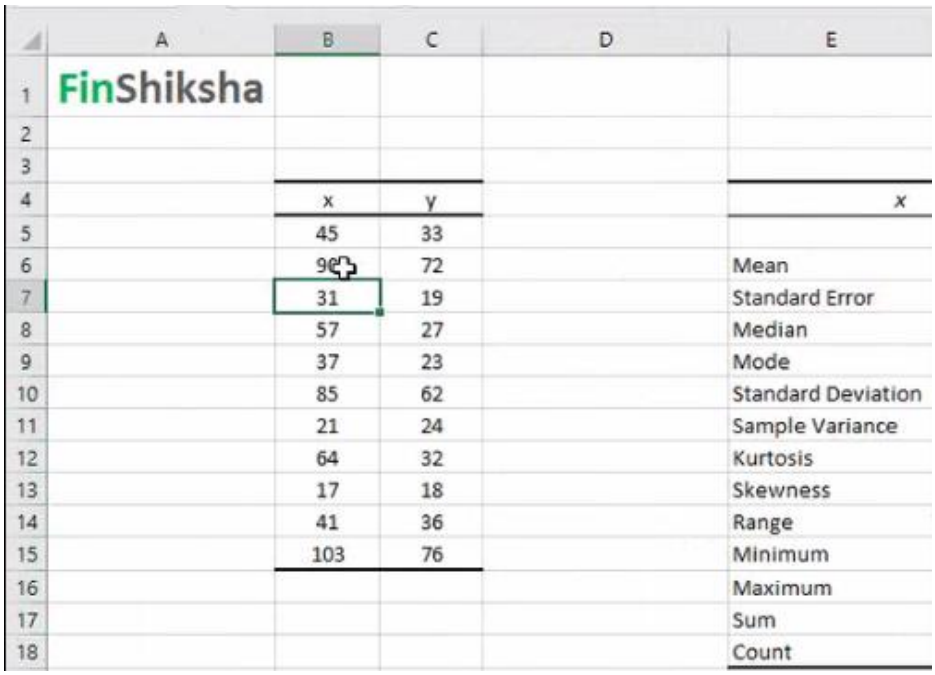
OUTPUT:





CALCULATING THE STATISTICAL MEASURES USING DATA ANALYSIS MENU

Calculate the Mean, Standard Deviation etc. mentioned in the below excel with the sample data:



	A	B	C	D	E
1	FinShiksha				
2					
3					
4		x	y		x
5		45	33		
6		90	72		Mean
7		31	19		Standard Error
8		57	27		Median
9		37	23		Mode
10		85	62		Standard Deviation
11		21	24		Sample Variance
12		64	32		Kurtosis
13		17	18		Skewness
14		41	36		Range
15		103	76		Minimum
16					Maximum
17					Sum
18					Count

Aim:

To calculate statistical measures for the given data using MS – Excel.

Algorithm:

Step 1: Open MS – Excel by using the command Start – All programs – Microsoft Office – MS-Excel.

Start -> All Programs -> Microsoft Office -> MS-Excel.

Step 2: Type the given values of X and Y.

Step 3: To calculate Descriptive statistics for the given data, click the below:

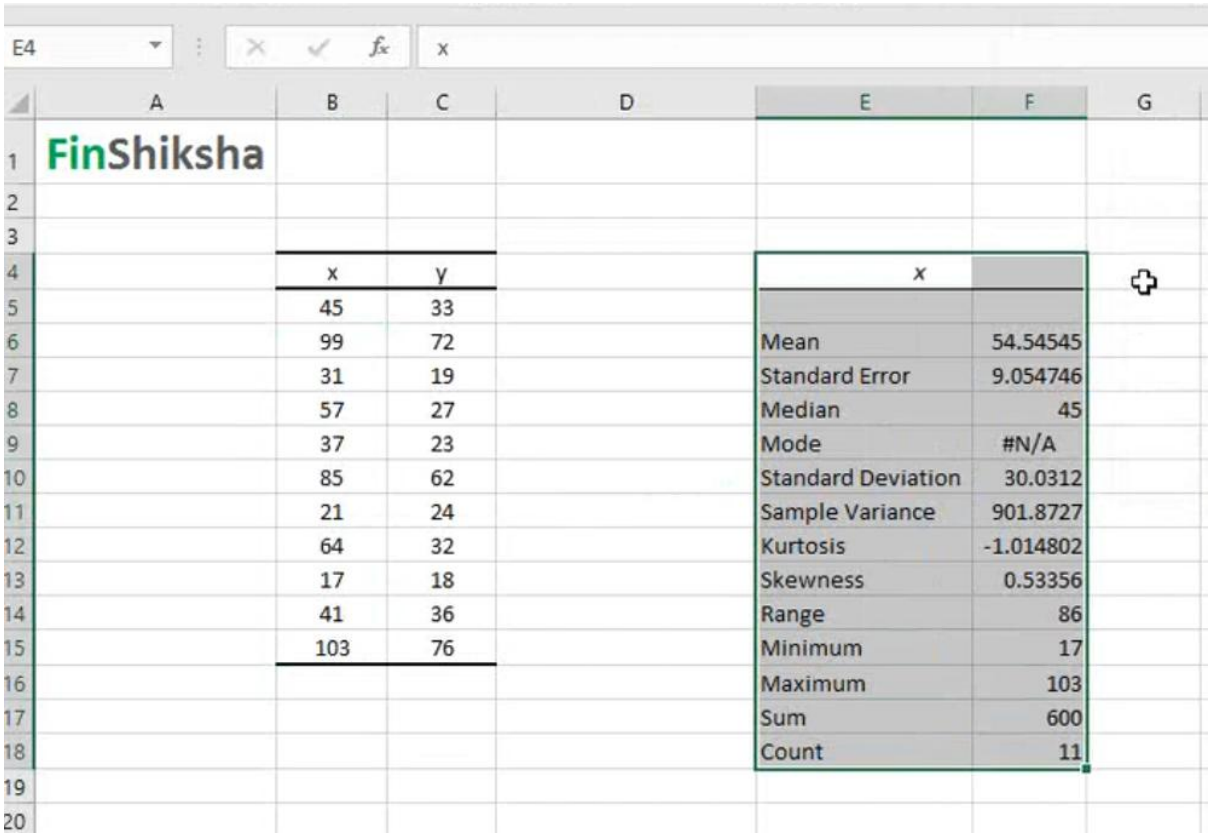
Data –> Data Analysis –> Descriptive Statistics

