

A photograph of a silver laptop on a light-colored wooden desk. The laptop is open, and its keyboard is visible. To the left of the laptop, there are some crumpled pieces of paper. To the right, a white mug is partially visible. The right side of the image is dominated by a large, bright orange geometric shape that overlaps the desk and laptop. The text 'PEMBANGUNAN DASHBOARD' is overlaid in white, bold, sans-serif font across the center of the image.

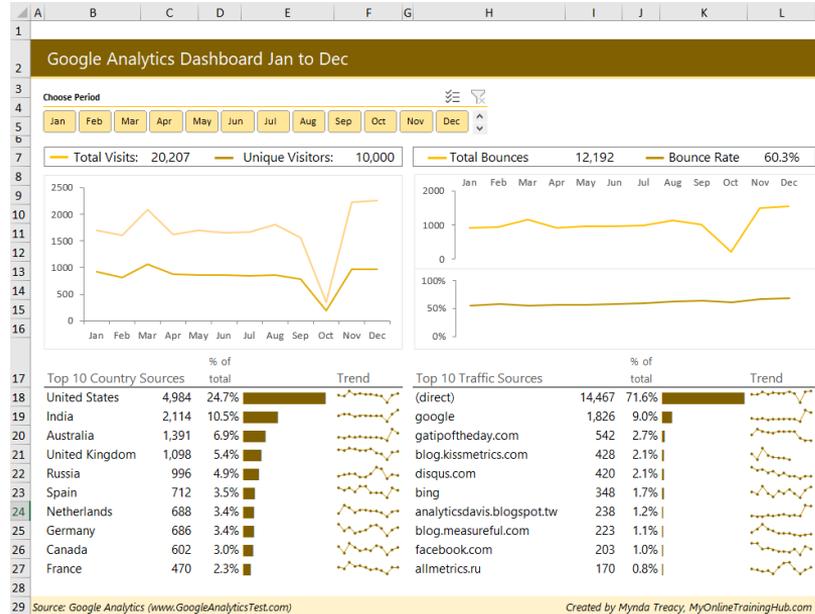
# PEMBANGUNAN DASHBOARD

# TOPIK PERBINCANGAN

1. Struktur asas papan pemuka
2. Penggunaan *tables & charts*
3. Penggunaan formula asas
4. Tips mudah untuk mengawal papan pemuka

# Design Tips

- ▶ Charting
- ▶ Excel Tables
- ▶ Formula
- ▶ Formatting
- ▶ ~~NOT VBA~~



DESIGN >> Less is MORE



# Tabular Format – Excel Table

A	B	C	D	E	F	G	H	I	J	K	L	M
1	visitor type	source	country	date	visitors	new visits	percent new visits	bounces	entrance bounce rate	time on site	avg time on site	
2	New Visitor	1 (direct)	(not set)	2/1/2014	1	1	100	1	100	0	0	
3	New Visitor	1 (direct)	(not set)	6/1/2014	1	1	100	1	100	0	0	
4	New Visitor	1 (direct)	(not set)	7/1/2014	1	1	100	0	0	65	65	
5	New Visitor	1 (direct)	(not set)	8/1/2014	1	1	100	0	0	13	13	
6	New Visitor	1 (direct)	(not set)	19/1/2014	2	2	100	2	100	0	0	
7	New Visitor	1 (direct)	(not set)	21/1/2014	2	2	100	2	100	0	0	
8	New Visitor	1 (direct)	(not set)	22/1/2014	1	1	100	1	100	0	0	
9	New Visitor	1 (direct)	(not set)	23/1/2014	1	1	100	0	0	349	349	
10	New Visitor	1 (direct)	(not set)	4/2/2014	1	1	100	1	100	0	0	
11	New Visitor	1 (direct)	(not set)	25/2/2014	1	1	100	1	100	0	0	
12	New Visitor	1 (direct)	(not set)	27/2/2014	1	1	100	0	0	132	132	
13	New Visitor	1 (direct)	(not set)	11/3/2014	1	1	100	1	100	0	0	
14	New Visitor	1 (direct)	(not set)	12/3/2014	1	1	100	0	0	215	215	
15	New Visitor	1 (direct)	(not set)	14/3/2014	1	1	100	1	100	0	0	
16	New Visitor	1 (direct)	(not set)	19/3/2014	1	1	100	0	0	131	131	
17	New Visitor	1 (direct)	(not set)	23/3/2014	1	1	100	0	0	51	51	
18	New Visitor	1 (direct)	(not set)	25/3/2014	1	1	100	0	0	1769	1769	
19	New Visitor	1 (direct)	(not set)	4/4/2014	1	1	100	0	0	803	803	
20	New Visitor	1 (direct)	(not set)	12/4/2014	1	1	100	0	0	989	989	
21	New Visitor	1 (direct)	(not set)	13/4/2014	1	1	100	0	0	48	48	
22	New Visitor	1 (direct)	(not set)	15/4/2014	1	1	100	0	0	196	196	
23	New Visitor	1 (direct)	(not set)	16/4/2014	1	1	100	0	0	278	278	
24	New Visitor	1 (direct)	(not set)	17/4/2014	1	1	100	1	100	0	0	
25	New Visitor	1 (direct)	(not set)	23/4/2014	1	1	100	1	100	0	0	
26	New Visitor	1 (direct)	(not set)	24/4/2014	2	2	100	2	100	0	0	
27	New Visitor	1 (direct)	(not set)	3/5/2014	1	1	100	0	0	25	25	
28	New Visitor	1 (direct)	(not set)	7/5/2014	1	1	100	0	0	3927	3927	

