

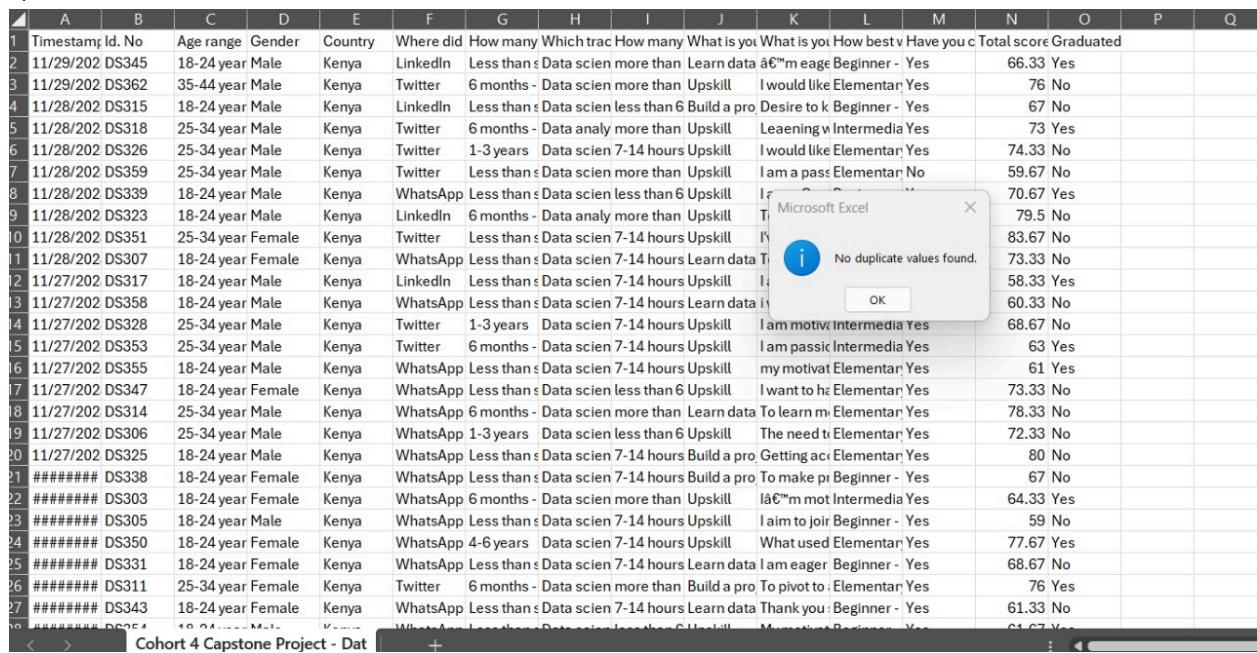
TASKS

- 1) Data Cleaning: Use Excel or SQL to remove duplicates, handle missing values, and standardize categorical data.
- Exploratory Analysis: Write SQL queries to answer key questions (e.g., average score by track, top countries represented).
 - Visualization: Create an interactive Power BI dashboard showing:
 - Demographics (age, gender, country)
 - Track distribution
 - Relationship between learning hours, experience, and scores
 - Graduation trend

WORK DONE

A) I first begun by loading my raw data set to excel and then i begun cleaning it as the steps below...in excel first:

1)