Step 4: Select the values of X as Input range.

Step 5: Select output range and enable Summary statistics check box.

Step 6: Click OK Button. Now the output will be displayed in the selected Output range.

OUTPUT:



E4 | x

FinShiksha

x	y
45	33
99	72
31	19
57	27
37	23
85	62
21	24
64	32
17	18
41	36
103	76

x	
Mean	54.54545
Standard Error	9.054746
Median	45
Mode	#N/A
Standard Deviation	30.0312
Sample Variance	901.8727
Kurtosis	-1.014802
Skewness	0.53356
Range	86
Minimum	17
Maximum	103
Sum	600
Count	11

MULTIPLE REGRESSION

Calculate the Multiple Regression for the following data:

FinShiksha

Color	Quality	Price
7	5	65
3	7	38
5	8	51
8	1	38
9	3	55
5	4	43
4	0	25
2	6	33
8	7	71
6	4	51
9	2	49

Aim: To Calculate Multiple Regression for the given data using MS – Excel.

Algorithm:

Step 1: Open MS – Excel by using the command Start – All programs – Microsoft Office – MS-Excel.

Start -> All Programs -> Microsoft Office -> MS-Excel.

Step 2: Type the given Color, Quantity, Price fields and its values.

Step 3: To calculate multiple regression for the given data, click the below:

Data -> Data Analysis -> Regression

Step 4: We will get the dialogue box for providing the Input values as below:

Input Y range : **Select the Price Column Values**

Input X range : **Select the color and quantity column range values.**

Step 5: Check the Label check box if we are selecting the Color, Quality and Price column headings.

Step 6: Select Output range in the Same Sheet means, mention the Cell address.

Step 7: Select the Output range as New Worksheet, we will get the output in the new sheet.

Step 8: Select the Residual check box if we want to calculate the residual values.

Step 9: Click OK button, we will get the Statistical Summary, ANOVA and Residual Output.

Step 10: From this data we can get the Intercept and Coefficient of Color and Quantity variables.

Step 11: Using the Intercept, Coefficient of Color and Quantity variables we can compute the calculated value of Price. From the given price and the calculated Price we can measure the Residual values.

Step 12: From this we can identified the Best Fit Line values of Intercept and Coefficient of Color and Quantity variables can be identified.

OUTPUT:

	A	B	C	D
1	FinShiksha			
2				
4	Y = mX1 + nX2 + C	Color	Quality	Price
5		7	5	65
6		3	7	38
7		5	8	51
8		8	1	38
9		9	3	55
10		5	4	43
11		4	0	25
12		2	6	33
13		8	7	71
14		6	4	51
15		9	2	49
16	SUMMARY OUTPUT			
17				
18	*Regression Statistics*			
19	Multiple R	0.922330727		
20	R Square	0.850693971		
21	Adjusted R Square	0.813367463		
22	Standard Error	5.888084465		
23	Observations	11		

	A	B	C	D	E	F	G	H	I
1	**FinShiksha**								
2									
18	*Regression Statistics*								
19	Multiple R	0.922330727	Correlation						
20	R Square	0.850693971							
21	Adjusted R Square	0.813367463							
22	Standard Error	5.888084465							
23	Observations	11							
24									
25	ANOVA								
26		*df*	*SS*	*MS*	*F*	*Significance F*			
27	Regression	2	1580.280054	790.1400271	22.79061267	0.000496946			
28	Residual	8	277.3563093	34.66953867					
29	Total	10	1857.636364						
30									
31		*Coefficients*	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
32	Intercept	1.751403659	6.960202671	0.251631129	0.807669624	-14.29885248	17.8016598	-14.29885248	17.8016598
33	Color	4.895288365	0.820229778	5.968191467	0.000335084	3.003835104	6.786741625	3.003835104	6.786741625
34	Quality	3.758415483	0.756510987	4.968091073	0.00109572	2.013898018	5.502932948	2.013898018	5.502932948
35									
36		Price = 1.7514 + 4.8952 * Color + 3.7584 * Quality				Color	Quality	Price	
37						9	2	53.32582991	

	A	B	C	D	E	F	G	H
1	**FinShiksha**							
2								
35								
36		Price = 1.7514 + 4.8952 * Color + 3.7584 * Quality				Color	Quality	Price
37						9	2	53.32582991
38	RESIDUAL OUTPUT							
39								
40	*Observation*	*Predicted Price*	*Residuals*					
41	1	54.81049962	10.18950038					
42	2	42.74617713	-4.746177133					
43	3	56.29516934	-5.295169345					
44	4	44.67212606	-6.672126058					
45	5	57.08424539	-2.084245388					
46	6	41.26150741	1.738492587					
47	7	21.33255712	3.667442883					
48	8	34.09247329	-1.092473285					
49	9	67.22261896	3.777381045					
50	10	46.15679578	4.843204223					
51	11	53.32582991	-4.325829905					
52								