Ctrl + T

The screenshot shows the Microsoft Excel interface with the 'Create PivotTable' dialog box open. The 'PivotTable' icon in the 'Insert' ribbon is circled in red. The dialog box is open, showing options to select a table or range, choose a connection, and specify where to place the report. The background shows a spreadsheet with columns for visitor type, visit count, source, country, date, and visitors.

**File** **Home** **Insert** **Draw** **Page Layout** **Formulas** **Data** **Review** **View** **Help** **Design** **Share** **Comments**

**PivotTable** **Recommended PivotTables** **Tables** **Illustrations** **Get Add-ins** **My Add-ins** **Recommended Charts** **Maps** **PivotChart** **3D Map** **Tours**

**Create PivotTable**

Choose the data that you want to analyze

Select a table or range

Table/Range: Table 1

Use an external data source

Choose Connection...

Connection name:

Use this workbook's Data Model

Choose where you want the PivotTable report to be placed

New Worksheet

Existing Worksheet

Location:

Choose whether you want to analyze multiple tables

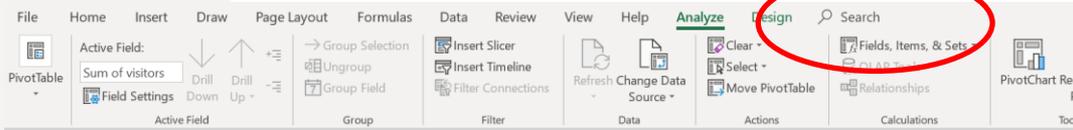
Add this data to the Data Model

**OK** **Cancel**

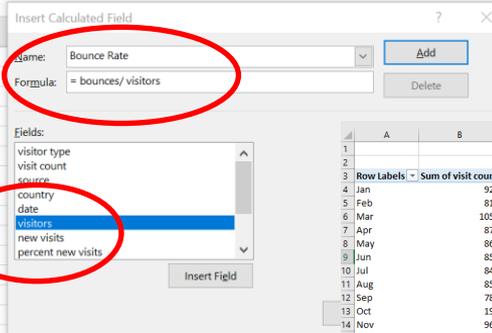
	A	B	C	D	E	F	G	H	I	J	K
1	visitor type	visit count	source	country	date	visitors					
2	New Visitor	1 (direct)	(not set)		2/1/2014						
3	New Visitor	1 (direct)	(not set)		6/1/2014						
4	New Visitor	1 (direct)	(not set)		7/1/2014						
5	New Visitor	1 (direct)	(not set)		8/1/2014						
6	New Visitor	1 (direct)	(not set)		19/1/2014						
7	New Visitor	1 (direct)	(not set)		21/1/2014						
8	New Visitor	1 (direct)	(not set)		22/1/2014						
9	New Visitor	1 (direct)	(not set)		23/1/2014						
10	New Visitor	1 (direct)	(not set)		4/2/2014						
11	New Visitor	1 (direct)	(not set)		25/2/2014						
12	New Visitor	1 (direct)	(not set)		27/2/2014						
13	New Visitor	1 (direct)	(not set)		11/3/2014						
14	New Visitor	1 (direct)	(not set)		12/3/2014	1	1	100	0	0	
15	New Visitor	1 (direct)	(not set)		14/3/2014	1	1	100	1	100	
16	New Visitor	1 (direct)	(not set)		19/3/2014	1	1	100	0	0	
17	New Visitor	1 (direct)	(not set)		23/3/2014	1	1	100	0	0	
18	New Visitor	1 (direct)	(not set)		25/3/2014	1	1	100	0	0	
19	New Visitor	1 (direct)	(not set)		4/4/2014	1	1	100	0	0	
20	New Visitor	1 (direct)	(not set)		12/4/2014	1	1	100	0	0	
21	New Visitor	1 (direct)	(not set)		13/4/2014	1	1	100	0	0	

The screenshot displays the Microsoft Excel interface with the following elements:

- File Name:** google\_analytics\_raw\_data\_udemy - Excel
- Tab:** PivotTable Tools
- User:** Dr. Izwan Nizal Bin Mohd. Shaharane
- Active Field:** date
- Grouping Dialog Box:**
  - Auto:**
    - Starting at: 1/1/2014
    - Ending at: 1/1/2015
  - By:** A list of time intervals: Seconds, Minutes, Hours, Days, Months (highlighted), Quarters, Years.
  - Number of days:** 1
  - Buttons:** OK, Cancel
- PivotTable Fields Task Pane:**
  - Choose fields to add to report:**
    - source
    - country
    - date
    - visitors
    - new visits
    - percent new visits
  - Drag fields between areas below:**
    - Filters:** (Empty)
    - Columns:** (Empty)
    - Rows:** date
    - Values:** (Empty)
  - Buttons:** Defer Layout Update, Update
- Worksheet Data:** A column of dates from 1-Jan to 21-Jan is visible in the background.