The screenshot shows a Microsoft Excel spreadsheet with data from row 1 to 27. The columns are labeled A through Q. The data includes timestamp, ID, age range, gender, country, and various responses to questions about their skills and interests. A message box is overlaid on the screen, stating "No duplicate values found." with an "OK" button.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	Timestamp	ID No	Age range	Gender	Country	Where did	How many	Which trac	How many	What is yo	What is yo	How best v	Have you c	Total score	Graduated		
2	11/29/202	DS345	18-24 year	Male	Kenya	LinkedIn	Less than 6	Data scienc	more than 6	Learn data	â€œm eage	Beginner - Yes	66.33	Yes			
3	11/29/202	DS362	35-44 year	Male	Kenya	Twitter	6 months -	Data scienc	more than 6	Upskill	I would like	Elementar	Yes	76	No		
4	11/28/202	DS315	18-24 year	Male	Kenya	LinkedIn	Less than 6	Data scienc	less than 6	Build a pro	Desire to k	Beginner - Yes	67	No			
5	11/28/202	DS318	25-34 year	Male	Kenya	Twitter	6 months -	Data analy	more than 6	Upskill	Leaning w	Intermedia	Yes	73	Yes		
6	11/28/202	DS326	25-34 year	Male	Kenya	Twitter	1-3 years	Data scienc	7-14 hours	Upskill	I would like	Elementar	Yes	74.33	No		
7	11/28/202	DS359	25-34 year	Male	Kenya	Twitter	Less than 6	Data scienc	more than 6	Upskill	I am a past	Elementar	No	59.67	No		
8	11/28/202	DS339	18-24 year	Male	Kenya	WhatsApp	Less than 6	Data scienc	less than 6	Upskill	I am motiv	Intermedia	Yes	70.67	Yes		
9	11/28/202	DS323	18-24 year	Male	Kenya	LinkedIn	6 months -	Data analy	more than 6	Upskill	Microsoft Excel			79.5	No		
10	11/28/202	DS351	25-34 year	Female	Kenya	Twitter	Less than 6	Data scienc	7-14 hours	Upskill	I am motiv	Intermedia	Yes	83.67	No		
11	11/28/202	DS307	18-24 year	Female	Kenya	WhatsApp	Less than 6	Data scienc	7-14 hours	Learn data	my motivat	Elementar	Yes	73.33	No		
12	11/27/202	DS317	18-24 year	Male	Kenya	LinkedIn	Less than 6	Data scienc	7-14 hours	Upskill	I want to h	Elementar	Yes	58.33	Yes		
13	11/27/202	DS358	18-24 year	Male	Kenya	WhatsApp	Less than 6	Data scienc	7-14 hours	Learn data	To learn m	Elementar	Yes	60.33	No		
14	11/27/202	DS328	25-34 year	Male	Kenya	Twitter	1-3 years	Data scienc	7-14 hours	Upskill	I am motiv	Intermedia	Yes	68.67	No		
15	11/27/202	DS353	25-34 year	Male	Kenya	Twitter	6 months -	Data scienc	7-14 hours	Upskill	I am passic	Intermedia	Yes	63	Yes		
16	11/27/202	DS355	18-24 year	Male	Kenya	WhatsApp	Less than 6	Data scienc	7-14 hours	Upskill	my motivat	Elementar	Yes	61	Yes		
17	11/27/202	DS347	18-24 year	Female	Kenya	WhatsApp	Less than 6	Data scienc	less than 6	Upskill	I want to h	Elementar	Yes	73.33	No		
18	11/27/202	DS314	25-34 year	Male	Kenya	WhatsApp	6 months -	Data scienc	more than 6	Learn data	To learn m	Elementar	Yes	78.33	No		
19	11/27/202	DS306	25-34 year	Male	Kenya	WhatsApp	1-3 years	Data scienc	less than 6	Upskill	The need t	Elementar	Yes	72.33	No		
20	11/27/202	DS325	18-24 year	Male	Kenya	WhatsApp	Less than 6	Data scienc	7-14 hours	Build a pro	Getting acq	Elementar	Yes	80	No		
21	#####	DS338	18-24 year	Female	Kenya	WhatsApp	Less than 6	Data scienc	7-14 hours	Build a pro	To make pr	Elementar	Yes	67	No		
22	#####	DS303	18-24 year	Female	Kenya	WhatsApp	6 months -	Data scienc	more than 6	Upskill	Iâ€™m mot	Intermedia	Yes	64.33	Yes		
23	#####	DS305	18-24 year	Male	Kenya	WhatsApp	Less than 6	Data scienc	7-14 hours	Upskill	I aim to joir	Beginner	Yes	59	No		
24	#####	DS350	18-24 year	Female	Kenya	WhatsApp	4-6 years	Data scienc	7-14 hours	Upskill	What used	Elementar	Yes	77.67	Yes		
25	#####	DS331	18-24 year	Female	Kenya	WhatsApp	Less than 6	Data scienc	7-14 hours	Learn data	I am eager	Beginner	Yes	68.67	No		
26	#####	DS311	25-34 year	Female	Kenya	Twitter	6 months -	Data scienc	more than 6	Build a pro	To pivot to	Elementar	Yes	76	Yes		
27	#####	DS343	18-24 year	Female	Kenya	WhatsApp	Less than 6	Data scienc	7-14 hours	Learn data	Thank you	Beginner	Yes	61.33	No		
28	#####	DS324	18-24 year	Male	Kenya	WhatsApp	Less than 6	Data scienc	less than 6	Upskill	More time	Reviewing	Yes	64.67	Yes		

no duplicates found in [id.no](#), when i checked for duplicates i didnt find any

2) Here I performed data cleaning by ensuring all the tracks name are written in a common format. This is done with an Excel formula using the functions TRIM (remove extra spaces) and PROPER (capitalize words)....AND The code that i used =TRIM(PROPER(H2)).Below are the results.

