

# Excel Analysis on Cars Dataset

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Excel Analysis: Applying Advanced Functions and Insights with the Cars Dataset

# Task - 1

Task1	<p>Use vlookup to bring the following columns from sheet2 to sheet1:</p> <ol style="list-style-type: none"><li>1) fuel</li><li>2) registration city</li><li>3) assembly</li><li>4) transmission</li><li>5) condition</li></ol>
Task2	<p>Create a new column called <b>selection</b> that will show <b>SELECTED</b> for the cars that meet ALL the following conditions:</p> <ol style="list-style-type: none"><li>1) Fuel is either Petrol or CNG</li><li>2) City is not Karachi</li><li>3) Make could be any except Toyota and Honda</li></ol> <p>Column should show <b>NOT SELECTED</b> for all the rest You will need to combine AND(), OR() and NOT() for the condition for IF()</p>
Task3	<p>Extract Model from the Make Model column into a separate column (for example extract Mehran VXR from Suzuki Mehran VXR)</p> <p>hint: you can do this in different ways. You can use text to column and then CONCAT(). Look into how you can also do this in one go using the FIND(), RIGHT() and LEN() functions</p>
Task4	<p>make a miles_per_year column (change kms to miles and then divide by the number of years that have passed between car year and current year 2024) Round it off to 3 decimal places</p>

# Sample of completed Tasks

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Ad ID	Car_Name	Fuel	Registration City	Assembly	Transmission	Condition	Make	Model	Year	KM_driven	Price	Selection	Miles_per_year
2	1019823763	Toyota Corolla Altis 1.6 cc	Petrol	Karachi	Toyota Corolla Altis 1.6 cc , Sil	Local	Automatic	Toyota	Corrolla Altis	2015	130000	4000000	NOT SELECTED	8975.359
3	1032353392	Mitsubishi mini cab urgent sale	Petrol	Lahore	engine replaced one time	Imported	Automatic	Mitsubishi	Minica	2012	115000	1150000	SELECTED	5954.805
4	1035626806	Suzuki Every 2013 Model 2019	Petrol	Lahore	A+ Condiitiion Single Hand Use	Imported	Automatic	Suzuki	Every	2013	120000	1900000	SELECTED	6778.593
5	1036683049	Mehran 2016 VXR original cond	Petrol	Hyderabad	car is n best geniune condition	Local	Manual	Suzuki	Mehran VXR	2016	38500	1180000	SELECTED	2990.348
6	1036970933	Daihatsu Cuore 2004	Petrol	Karachi	Daihatsu Cuore 2004genuine c	Local	Manual	Daihatsu	Cuore	2004	100000	700000	NOT SELECTED	3106.855
7	1038612589	Mitsubishi Minica 2 door Japan	Petrol	Lahore	Selling my _ : Mitsubishi Min	Imported	Manual	Mitsubishi	Minica	2007	133500	1300000	SELECTED	4879.59
8	1043285959	toyota corolla 2005	Petrol	Islamabad	Original buyers can approach ii	Local	Manual	Toyota	Corolla XLI	2005	195000	1750000	NOT SELECTED	6377.229
9	1043893641	chska party call na kra	Petrol	Islamabad	car 2005 classic cheek kr la	Local	Manual	KIA	Classic	2005	129049	550000	SELECTED	4220.385
10	1045295959	Suzuki Wagon R FA Package 2	Petrol	Unregistered	Contact only on WhatsApp Nun	Imported	Automatic	Suzuki	Wagon R	2019	18360	3500000	SELECTED	2281.674
11	1045445134	Carry Daaba Minicap Mitsubish	Petrol	Lahore	Urgently For sale Mitsubishi Mi	Imported	Automatic	Mitsubishi	Minica	2017	170000	1500000	SELECTED	15090.439
12	1046475308	Kia Spectra 2001 1.5 Automatic	Petrol	Lahore	Kia spectra 2001Customised. I	Imported	Automatic	KIA	Spectra	2001	50000	1200000	SELECTED	1350.807
13	1046608801	suzuki every turbo 5gair Exchar	Petrol	Lahore	suzuki every trbo 5gair totel ga	Imported	Automatic	Suzuki	Every	2016	123456	1750000	SELECTED	9588.997
14	1046845167	Suzuki Bolan	Petrol	Karachi	Suzuki Bolan in original conditi	Local	Manual	Suzuki	Bolan	2017	38000	1300000	NOT SELECTED	3373.157
15	1048171759	Honda Civic VTI Automatic	Petrol	Karachi	I am selling my Honda Civic VT	Local	Automatic	Honda	Civic Prosmetic	2005	104000	1515000	NOT SELECTED	3401.189
16	1049652233	Coure 2004 model	Petrol	Faisalabad	life time token outer 85% origin	Imported	Manual	Daihatsu	Cuore	2004	260000	650000	SELECTED	8077.823
17	1051027975	Honda city I. D. S. I 2006	Petrol	Karachi	Beautiful car central locking sy	Local	Manual	Honda	City IDSI	2006	117790	1625000	NOT SELECTED	4066.183
18	1051075341	Suzuki Mehran VXR 2009	Petrol	Karachi	Engine 100% OKSuspension 1	Local	Manual	Suzuki	Mehran VXR	2009	50260	540000	NOT SELECTED	2082.007
19	1051252471	kia classic car	CNG	Haripur	inner original and outer spraye	Imported	Manual	KIA	Classic	2002	13452	595000	SELECTED	379.94
20	1052330175	Honda city idsi vario Automatic	Petrol	Karachi	Honda city idsi vario full autom	Local	Automatic	Honda	City Vario	2007	120000	1800000	NOT SELECTED	4386.148
21	1053425910	alto car	Petrol	Lahore	alto vxr for sale urgentnew tyre	Imported	Manual	Suzuki	Alto	2005	200000	750000	SELECTED	6540.747
22	1054393126	SUZUKI   Cultus VXR   2001 M	Petrol	Karachi	Suzuki Cultus VXR Model 200	Local	Manual	Suzuki	Cultus VXR	2001	20000	500000	NOT SELECTED	540.323
23	1054535697	Changan Alsvin Lumier Silver 2	Petrol	Islamabad	Price is negotiable. Just like Z	Local	Automatic	Changan	Alsvin	2022	15000	4250000	SELECTED	4660.283
24	1054733477	Suzuki Alto 2007 Like new car	Petrol	Lahore	Aoa! I m selling suzuki Alto 200	Local	Manual	Suzuki	Alto	2007	83000	890000	SELECTED	3033.753
25	1055305594	Santro Club EFI Original Condit	Petrol	Lahore	Santro Club black colour 2006	Imported	Manual	Hyundai	Santro	2006	153000	950000	SELECTED	5281.654
26	1055598632	cultus.	Petrol	Karachi	Android pannel installed. Back	Local	Manual	Suzuki	Cultus VXR	2016	87000	1825000	NOT SELECTED	6757.41
27	1055660992	honda city prismatic Total gunie	Petrol	Karachi	Engine 99%suspension 99%Tc	Local	Automatic	Honda	City Aspire	2019	47000	3995000	NOT SELECTED	5840.887
28	1056841265	baleno car	Petrol	Islamabad	car for sale 1st check then que	Local	Manual	Suzuki	Baleno	2005	100000	850000	SELECTED	3270.374
29	1057673672	Mitsubishi minica	Petrol	Islamabad	minica white in excellent condit	Imported	Automatic	Mitsubishi	Minica	2013	85000	1345000	SELECTED	4801.503
30	1058158069	Suzuki wagonR VXL 2021 100%	Petrol	Punjab	Suzuki wagonR VXL 2021 mod	Local	Manual	Suzuki	Wagon R	2021	21000	2729000	SELECTED	4349.597
31	1058344102	coure 2006 model total geniune	Petrol	Attock	coure 2006 model total geniune	Imported	Manual	Daihatsu	Cuore	2006	130000	920000	SELECTED	4487.679
32	1058709644	Daihatsu Move 2015	Petrol	Lahore	Daihatsu MoveModel 2015Reg	Imported	Automatic	Daihatsu	Move	2015	86000	2325000	SELECTED	5937.545
33	1059010266	Honda city auto fore sale 2005	Petrol	Karachi	inner genuine outer paint . auto	Imported	Automatic	Honda	City IVTEC	2005	100000	1450000	NOT SELECTED	3270.374
34	1059759696	A Gift for Honda Lovers. Honda	Petrol	Karachi	A gift for Honda Lovers. Honda	Local	Automatic	Honda	Civic Prosmetic	2007	182000	1800000	NOT SELECTED	6652.325
35	1060113914	Suzuki WagonR	Petrol	Karachi	Suzuki wagonR VXLcondition 1	Local	Manual	Suzuki	Wagon R	2016	98000	2025000	NOT SELECTED	7611.795
36	1060740152	suzuki marhan	Petrol	Lahore	Suzuki marhan 2017 model	Local	Manual	Suzuki	Mehran VXR	2017	75000	1350000	SELECTED	6657.546
37	1061007240	Suzuki Swift 1.3 Dlx 2016 mode	Petrol	Bahawalpur	Outside only sides minor spray	Local	Manual	Suzuki	Swift	2016	130000	2075000	SELECTED	10097.279