Row Labels	Sum of visit count	Sum of visitors	Sum of bounces
Jan	926	1696	926
Feb	819	1602	929
Mar	1053	2084	1144
Apr	879	1616	906
May	866	1703	954
Jun	855	1656	968
Jul	840	1664	976
Aug	855	1802	1134
Sep	780	1557	1001
Oct	191	349	210
Nov	969	2229	1499
Dec	967	2249	1545
<b>Grand Total</b>	<b>10000</b>	<b>20207</b>	<b>12192</b>



Row Labels	Sum of visit count	Sum of visitors	Sum of bounces	Sum of Bounce Rate
Jan	926	1696	926	0.545990566
Feb	819	1602	929	0.5800125
Mar	1053	2084	1144	0.54894326
Apr	879	1616	906	0.560643564
May	866	1703	954	0.560187904
Jun	855	1656	968	0.584541063
Jul	840	1664	976	0.586538462
Aug	855	1802	1134	0.629300777
Sep	780	1557	1001	0.64290915
Oct	191	349	210	0.601719198
Nov	969	2229	1499	0.672498878
Dec	967	2249	1545	0.686971988
<b>Grand Total</b>	<b>10000</b>	<b>20207</b>	<b>12192</b>	<b>0.603355273</b>

Value Field Settings

Source Name: Bounce Rate

Custom Name: Sum of Bounce Rate

Summarize value field by: Sum

Format Cells

Category: Percentage

Decimal places: 2

Row Labels	Sum of visit count	Sum of visitors	Sum of bounces	Sum of Bounce Rate
Jan	926	1696	926	55%
Feb	819	1602	929	58%
Mar	1053	2084	1144	55%
Apr	879	1616	906	56%
May	866	1703	954	56%
Jun	855	1656	968	58%
Jul	840	1664	976	59%
Aug	855	1802	1134	63%
Sep	780	1557	1001	64%
Oct	191	349	210	60%
Nov	969	2229	1499	67%
Dec	967	2249	1545	69%
<b>Grand Total</b>	<b>10000</b>	<b>20207</b>	<b>12192</b>	<b>60%</b>

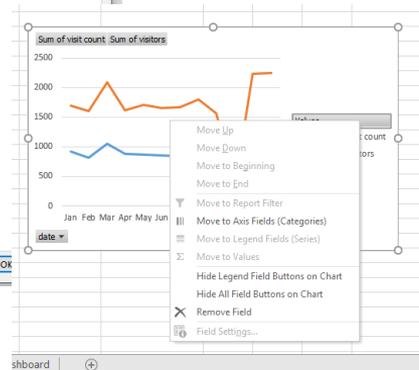
Insert Chart

All Charts

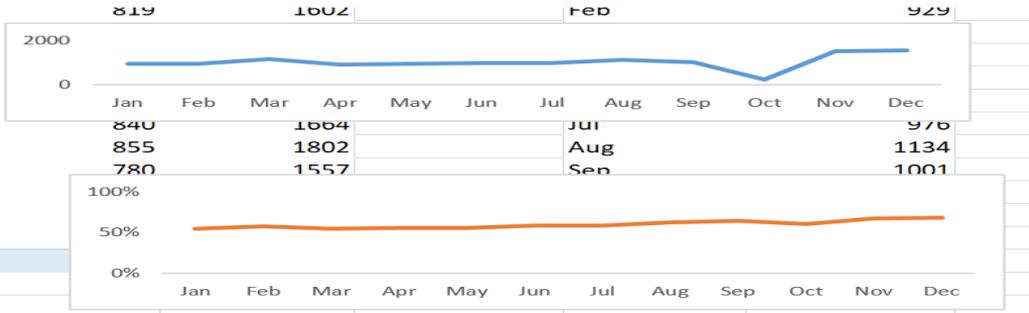
- Recent
- Templates
- Column
- Line**
- Pie
- Bar
- Area
- XY (Scatter)
- Map
- Stock
- Surface
- Radar
- Treemap
- Sunburst
- Histogram
- Box & Whisker
- Waterfall
- Funnel
- Combo

Line

OK



Row Labels	Sum of bounces	Row Labels	Sum of Bounce Rate
Jan	926	Jan	55%
Feb	929	Feb	58%
Mar	1144	Mar	55%
Apr	906	Apr	56%
May	954	May	56%
Jun	968	Jun	58%
Jul	976	Jul	59%
Aug	1134	Aug	63%
Sep	1001	Sep	64%
Oct	210	Oct	60%
Nov	1499	Nov	67%
Dec	1545	Dec	69%
<b>Grand Total</b>	<b>12192</b>	<b>Grand Total</b>	<b>60%</b>



Horizontal (Cat...)