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Timestamp	Id. No	Age range	Gender	Country	Where did	How many	Which tra	Track_Clea	How many	What is yo	What is yo	How best v	Have you c	Total score	Graduated
11/29/202	DS345	18-24 year	Male	Kenya	LinkedIn	Less than 6	Data scienc	Data Scien	more than	Learn data	â€™m eage	Beginner -	Yes	66.33	Yes
11/29/202	DS362	35-44 year	Male	Kenya	Twitter	6 months -	Data scienc	Data Scien	more than	Upskill	I would like	Elementar	Yes	76	No
11/28/202	DS315	18-24 year	Male	Kenya	LinkedIn	Less than 6	Data scienc	Data Scien	less than 6	Build a pro	Desire to k	Beginner -	Yes	67	No
11/28/202	DS318	25-34 year	Male	Kenya	Twitter	6 months -	Data analy	Data Analy	more than	Upskill	Leaening w	Intermedia	Yes	73	Yes
11/28/202	DS326	25-34 year	Male	Kenya	Twitter	1-3 years	Data scienc	Data Scien	7-14 hours	Upskill	I would like	Elementar	Yes	74.33	No
11/28/202	DS359	25-34 year	Male	Kenya	Twitter	Less than 6	Data scienc	Data Scien	more than	Upskill	I am a pass	Elementar	No	59.67	No
11/28/202	DS339	18-24 year	Male	Kenya	WhatsApp	Less than 6	Data scienc	Data Scien	less than 6	Upskill	I am a Cor	Beginner -	Yes	70.67	Yes
11/28/202	DS323	18-24 year	Male	Kenya	LinkedIn	6 months -	Data analy	Data Analy	more than	Upskill	To get an o	Elementar	Yes	79.5	No
11/28/202	DS351	25-34 year	Female	Kenya	Twitter	Less than 6	Data scienc	Data Scien	7-14 hours	Upskill	I've seen d:	Elementar	Yes	83.67	No
11/28/202	DS307	18-24 year	Female	Kenya	WhatsApp	Less than 6	Data scienc	Data Scien	7-14 hours	Learn data	To learn da	Beginner -	Yes	73.33	No
11/27/202	DS317	18-24 year	Male	Kenya	LinkedIn	Less than 6	Data scienc	Data Scien	7-14 hours	Upskill	I am passic	Elementar	Yes	58.33	Yes
11/27/202	DS358	18-24 year	Male	Kenya	WhatsApp	Less than 6	Data scienc	Data Scien	7-14 hours	Learn data	I want to be	Beginner -	Yes	60.33	No
11/27/202	DS328	25-34 year	Male	Kenya	Twitter	1-3 years	Data scienc	Data Scien	7-14 hours	Upskill	I am motiv	Intermedia	Yes	68.67	No
11/27/202	DS353	25-34 year	Male	Kenya	Twitter	6 months -	Data scienc	Data Scien	7-14 hours	Upskill	I am passic	Intermedia	Yes	63	Yes
11/27/202	DS355	18-24 year	Male	Kenya	WhatsApp	Less than 6	Data scienc	Data Scien	7-14 hours	Upskill	my motivat	Elementar	Yes	61	Yes
11/27/202	DS347	18-24 year	Female	Kenya	WhatsApp	Less than 6	Data scienc	Data Scien	less than 6	Upskill	I want to h	Elementar	Yes	73.33	No
11/27/202	DS314	25-34 year	Male	Kenya	LinkedIn	6 months -	Data scienc	Data Scien	more than	Learn data	To learn m	Elementar	Yes	78.33	No
11/27/202	DS306	25-34 year	Male	Kenya	WhatsApp	1-3 years	Data scienc	Data Scien	less than 6	Upskill	The need t	Elementar	Yes	72.33	No
11/27/202	DS325	18-24 year	Male	Kenya	WhatsApp	Less than 6	Data scienc	Data Scien	7-14 hours	Build a pro	Getting ac	Elementar	Yes	80	No
#####	DS338	18-24 year	Female	Kenya	WhatsApp	Less than 6	Data scienc	Data Scien	7-14 hours	Build a pro	To make pr	Beginner -	Yes	67	No
#####	DS303	18-24 year	Female	Kenya	WhatsApp	6 months -	Data scienc	Data Scien	more than	Upskill	Iâ€™m mot	Intermedia	Yes	64.33	Yes
#####	DS305	18-24 year	Male	Kenya	WhatsApp	Less than 6	Data scienc	Data Scien	7-14 hours	Upskill	I aim to joir	Beginner -	Yes	59	No
#####	DS350	18-24 year	Female	Kenya	WhatsApp	4-6 years	Data scienc	Data Scien	7-14 hours	Upskill	What used	Elementar	Yes	77.67	Yes
#####	DS331	18-24 year	Female	Kenya	WhatsApp	Less than 6	Data scienc	Data Scien	7-14 hours	Learn data	I am eager	Beginner -	Yes	68.67	No
#####	DS311	25-34 year	Female	Kenya	Twitter	6 months -	Data scienc	Data Scien	more than	Build a pro	To pivot to	Elementar	Yes	76	Yes

3) I now have a clean numeric column (Experience_Months) that I can use for analysis, charts, or pivot tables. AND this is what i did Encode Experience to numeric months.

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	
1	Timestamp	Id. No	Age range	Gender	Country	Where did	How many	Experience	Which tra	How many	What is yo	What is yo	How best v	Have you c	Total score	Graduated
2	11/29/202	DS345	18-24 year	Male	Kenya	LinkedIn	Less than 6	3	Data Scienc	more than	Learn data	â€™m eage	Beginner -	Yes	66.33	Yes
3	11/29/202	DS362	35-44 year	Male	Kenya	Twitter	6 months -	9	Data Scienc	more than	Upskill	I would like	Elementar	Yes	76	No
4	11/28/202	DS315	18-24 year	Male	Kenya	LinkedIn	Less than 6	3	Data Scienc	less than 6	Build a pro	Desire to k	Beginner -	Yes	67	No
5	11/28/202	DS318	25-34 year	Male	Kenya	Twitter	6 months -	9	Data Analy	more than	Upskill	Leaening w	Intermedia	Yes	73	Yes
6	11/28/202	DS326	25-34 year	Male	Kenya	Twitter	1-3 years	9	Data Scienc	7-14 hours	Upskill	I would like	Elementar	Yes	74.33	No
7	11/28/202	DS359	25-34 year	Male	Kenya	Twitter	Less than 6	3	Data Scienc	more than	Upskill	I am a pass	Elementar	No	59.67	No
8	11/28/202	DS339	18-24 year	Male	Kenya	WhatsApp	Less than 6	3	Data Scienc	less than 6	Upskill	I am a Cor	Beginner -	Yes	70.67	Yes
9	11/28/202	DS323	18-24 year	Male	Kenya	LinkedIn	6 months -	9	Data Analy	more than	Upskill	To get an o	Elementar	Yes	79.5	No
10	11/28/202	DS351	25-34 year	Female	Kenya	Twitter	Less than 6	3	Data Scienc	7-14 hours	Upskill	I've seen d:	Elementar	Yes	83.67	No
11	11/28/202	DS307	18-24 year	Female	Kenya	WhatsApp	Less than 6	3	Data Scienc	7-14 hours	Learn data	To learn da	Beginner -	Yes	73.33	No
12	11/27/202	DS317	18-24 year	Male	Kenya	LinkedIn	Less than 6	3	Data Scienc	7-14 hours	Upskill	I am passic	Elementar	Yes	58.33	Yes
13	11/27/202	DS358	18-24 year	Male	Kenya	WhatsApp	Less than 6	3	Data Scienc	7-14 hours	Learn data	I want to h	Beginner -	Yes	60.33	No
14	11/27/202	DS328	25-34 year	Male	Kenya	Twitter	1-3 years	9	Data Scienc	7-14 hours	Upskill	I am motiv	Intermedia	Yes	68.67	No
15	11/27/202	DS353	25-34 year	Male	Kenya	Twitter	6 months -	9	Data Scienc	7-14 hours	Upskill	I am passic	Intermedia	Yes	63	Yes
16	11/27/202	DS355	18-24 year	Male	Kenya	WhatsApp	Less than 6	3	Data Scienc	7-14 hours	Upskill	my motivat	Elementar	Yes	61	Yes
17	11/27/202	DS347	18-24 year	Female	Kenya	WhatsApp	Less than 6	3	Data Scienc	less than 6	Upskill	I want to h	Elementar	Yes	73.33	No
18	11/27/202	DS314	25-34 year	Male	Kenya	WhatsApp	6 months -	9	Data Scienc	more than	Learn data	To learn m	Elementar	Yes	78.33	No
19	11/27/202	DS306	25-34 year	Male	Kenya	WhatsApp	1-3 years	9	Data Scienc	less than 6	Upskill	The need t	Elementar	Yes	72.33	No
20	11/27/202	DS325	18-24 year	Male	Kenya	WhatsApp	Less than 6	3	Data Scienc	7-14 hours	Build a pro	Getting ac	Elementar	Yes	80	No
21	#####	DS338	18-24 year	Female	Kenya	WhatsApp	Less than 6	3	Data Scienc	7-14 hours	Build a pro	To make pr	Beginner -	Yes	67	No
22	#####	DS303	18-24 year	Female	Kenya	WhatsApp	6 months -	9	Data Scienc	more than	Upskill	Iâ€™m mot	Intermedia	Yes	64.33	Yes
23	#####	DS305	18-24 year	Male	Kenya	WhatsApp	Less than 6	3	Data Scienc	7-14 hours	Upskill	I aim to joir	Beginner -	Yes	59	No
24	#####	DS350	18-24 year	Female	Kenya	WhatsApp	4-6 years	3	Data Scienc	7-14 hours	Upskill	Data Scienc	7-14 hours	Upskill	77.67	Yes
25	#####	DS331	18-24 year	Female	Kenya	WhatsApp	Less than 6	3	Data Scienc	7-14 hours	Learn data	I am eager	Beginner -	Yes	68.67	No
26	#####	DS311	25-34 year	Female	Kenya	Twitter	6 months -	9	Data Scienc	more than	Build a pro	To pivot to	Elementar	Yes	76	Yes
27	#####	DS343	18-24 year	Female	Kenya	WhatsApp	Less than 6	3	Data Scienc	7-14 hours	Learn data	Thank you	Beginner -	Yes	61.33	No
28	#####	DS354	18-24 year	Male	Kenya	WhatsApp	Less than 6	3	Data Scienc	7-14 hours	Learn data	More about	Design	Yes	C1-C7	Yes