Cars\_dataset\_sheet1

Cars\_dataset\_sheet2

Tasks and Questions



# Approaching the Solution

- **Data Integration with VLOOKUP**

1. Successfully utilized VLOOKUP to merge data from Sheet2 to Sheet1, importing essential columns such as Fuel, Registration City, Assembly, Transmission, and Condition.

- **Advanced Conditional Logic with IF()**

1. Created a "Selection" column using complex logic with AND(), OR(), and NOT() to filter cars based on fuel type, city, and make criteria.

- **Text Parsing and Model Extraction**

- Extracted the Model from the "Make Model" column using Text-to-Columns and advanced functions like FIND(), RIGHT(), and LEN(), showcasing expertise in text manipulation.
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# Approaching the Solution

- **Dynamic Calculations: Miles Per Year**

1. Added a calculated column for Miles Per Year:Converted kilometers to miles.
  2. Divided by the difference between car year and 2024.
  3. Rounded values to 3 decimal places for accuracy.
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## Task - 2

		Answers
QUESTIONS	[2 marks each]	
1	what is the avg price of CNG models in suzuki?	8162929.929
2	how many local, automatic models in Honda in Lahore?	304
3	what is the total of all the prices of imported, manual cars in Karachi?	342497996
4	what is the difference between avg price of a local car and avg price of an imported car?	Difference = 325987.804
5	what is the percentage of CNG cars in the dataset?	2.13%