Fill Outline

- Delete
- Reset to Match Style
- Font...
- Change Chart Type...
- Select Data...
- 3-D Rotation...
- Add Major Gridlines
- Add Minor Gridlines
- Format Axis...

### Format Axis

Axis Options Text Options

On tick marks

Between tick marks

Categories in reverse order

**Tick Marks**

Interval between marks: 1

Major type: None

Minor type: None

**Labels**

Interval between labels

Automatic

Specify interval unit

Distance from axis: None

Label Position: High

Number

AutoSave On google\_analytics\_raw\_data\_udemy\_ver2 - Excel Dr. Izwan Nizal Bin Mohd Shaharane

File Home Insert Draw Page Layout Formulas Data Review View Help Search Share Comments

Themes Colors Fonts Effects Margins Orientation Size Print Area Breaks Background Print Titles Width: Automatic Height: Automatic Scale: 100% Gridlines View Print Headings View Print Bring Forward Send Backward Selection Pane Align Group Rotate

E5

Google Analytics Dashboard

Total Visits: 20207 Uniques Visitors: 10000

Total Bounces: 12192 Bounce Rate: 0.603355273

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

Top 10 Country Sources % of Total Trend

Ready Display Settings 11:33 PM 14/2/2020

**View Headings**  
Show column headings and row numbers. Column headings are the letters or numbers that appear above the columns on a sheet.

Month	Total Visits	Uniques Visitors	Total Bounces	Bounce Rate
Jan	1700	1000	1500	0.55
Feb	1600	900	1600	0.55
Mar	2100	1100	1700	0.55
Apr	1600	900	1600	0.55
May	1700	900	1600	0.55
Jun	1700	900	1600	0.55
Jul	1700	900	1600	0.55
Aug	1800	900	1600	0.55
Sep	1600	800	1500	0.55
Oct	300	300	1500	0.55
Nov	2200	1000	1700	0.55
Dec	2200	1000	1800	0.55

AutoSave google\_analytics\_raw\_data\_udemy\_ver2 - Excel PivotTable Tools Dr. Izwan Nizal Bin Mohd Shaharanee

File Home Insert Draw Page Layout Formulas Data Review View Help Analyze Design Search Share Comments

Calibri 11 Wrap Text Percentage Conditional Formatting Table Styles Insert Delete Format Sort & Find & Filter Select Ideas

C4 0.80170238036324%

Top 10 Country Sources	Sum of visitors	Sum of visitors2
(not set)	162	0.8%
Afghanistan	1	0.0%
Albania	8	0.0%
Algeria	14	0.0%
Andorra	2	0.0%
Antigua & Barbuda	1	0.0%
Argentina	194	0.9%
Armenia	20	0.1%
Aruba	4	0.0%
Australia	1391	6.8%
Austria	165	0.8%
Azerbaijan	12	0.0%
Bahrain	9	0.0%
Bangladesh	145	0.7%
Barbados	7	0.0%
Belarus	59	0.29%
Belgium	344	1.70%
Bolivia	13	0.06%

PivotTable Fields

Choose fields to add to report:

Search

- source
- country
- date
- visitors
- new visits
- percent new visits

Drag fields between areas below:

Filters Columns

Rows Values

country Sum of visitors Sum of visitors2

Defer Layout Update Update

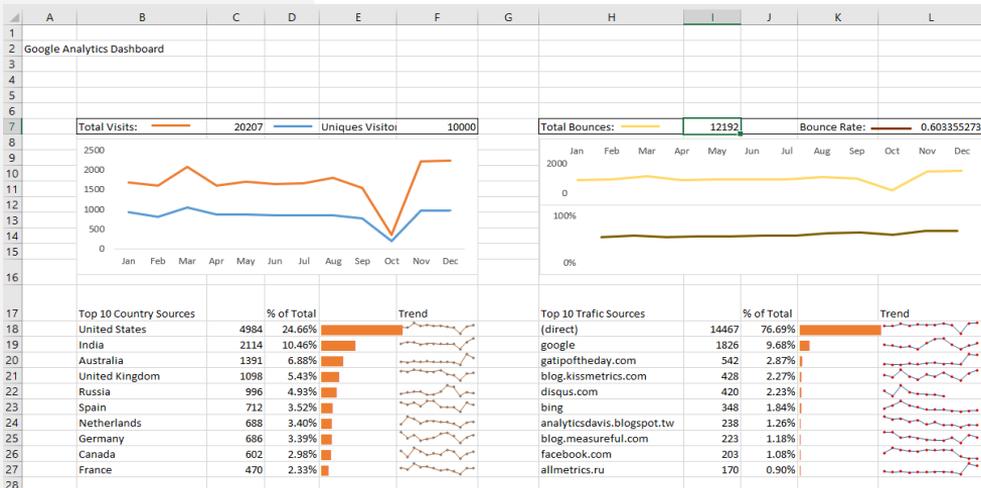
Display Settings 100%

11:48 PM 14/2/2020

Top 10 Country Sources	Sum of visitors
United States	24,666
India	
Australia	
United Kingdom	
Russia	
Spain	
Netherlands	
Germany	
Canada	
France	
Belgium	
Taiwan	
Italy	
Brazil	
Sweden	