4) I now have a clean numeric column (Experience_Months) that you can use for analysis, charts, or pivot tables. AND this is what i did Encode Experience to numeric months
 this is the code i used =IF(TRIM(SUBSTITUTE(G2,"-","-"))="Less than six months",3,
 IF(TRIM(SUBSTITUTE(G2,"-","-"))="6 months - 1 year",9,
 IF(TRIM(SUBSTITUTE(G2,"-","-"))="1 - 2 years",18,
 IF(TRIM(SUBSTITUTE(G2,"-","-"))="2 - 3 years",30,
 IF(TRIM(SUBSTITUTE(G2,"-","-"))="More than 3 years",42,""))))

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	Timestamp	Id. No.	Age range	Gender	Country	Where did	How many	Experience	Which trac	How many	What is you	What is you	How best v	Have you c	Total score	Graduated
2	11/29/202	DS345	18-24 year	Male	Kenya	LinkedIn	Less than	3 Data Scien	more than	Learn data	â€™m eager	Beginner	- Yes	66.33	Yes	
3	11/29/202	DS362	35-44 year	Male	Kenya	Twitter	6 months	9 Data Scien	more than	Upskill	I would like	Elementar	Yes	76	No	
4	11/28/202	DS315	18-24 year	Male	Kenya	LinkedIn	Less than	3 Data Scien	less than 6	Build a pro	Desire to k	Beginner	- Yes	67	No	
5	11/28/202	DS318	25-34 year	Male	Kenya	Twitter	6 months	9 Data Analy	more than	Upskill	Leaening w	Intermedia	Yes	73	Yes	
6	11/28/202	DS326	25-34 year	Male	Kenya	Twitter	1-3 years	Data Scien	7-14 hours	Upskill	I would like	Elementar	Yes	74.33	No	
7	11/28/202	DS359	25-34 year	Male	Kenya	Twitter	Less than	3 Data Scien	more than	Upskill	I am a pass	Elementar	No	59.67	No	
8	11/28/202	DS339	18-24 year	Male	Kenya	WhatsApp	Less than	3 Data Scien	less than 6	Upskill	I am a Cor	Beginner	- Yes	70.67	Yes	
9	11/28/202	DS323	18-24 year	Male	Kenya	LinkedIn	6 months	9 Data Analy	more than	Upskill	To get an o	Elementar	Yes	79.5	No	
10	11/28/202	DS351	25-34 year	Female	Kenya	Twitter	Less than	3 Data Scien	7-14 hours	Upskill	I've seen d	Elementar	Yes	83.67	No	
11	11/28/202	DS307	18-24 year	Female	Kenya	WhatsApp	Less than	3 Data Scien	7-14 hours	Learn data	To learn da	Beginner	- Yes	73.33	No	
12	11/27/202	DS317	18-24 year	Male	Kenya	LinkedIn	Less than	3 Data Scien	7-14 hours	Upskill	I am passic	Elementar	Yes	58.33	Yes	
13	11/27/202	DS358	18-24 year	Male	Kenya	WhatsApp	Less than	3 Data Scien	7-14 hours	Learn data	i want to b	Beginner	- Yes	60.33	No	
14	11/27/202	DS328	25-34 year	Male	Kenya	Twitter	1-3 years	Data Scien	7-14 hours	Upskill	I am motiv	Intermedia	Yes	68.67	No	
15	11/27/202	DS353	25-34 year	Male	Kenya	Twitter	6 months	9 Data Scien	7-14 hours	Upskill	I am passic	Intermedia	Yes	63	Yes	
16	11/27/202	DS355	18-24 year	Male	Kenya	WhatsApp	Less than	3 Data Scien	7-14 hours	Upskill	my motivat	Elementar	Yes	61	Yes	
17	11/27/202	DS347	18-24 year	Female	Kenya	WhatsApp	Less than	3 Data Scien	less than 6	Upskill	I want to h	Elementar	Yes	73.33	No	
18	11/27/202	DS314	25-34 year	Male	Kenya	WhatsApp	6 months	9 Data Scien	more than	Learn data	To learn m	Elementar	Yes	78.33	No	
19	11/27/202	DS306	25-34 year	Male	Kenya	WhatsApp	1-3 years	Data Scien	less than 6	Upskill	The need t	Elementar	Yes	72.33	No	
20	11/27/202	DS325	18-24 year	Male	Kenya	WhatsApp	Less than	3 Data Scien	7-14 hours	Build a pro	Getting ac	Elementar	Yes	80	No	
21	#####	DS338	18-24 year	Female	Kenya	WhatsApp	Less than	3 Data Scien	7-14 hours	Build a pro	To make pri	Beginner	- Yes	67	No	
22	#####	DS303	18-24 year	Female	Kenya	WhatsApp	6 months	9 Data Scien	more than	Upskill	Iâ€™m mot	Intermedia	Yes	64.33	Yes	
23	#####	DS305	18-24 year	Male	Kenya	WhatsApp	Less than	3 Data Scien	7-14 hours	Upskill	I aim to joir	Beginner	- Yes	59	No	
24	#####	DS350	18-24 year	Female	Kenya	WhatsApp	4-6 years	Data Scien	7-14 hours	Upskill	What used	Elementar	Yes	77.67	Yes	
25	#####	DS331	18-24 year	Female	Kenya	WhatsApp	Less than	3 Data Scien	7-14 hours	Learn data	I am eager	Beginner	- Yes	68.67	No	
26	#####	DS311	25-34 year	Female	Kenya	Twitter	6 months	9 Data Scien	more than	Build a pro	To pivot to	Elementar	Yes	76	Yes	
27	#####	DS343	18-24 year	Female	Kenya	WhatsApp	Less than	3 Data Scien	7-14 hours	Learn data	Thank you	Beginner	- Yes	61.33	No	
28	#####	DS354	18-24 year	Male	Kenya	WhatsApp	Less than	3 Data Scien	less than 6	Upskill	Motivation	Beginner	- Yes	C1-C7	Yes	