Context menu for cell B4:

- Copy
- Format Cells...
- Number Format...
- Refresh
- Sort
  - Sort Smallest to Largest
  - Sort Largest to Smallest
  - More Sort Options...
- Remove "Sum of visitors"
- Summarize Values By
- Show Values As
- Value Field Settings...
- PivotTable Options...
- Hide Field List



- ▶ B8 =country!A4
- ▶ C8=GETPIVOTDATA("Sum of visitors",country!\$A\$3,"country",B18)
- ▶ D8 =GETPIVOTDATA("Sum of visitors2",country!\$A\$3,"country",B18)
- ▶ E8=REPT("|",C18/MAX(\$C\$18:\$C\$27)\*100)
- ▶ H8=source!A4
- ▶ I8=GETPIVOTDATA("Sum of visitors",source!\$A\$3,"source",H18)
- ▶ J8=GETPIVOTDATA("Sum of visitors2",source!\$A\$3,"source",H18)
- ▶ K8=REPT("|",I18/MAX(\$I\$18:\$I\$27)\*100)

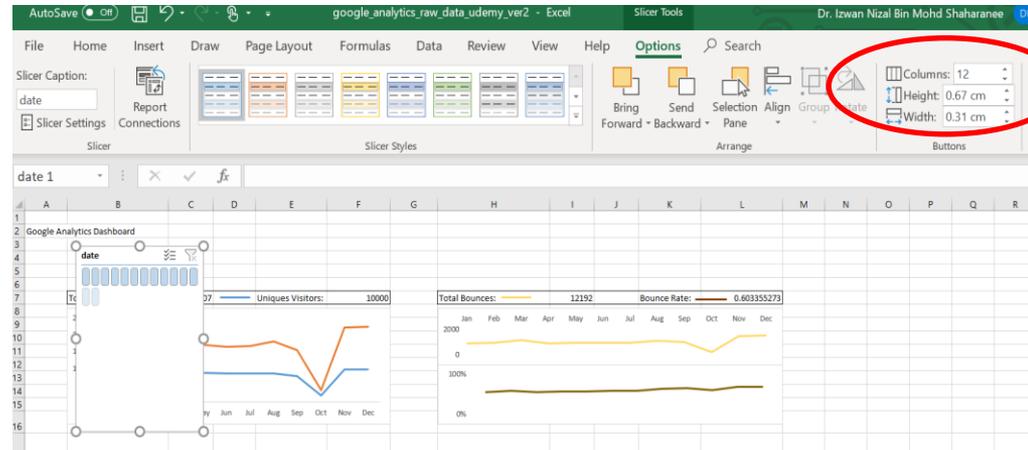
# Insert Trend

- ▶ **Country**
  - ▶ Select F1:F27
  - ▶ Insert >Sparklines>Line> Data Range (Jan: Feb)
  - ▶ Show >Marker
  
- ▶ **Source**
  - ▶ Select L1:L27
  - ▶ Insert >Sparklines>Line> Data Range (Jan: Feb)
  - ▶ Show >Marker

date
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug

- ▶ HeaderLine Pivot Sheet
- ▶ Click on any cell contains Values

Sum of visit count	Sum of visitors	Row Labels	Sum of bounces
926	1696	Jan	926
819	1602	Feb	929
1053	2084	Mar	1144
879	1616	Apr	906
866	1703	May	954
855	1656	Jun	968
840	1664	Jul	976
855	1802	Aug	1134
780	1557	Sep	1001
191	349	Oct	210
969	2229	Nov	1499
967	2249	Dec	1545
<b>10000</b>	<b>20207</b>	<b>Grand Total</b>	<b>12192</b>