5) Here I encoded hours per week

	J2	Timestamp	Id. No	Age range	Gender	Country	Where did	How many	Which trac	How many	Hours_PW	What is you	What is you	How best v	Have you c	Total score	Graduated
1	=IF(I2="less than 6 hours",3,	11/29/2022	DS345	18-24 year	Male	Kenya	LinkedIn	3 Data Scien	more than	16	Learn data	â€™m eage	Beginner -	Yes	66.33	Yes	
2	11/29/2022 DS362	35-44 year	Male	Kenya	Twitter	9 Data Scien	more than	16	Upskill	I would like	Elementar	Yes	76	No			
3	11/28/2022 DS315	18-24 year	Male	Kenya	LinkedIn	3 Data Scien	less than 6	3	Build a pro	Desire to k	Beginner -	Yes	67	No			
4	11/28/2022 DS318	25-34 year	Male	Kenya	Twitter	9 Data Analy	more than	16	Upskill	Leaening w	Intermedia	Yes	73	Yes			
5	11/28/2022 DS326	25-34 year	Male	Kenya	Twitter	18 Data Scien	7-14 hours	10	Upskill	I would like	Elementar	Yes	74.33	No			
6	11/28/2022 DS359	25-34 year	Male	Kenya	Twitter	3 Data Scien	more than	16	Upskill	I am a pass	Elementar	No	59.67	No			
7	11/28/2022 DS339	18-24 year	Male	Kenya	WhatsApp	3 Data Scien	less than 6	3	Upskill	I am a Cor	Beginner -	Yes	70.67	Yes			
8	11/28/2022 DS323	18-24 year	Male	Kenya	LinkedIn	9 Data Analy	more than	16	Upskill	To get an o	Elementar	Yes	79.5	No			
9	11/28/2022 DS351	25-34 year	Female	Kenya	Twitter	3 Data Scien	7-14 hours	10	Upskill	I've seen d:	Elementar	Yes	83.67	No			
10	11/28/2022 DS307	18-24 year	Female	Kenya	WhatsApp	3 Data Scien	7-14 hours	10	Learn data	To learn da	Beginner -	Yes	73.33	No			
11	11/27/2022 DS317	18-24 year	Male	Kenya	LinkedIn	3 Data Scien	7-14 hours	10	Upskill	I am passic	Elementar	Yes	58.33	Yes			
12	11/27/2022 DS358	18-24 year	Male	Kenya	WhatsApp	3 Data Scien	7-14 hours	10	Learn data	I want to be	Beginner -	Yes	60.33	No			
13	11/27/2022 DS328	25-34 year	Male	Kenya	Twitter	18 Data Scien	7-14 hours	10	Upskill	I am motiv	Intermedia	Yes	68.67	No			
14	11/27/2022 DS353	25-34 year	Male	Kenya	Twitter	9 Data Scien	7-14 hours	10	Upskill	I am passic	Intermedia	Yes	63	Yes			
15	11/27/2022 DS355	18-24 year	Male	Kenya	WhatsApp	3 Data Scien	7-14 hours	10	Upskill	my motivat	Elementar	Yes	61	Yes			
16	11/27/2022 DS347	18-24 year	Female	Kenya	WhatsApp	3 Data Scien	less than 6	3	Upskill	I want to h	Elementar	Yes	73.33	No			
17	11/27/2022 DS314	25-34 year	Male	Kenya	WhatsApp	9 Data Scien	more than	16	Learn data	To learn mi	Elementar	Yes	78.33	No			
18	11/27/2022 DS306	25-34 year	Male	Kenya	WhatsApp	18 Data Scien	less than 6	3	Upskill	The need t	Elementar	Yes	72.33	No			
19	11/27/2022 DS325	18-24 year	Male	Kenya	WhatsApp	3 Data Scien	7-14 hours	10	Build a pro	Getting ac:	Elementar	Yes	80	No			
20	##### DS338	18-24 year	Female	Kenya	WhatsApp	3 Data Scien	7-14 hours	10	Build a pro	To make pi	Beginner -	Yes	67	No			
21	##### DS303	18-24 year	Female	Kenya	WhatsApp	9 Data Scien	more than	16	Upskill	lâ€™m mot	Intermedia	Yes	64.33	Yes			
22	##### DS305	18-24 year	Male	Kenya	WhatsApp	3 Data Scien	7-14 hours	10	Upskill	I aim to joir	Beginner -	Yes	59	No			
23	##### DS350	18-24 year	Female	Kenya	WhatsApp	42 Data Scien	7-14 hours	10	Upskill	What used	Elementar	Yes	77.67	Yes			
24	##### DS331	18-24 year	Female	Kenya	WhatsApp	3 Data Scien	7-14 hours	10	Learn data	I am eager	Beginner -	Yes	68.67	No			
25	##### DS311	25-34 year	Female	Kenya	Twitter	9 Data Scien	more than	16	Build a pro	To pivot to:	Elementar	Yes	76	Yes			
26	##### DS343	18-24 year	Female	Kenya	WhatsApp	3 Data Scien	7-14 hours	10	Learn data	Thank you :	Beginner -	Yes	61.33	No			

FOR THIS i used this code =IF(I2="less than 6 hours",3,

IF(I2="7-14 hours",10,

IF(I2="more than 14 hours",16,"")) to perform this task I now have a clean numeric column

(Hours_PW_Num) with values 3, 10, or 16 much easier for averages, charts, or regressions.

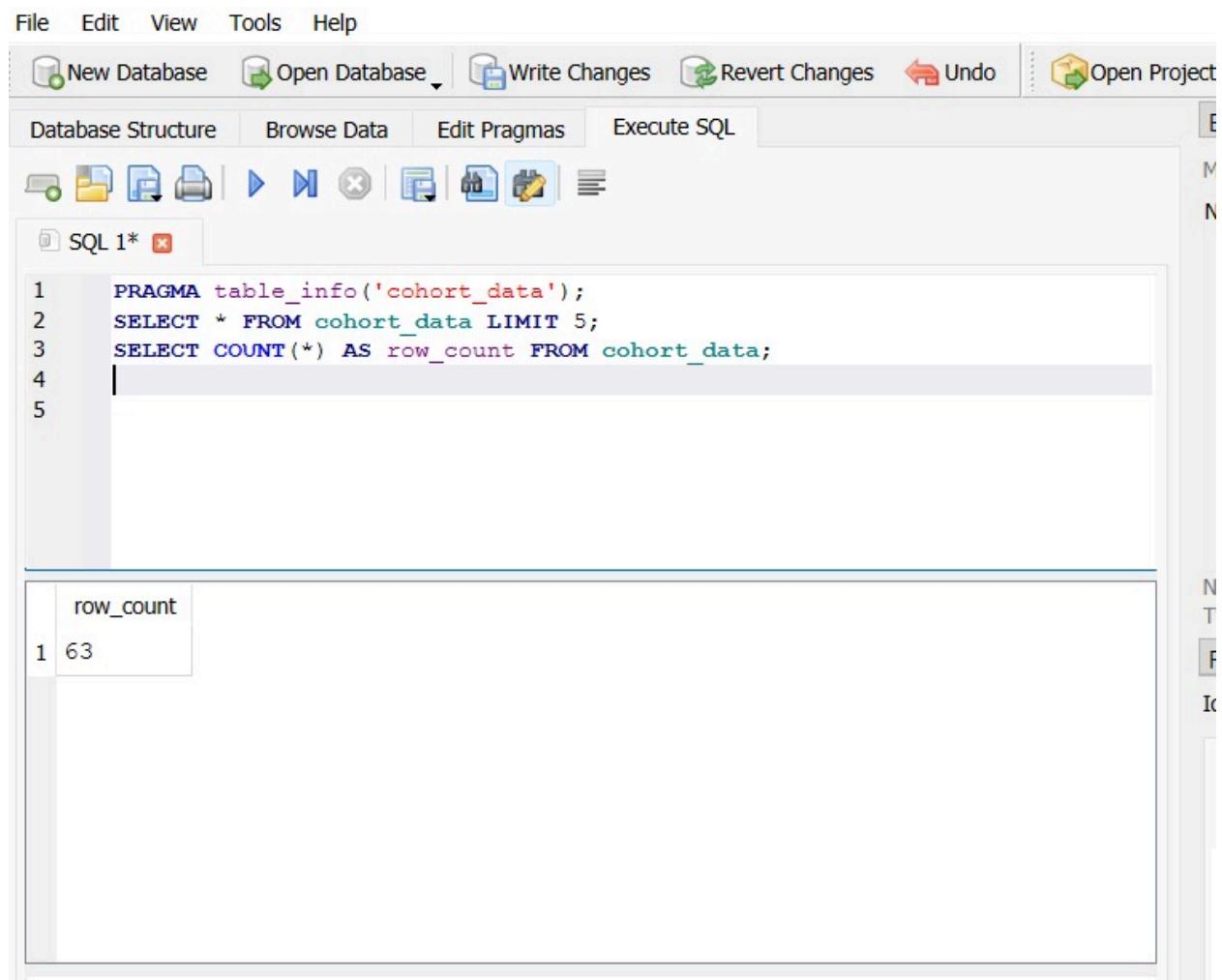
6)