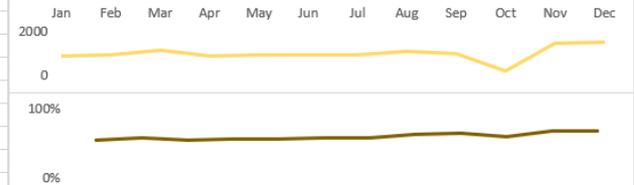
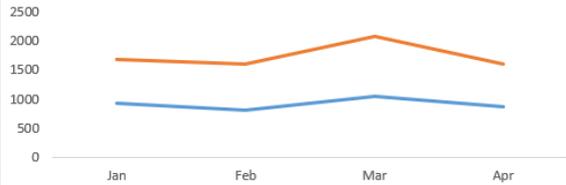
Google Analytics Dashboard

date

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

Total Visits: 20207 Uniques Visitors: 10000

Total Bounces: 12192 Bounce Rate: 0.603355273



Top 10 Country Sources		% of Total	Trend
United States	4984	24.66%	
India	2114	10.46%	
Australia	1391	6.88%	
United Kingdom	1098	5.43%	
Russia	996	4.93%	
Spain	712	3.52%	
Netherlands	688	3.40%	
Germany	686	3.39%	
Canada	602	2.98%	
France	470	2.33%	

Top 10 Traffic Sources		% of Total	Trend
(direct)	14467	76.69%	
google	1826	9.68%	
gatipoftheday.com	542	2.87%	
blog.kissmetrics.com	428	2.27%	
disqus.com	420	2.23%	
bing	348	1.84%	
analyticsdavis.blogspot.tw	238	1.26%	
blog.measureful.com	223	1.18%	
facebook.com	203	1.08%	
allmetrics.ru	170	0.90%	





# Nota Tambahan

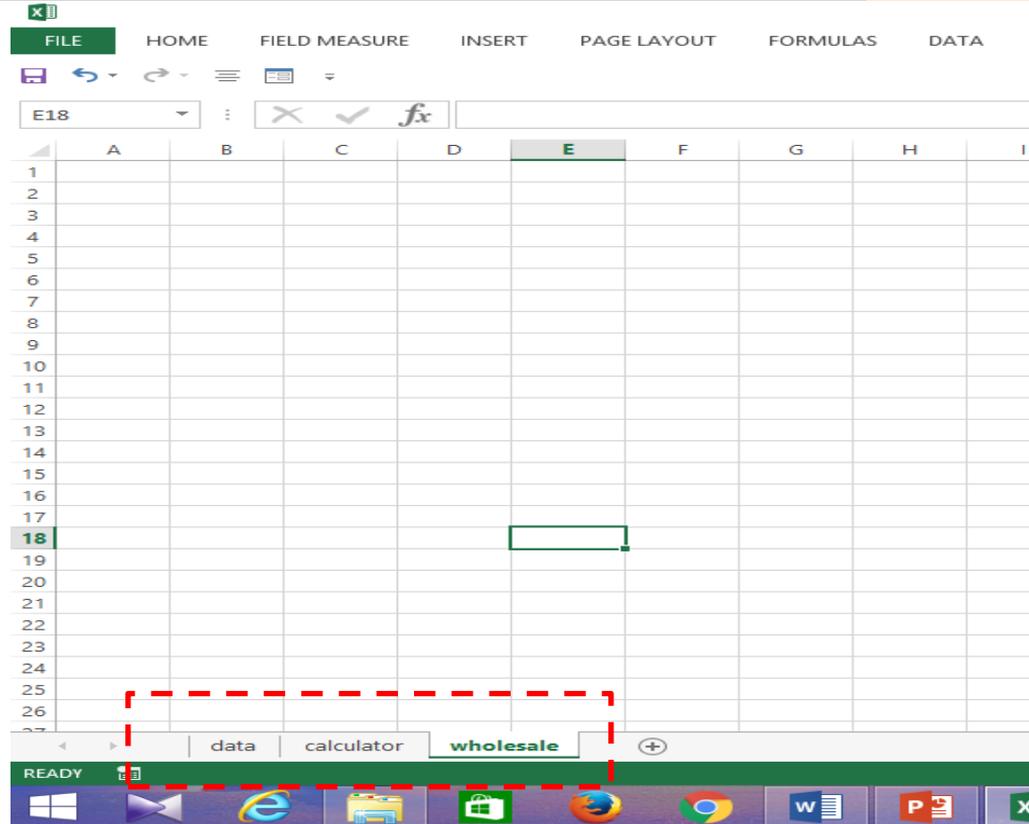
- ▶ Nota Tambahan

# 1. Struktur Asas Papan Pemuka Analitik

Sediakan 3 worksheets untuk dashboard anda:

- (1) Data mentah,
- (2) *Calculator*; dan
- (3) *Dashboard*

Ini bertujuan untuk memudahkan anda mengawal capaian data dan fungsi pada papan pemuka.



# 1. Struktur Asas Papan Pemuka Analitik

Cara melabel *sheet* pada Excel:

- (1) Bawa kursor ke label *sheet*.
- (2) Klik kanan pada tetikus dan pop menu akan kelihatan (seperti rajah).
- (3) Pilih *rename*, dan anda boleh memberi label Baharu pada *sheet*.
- (4) Klik "+" jika anda ingin menambah *sheet* lain.

	A	B	C	D	E	F	G	H
1	Channel	Region	Fresh	Milk	Grocery	Frozen	Detergents_P	Delicatessen
2	2	3	12669	9656	7561	214	2674	1338
3	2	3	7057	9810	9568	1762	3293	1776
4	2	3	6353	8808	7684	2405	3516	7844
5	1	3	13265	1196	4221	6404	507	1788
6	2	3	22615	5410	7198	3915	1777	5185
7	2	3	9413	8259	5126	666	1795	1451
8	2	3	12126	3199	6975	480	3140	545
9	2	3	7579	4956	9426	1669	3321	2566
10	1	3	5963	3648	6192	425	1716	750
11	2	3	6006	11093	18881	1159	7425	2098
12	2	3	3366	5403	12974	4400	5977	1744
13	2	3	13146	1124	4523	1420	549	497
14	2	3	31714	12319	11757	287	3881	2931
15	2	3	21217	6208	14982	3095	6707	602
16	2				12091	294	5058	2168
17	1				3821	397	964	412
18	2				12121	134	4508	1080
19	1				2933	839	370	4478
20	2				10099	2205	2767	3181
21	1				9464	669	2518	501
22	2				4602	1066	2259	2124
23	1				2010	3383	375	569
24	1				4469	9408	2381	4334
25	2				22019	5154	4337	16523
26	2				13792	2915	4482	5778
27	2				7505	201	4003	57

## 2. Tables & Charts

### Table / Jadual

- ▶ Jadual boleh direkabentuk secara manual ataupun menggunakan kaedah lebih cepat (*pivot table*).
  - ▶ Kaedah manual memerlukan anda menyelit formula, tetapi
  - ▶ Pivot table membantu anda membina jadual dengan lebih mudah.
- ▶ Begitu juga dengan charts – ia boleh dipilih secara manual mahupun menggunakan *pivot charts*.

## 2. Tables - manual

### Set Formula

"fx" – merupakan singkatan untuk menyelit formula pada suatu sel. Excel menyediakan pelbagai jenis formula untuk anda.

The screenshot shows an Excel spreadsheet with a table. The formula bar at the top displays the formula `=SUM(data!C2:C441)`. A table is visible with columns 'Bahan' and 'Jumlah'. A right-click context menu is open over the table, with 'Format Cells...' selected. A red dashed box highlights the formula bar area, and a red arrow points from the 'fx' icon to the formula bar. A blue arrow points from the 'Format Cells...' option in the context menu to the text box on the right.

	A	B	C	D	E	F	G
1							
2		Jumlah bahan wholesale					
3		Bahan	Jumlah				
4		Fresh	5,280,131.00				
5		Milk	2,550,357.00				
6		Grocery	3,498,562.00				
7		Frozen	1,351,650.00				
8		Detergents_Paper	1,267,857.00				
9		Delicatessen	670,943.00				
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							

### Format Sel

- Letak kursor pada sel yang ingin anda formatkan.
- Klik kanan pada tetikus dan pilih *Format Cells*.
- Pilih format sel pilihan anda