	P1	Timestamp	Id. No	Age range	Gender	Country	Where did	How many	Which trac	How many	Hours_PW	What is you	What is you	How best v	Have you c	Total score	Aptitude_C	Graduated	Num
0	11/29/2022 DS345	18-24 year	Male	Kenya	LinkedIn	3 Data Scien	16 Learn data	â€™m eage	Beginner -	Yes	66.33	Yes	1	1					
1	11/29/2022 DS362	35-44 year	Male	Kenya	Twitter	9 Data Scien	16 Upskill	I would like	Elementar	Yes	76	No	1	0					
2	11/28/2022 DS315	18-24 year	Male	Kenya	LinkedIn	3 Data Scien	3 Build a pro	Desire to k	Beginner -	Yes	67	No	1	0					
3	11/28/2022 DS318	25-34 year	Male	Kenya	Twitter	9 Data Analy	16 Upskill	Leaening w	Intermedia	Yes	73	Yes	1	1					
4	11/28/2022 DS326	25-34 year	Male	Kenya	Twitter	18 Data Scien	10 Upskill	I would like	Elementar	Yes	74.33	No	1	0					
5	11/28/2022 DS359	25-34 year	Male	Kenya	Twitter	3 Data Scien	16 Upskill	I am a pass	Elementar	No	59.67	No	0	0					
6	11/28/2022 DS339	18-24 year	Male	Kenya	WhatsApp	3 Data Scien	3 Upskill	I am a Com	Beginner -	Yes	70.67	Yes	1	1					
7	11/28/2022 DS323	18-24 year	Male	Kenya	LinkedIn	9 Data Analy	16 Upskill	To get an o	Elementar	Yes	79.5	No	1	0					
8	11/28/2022 DS351	25-34 year	Female	Kenya	Twitter	3 Data Scien	10 Upskill	I've seen d:	Elementar	Yes	83.67	No	1	0					
9	11/28/2022 DS307	18-24 year	Female	Kenya	WhatsApp	3 Data Scien	10 Learn data	To learn da	Beginner -	Yes	73.33	No	1	0					
10	11/27/2022 DS317	18-24 year	Male	Kenya	LinkedIn	3 Data Scien	10 Upskill	I am passic	Elementar	Yes	58.33	Yes	1	1					
11	11/27/2022 DS358	18-24 year	Male	Kenya	WhatsApp	3 Data Scien	10 Learn data	I want to be	Beginner -	Yes	60.33	No	1	0					
12	11/27/2022 DS328	25-34 year	Male	Kenya	Twitter	18 Data Scien	10 Upskill	I am motiv	Intermedia	Yes	68.67	No	1	0					
13	11/27/2022 DS353	25-34 year	Male	Kenya	Twitter	9 Data Scien	10 Upskill	I am passic	Intermedia	Yes	63	Yes	1	1					
14	11/27/2022 DS355	18-24 year	Male	Kenya	WhatsApp	3 Data Scien	10 Upskill	my motivat	Elementar	Yes	61	Yes	1	1					
15	11/27/2022 DS347	18-24 year	Female	Kenya	WhatsApp	3 Data Scien	3 Upskill	I want to h	Elementar	Yes	73.33	No	1	0					
16	11/27/2022 DS314	25-34 year	Male	Kenya	WhatsApp	9 Data Scien	16 Learn data	To learn m	Elementar	Yes	78.33	No	1	0					
17	11/27/2022 DS306	25-34 year	Male	Kenya	WhatsApp	18 Data Scien	3 Upskill	The need t	Elementar	Yes	72.33	No	1	0					
18	11/27/2022 DS325	18-24 year	Male	Kenya	WhatsApp	3 Data Scien	10 Build a pro	Getting ac:	Elementar	Yes	80	No	1	0					
19	##### DS338	18-24 year	Female	Kenya	WhatsApp	3 Data Scien	10 Build a pro	To make pi	Beginner -	Yes	67	No	1	0					
20	##### DS303	18-24 year	Female	Kenya	WhatsApp	9 Data Scien	16 Upskill	lâ€™m mot	Intermedia	Yes	64.33	Yes	1	1					
21	##### DS305	18-24 year	Male	Kenya	WhatsApp	3 Data Scien	10 Upskill	I aim to joir	Beginner -	Yes	59	No	1	0					
22	##### DS350	18-24 year	Female	Kenya	WhatsApp	42 Data Scien	10 Upskill	What used	Elementar	Yes	77.67	Yes	1	1					
23	##### DS331	18-24 year	Female	Kenya	WhatsApp	3 Data Scien	10 Learn data	I am eager	Beginner -	Yes	68.67	No	1	0					
24	##### DS311	25-34 year	Female	Kenya	Twitter	9 Data Scien	16 Build a pro	To pivot to:	Elementar	Yes	76	Yes	1	1					
25	##### DS343	18-24 year	Female	Kenya	WhatsApp	3 Data Scien	10 Learn data	Thank you :	Beginner -	Yes	61.33	No	1	0					

I Converted Yes/No to Booleans AND this is the code i used =IF(M2="Yes",1,0) for aptitude and this is code i use =IF(O2="Yes",1,0) FOR GRADUATION

B)Now below is the sql results:

1)



The screenshot shows the SQLite Manager interface. At the top, there's a menu bar with File, Edit, View, Tools, and Help. Below the menu is a toolbar with icons for New Database, Open Database, Write Changes, Revert Changes, Undo, and Open Project. A tab bar has tabs for Database Structure, Browse Data, Edit Pragmas, and Execute SQL, with Execute SQL currently selected. Below the toolbar is a toolbar with icons for opening databases, writing changes, reverting changes, undoing, redoing, and other database management functions. A main window contains a SQL editor pane titled "SQL 1*" with the following code:

```
1 PRAGMA table_info('cohort_data');
2 SELECT * FROM cohort_data LIMIT 5;
3 SELECT COUNT(*) AS row_count FROM cohort_data;
4
5
```

Below the SQL editor is a results pane showing a single row of data:

	row_count
1	63

counting rows using SQLite

2)

DB BROWSER FOR SQLITE - C:\USERS\ANTHONY KARWE\DOWNLOADED\DATA MINING PROJECT\cohorts.sqlite

File Edit View Tools Help

New Database Open Database Write Changes Revert Changes Undo Open Project

Database Structure Browse Data Edit Pragmas Execute SQL

SQL 1*

```
1 SELECT typeof("Total score") AS type, COUNT(*) AS n
2 FROM cohort_data
3 GROUP BY typeof("Total score");
4
5
6
```

	type	n
1	integer	24
2	real	39

Execution finished without errors.
Result: 2 rows returned in 9ms
At line 1:
SELECT typeof("Total score") AS type, COUNT(*) AS n
FROM cohort_data
GROUP BY typeof("Total score");

check whether total_score is numeric or text

3)

The screenshot shows a database management application window. At the top, there's a toolbar with icons for New Database, Open Database, Write Changes, Revert Changes, Undo, and Open. Below the toolbar, a menu bar has tabs for Database Structure, Browse Data, Edit Pragmas, and Execute SQL. Under Execute SQL, there are several icons: a folder, a file, a printer, a magnifying glass, a double arrow, a delete, a save, a refresh, and a list. A sub-menu for 'SQL 1*' is open, containing the following SQL code:

```
36 | FROM cohort_data
37 | LIMIT 10;
38 |
39 | SELECT
40 |     COUNT(*) AS total_rows,
41 |     SUM(CASE WHEN total_score_num IS NULL THEN 1 ELSE 0 END) AS nulls,
42 |     SUM(CASE WHEN total_score_num IS NOT NULL THEN 1 ELSE 0 END) AS filled
43 |
44 | FROM cohort_data;
```

Below the code, the results are displayed in a table:

	total_rows	nulls	filled
1	63	0	63

At the bottom of the interface, a message box displays the execution status:

```
Execution finished without errors.
Result: 1 rows returned in 7ms
At line 38:
SELECT
    COUNT(*) AS total_rows,
    SUM(CASE WHEN total_score_num IS NULL THEN 1 ELSE 0 END) AS nulls,
    SUM(CASE WHEN total_score_num IS NOT NULL THEN 1 ELSE 0 END) AS filled
```

Following the message box, a text line states: "now there are no nulls in total score".

4)

SQL 1*

```
49     1.0 * SUM(CASE WHEN LOWER(TRIM(COALESCE(Graduated, ''))) = 'yes' T
50     / COUNT(*),
51     2
52   ) AS graduation_rate
53   FROM cohort_data
54   GROUP BY "Which track are you applying for?"
55   ORDER BY participant_count DESC;
56
57
```

	track	avg_score	participant_count	graduation_rate
1	Data Science	69.03	61	0.0
2	Data Analysis	76.25	2	0.0

Average score by track + count + graduation rate

5)

The screenshot shows the DBHub application interface. At the top, there's a menu bar with File, Edit, View, Tools, and Help. Below the menu is a toolbar with icons for New Database, Open Database, Write Changes, Revert Changes, Undo, Open Project, and others. A tab bar includes Database Structure, Browse Data, Edit Pragmas, Execute SQL, and Edit Data. On the right side, there are several status and configuration panels: Mode: Test, NULL, No cell available, Type: NULL, Remote, Identity, DBHub, and Name. The main area contains a SQL editor window titled "SQL 1*" with the following code:

```
61 1.0 * SUM(CASE WHEN LOWER(TRIM(COALESCE(graduated, '')))='yes' THEN
62 / COUNT(*),
63 2
64 ) AS graduation_rate
65 FROM cohort_data
66 GROUP BY country
67 ORDER BY participants DESC, country ASC;
68
69
```

Below the SQL editor is a table result set:

	Country	participants	avg_score	graduation_rate
1	Kenya	62	69.14	0.0
2	South Africa	1	76.67	0.0

At the bottom of the interface, a message box displays the execution results:

```
Execution finished without errors.
Result: 2 rows returned in 5ms
At line 56:
SELECT
    country,
    COUNT(*) AS participants,
    ROUND(AVG(CAST("Total score" AS REAL)), 2) AS avg_score.
```

Top countries represented

6)

The screenshot shows a SQL editor interface with a toolbar at the top containing various icons for file operations. Below the toolbar is a tab labeled "SQL 1*". The code in the editor is as follows:

```
76      THEN 1 ELSE 0 END
77      ) / COUNT(*),
78      2
79  ) AS graduation_rate
80 FROM cohort_data
81 GROUP BY "Age range", "Gender"
82 ORDER BY "Age range", "Gender";
83
84
```

Below the code, the results are displayed in a table:

	age_range	gender	count_learners	avg_score	graduation_rate
1	18-24 years	Female	19	68.19	0.0
2	18-24 years	Male	19	66.46	0.0
3	25-34 years	Female	6	73.22	0.0
4	25-34 years	Male	17	71.56	0.0
5	35-44 years	Male	1	76.0	0.0
6	45-54 years	Female	1	73.33	0.0

At the bottom of the results pane, the message "Execution finished without errors." is displayed, followed by "Result: 6 rows returned in 7ms" and "At line 68: SELECT".

Demographics — age by gender

C) NOW ANALYSIS AND VISUALISATION USING POWER BI