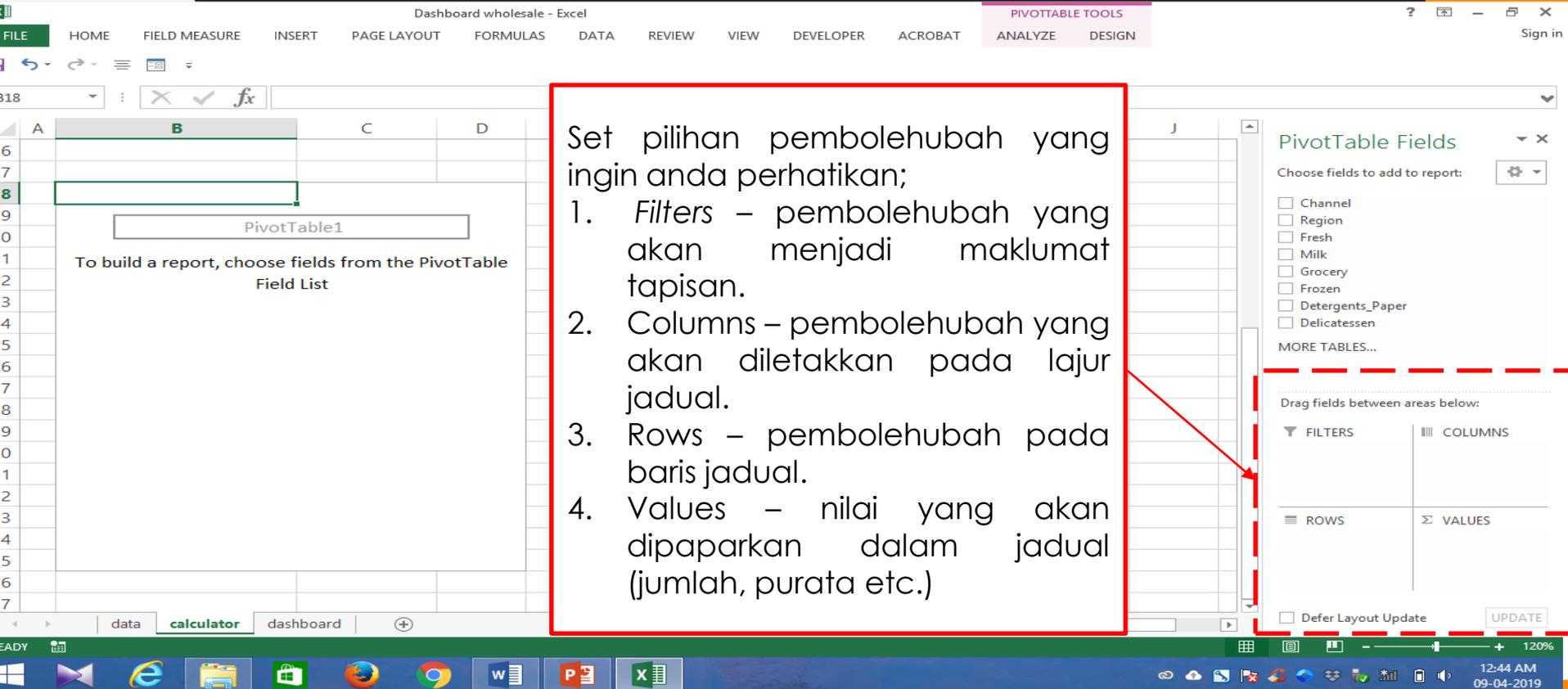
## 2. Tables – pivot table

The screenshot shows the Microsoft Excel interface with the 'INSERT' tab selected in the ribbon. The 'Create PivotTable' dialog box is open, displaying the following options:

- Choose the data that you want to analyze:**
  - Select a table or range
  - Table/Range: [ ]
  - Use an external data source
  - Choose Connection...
  - Connection name:
- Choose where you want the PivotTable report to be placed:**
  - New Worksheet
  - Existing Worksheet
  - Location: calculator!\$B\$18
- Choose whether you want to analyze multiple tables:**
  - Add this data to the Data Model
- Buttons: OK, Cancel

1. Pilih INSERT → Pivot Table
2. Pilih julat data
3. Set lokasi pivot table untuk dipaparkan
4. Klik OK.

## 2. Tables – pivot table



Dashboard wholesale - Excel

FILE HOME FIELD MEASURE INSERT PAGE LAYOUT FORMULAS DATA REVIEW VIEW DEVELOPER ACROBAT PIVOTTABLE TOOLS ANALYZE DESIGN Sign in

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A B C D

PivotTable1

To build a report, choose fields from the PivotTable Field List

PivotTable Fields

Choose fields to add to report:

- Channel
- Region
- Fresh
- Milk
- Grocery
- Frozen
- Detergents\_Paper
- Delicatessen

MORE TABLES...

Drag fields between areas below:

<input type="checkbox"/> FILTERS	<input type="checkbox"/> COLUMNS
<input type="checkbox"/> ROWS	<input type="checkbox"/> VALUES

Defer Layout Update UPDATE

data calculator dashboard

READY

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Set pilihan pembolehubah yang ingin anda perhatikan;

1. *Filters* – pembolehubah yang akan menjadi maklumat tapisan.
2. *Columns* – pembolehubah yang akan diletakkan pada lajur jadual.
3. *Rows* – pembolehubah pada baris jadual.
4. *Values* – nilai yang akan dipaparkan dalam jadual (jumlah, purata etc.)

## AKTIVITI

Sila bina jadual anda.

# Pilihan rajah di Excel

Anda boleh memilih elemen (rajah / carta) sedia ada di dalam Excel. Ia boleh diperolehi dengan langkah berikut:

- 1) Pilih ribbon **INSERT**, kemudian pilih menu **Charts**.
- 2) Excel menawarkan berikut:
  - a) *Recommended Charts* – sesuai untuk *beginner users* yang ingin mendapatkan idea tentang carta yang sesuai dengan data.
  - b) Koleksi carta (*column chart, bar chart, radar chart, ..., bubble chart*) - *intermediate users* biasanya memiliki idea tentang carta yang diinginkan.
  - c) PivotChart – menawarkan Pembangunan carta dengan lebih efisien terutamanya untuk data bersaiz besar.

## AKTIVITI

Menggunakan jadual yang telah dibina, bentukkan rajah yang sesuai.

## 3. Tips Mudah Mengawal Dashboard Anda

- ▶ Kawal rajah anda dengan langkah berikut;
  1. Klik rajah yang ingin di format.
  2. Klik kanan pada tetikus, dan menu akan kelihatan.
  3. Pilih Format Chart Area.
  4. Pada Chart Options, pilih Size & Properties.
  5. Pilih seperti di rajah.

▶ **SIZE**

▲ **PROPERTIES**

- Move and size with cells
- Move but don't size with cells
- Don't move or size with cells
- Print object
- Locked ⓘ
- Lock text

▶ **ALT TEXT**