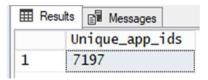# Apple Store Dataset Analysis

--Check the number of unique apps in both tables of Applestore
SELECT COUNT(distinct id) AS Unique_app_ids from AppleStore

	Unique_app_ids
1	7197

SELECT COUNT(distinct id) AS Unique_app_ids from description

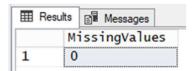|	Unique_app_ids
1	7197

--Check for any missing values in key fields
SELECT COUNT(*) AS MissingValues from AppleStore
where track_name is null or user_rating_ver is null or prime_genre is null
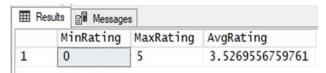
	MissingValues
1	0

SELECT COUNT(*) AS MissingValues from description where app_desc is null

	MissingValues
1	0

--Get an Overview of the app's ratings
SELECT Min(user_rating) AS MinRating, Max(user_rating) AS MaxRating, Avg(user_rating) AS AvgRating
from AppleStore

	MinRating	MaxRating	AvgRating
1	0	5	3.5269556759761

--Determine whether paid apps have better rating than free apps
SELECT CASE WHEN price > 0 THEN 'paid' ELSE 'free' END AS App_Type, AVG(user_rating) AS Avg_Rating
FROM AppleStore
GROUP BY CASE WHEN price > 0 THEN 'paid' ELSE 'free' END

	App_Type	Avg_Rating
1	paid	3.72094874243871
2	free	3.3767258382643

SELECT prime_genre,COUNT(*) AS NumApps from AppleStore group by prime_genre
order by NumApps DESC

SELECT (price / 2) * 2 AS PriceBinStart, ((price / 2) * 2) + 2 AS PriceBinEnd, COUNT(*) AS NumApps
FROM AppleStore
GROUP BY (price / 2) * 2
ORDER BY (price / 2) * 2

Results | **Messages**

	prime_genre	NumApps
1	Games	3862
2	Entertainment	535
3	Education	453
4	Photo & Video	349
5	Utilities	248
6	Health & Fitness	180
7	Productivity	178
8	Social Networ...	167
9	Lifestyle	144
10	Music	138
11	Shopping	122
12	Sports	114
13	Book	112
14	Finance	104
15	Travel	81
16	News	75
17	Weather	72
18	Reference	64
19	Food & Drink	63
20	Business	57
21	Navigation	46
22	Medical	23
23	Catalogs	10

Results | **Messages**

	PriceBinStart	PriceBinEnd	NumApps
1	0	2	4056
2	0.990000009536743	2.99000000953674	728
3	1.99000000953674	3.99000000953674	621
4	2.99000000953674	4.99000000953674	683
5	3.99000000953674	5.99000000953674	277
6	4.98999977111816	6.98999977111816	394
7	5.98999977111816	7.98999977111816	52
8	6.98999977111816	8.98999977111816	166
9	7.98999977111816	9.98999977111816	33
10	8.98999977111816	10.9899997711182	9
11	9.98999977111816	11.9899997711182	81
12	11.9899997711182	13.9899997711182	6
13	12.9899997711182	14.9899997711182	5
14	13.9899997711182	15.9899997711182	6
15	14.9899997711182	16.9899997711182	21
16	15.9899997711182	17.9899997711182	4
17	16.9899997711182	18.9899997711182	2
18	17.9899997711182	19.9899997711182	3
19	18.9899997711182	20.9899997711182	1
20	19.9899997711182	21.9899997711182	13
21	20.9899997711182	22.9899997711182	2
22	21.9899997711182	23.9899997711182	1
23	22.9899997711182	24.9899997711182	2
24	23.9899997711182	25.9899997711182	2
25	24.9899997711182	26.9899997711182	8
26	27.9899997711182	29.9899997711182	2
27	29.9899997711182	31.9899997711182	6
28	34.9900016784668	36.9900016784668	1
29	39.9900016784668	41.9900016784668	2
30	47.9900016784668	49.9900016784668	1
31	49.9900016784668	51.9900016784668	2
32	59.9900016784668	61.9900016784668	3
33	74.9899978637695	76.9899978637695	1
34	99.9899978637695	101.98999786377	1
35	249.990005493164	251.990005493164	1
36	299.989990234375	301.989990234375	1

--Check if app with more language support have higher ratings
SELECT CASE
WHEN lang_num < 10 then '<10 languages'
WHEN lang_num between 10 and 30 then '10-30 languages' ELSE '>30 languages' END as languages_bucket, AVG(user_rating) as Avg_Rating
FROM AppleStore
group by CASE
WHEN lang_num < 10 then '<10 languages'
WHEN lang_num between 10 and 30 then '10-30 languages' ELSE '>30 languages' END
order by Avg_Rating DESC

	languages_bucket	Avg_Rating
1	10-30 languages	4.13051209103841
2	>30 languages	3.77777777777778
3	<10 languages	3.36832740213523

--Check genres with low ratings
select top(10) prime_genre,AVG(user_rating) as Avg_Rating from AppleStore
group by prime_genre
order by Avg_Rating ASC

	prime_genre	Avg_Rating
1	Catalogs	2.1
2	Finance	2.43269230769231
3	Book	2.47767857142857
4	Navigation	2.68478260869565
5	Lifestyle	2.80555555555556
6	News	2.98
7	Sports	2.98245614035088
8	Social Networking	2.98502994011976
9	Food & Drink	3.18253968253968
10	Entertainment	3.24672897196262

-- Check if there is correlation between the length of description and the user rating
SELECT case
when len(d.app_desc) < 500 then 'Short'
when len(d.app_desc) between 500 and 1000 then 'Medium' Else 'Long'
End as descripion_length_bucket,
AVG(user_rating) as Avg_Rating
FROM AppleStore as a
join description as d on a.id = d.id
group by case
when len(d.app_desc) < 500 then 'Short'
when len(d.app_desc) between 500 and 1000 then 'Medium' Else 'Long' End
order by Avg_Rating DESC

	descripion_length_bucket	Avg_Rating
1	Long	3.85594694498804
2	Medium	3.2328094302554
3	Short	2.53361344537815

-- **Check top-rated app for each genre**

```sql
select prime_genre, track_name, user_rating from( select prime_genre, track_name, user_rating,RANK() over(partition by prime_genre order
by user_rating desc, rating_count_tot DESC) AS rank
from AppleStore
)as a
where a.rank = 1
```

Results | Messages

	prime_genre	track_name	user_rating
1	Book	Color Therapy Adult Coloring Book for Adults	5
2	Business	TurboScan™ Pro - document & receipt scanner: sc...	5
3	Catalogs	CPlus for Craigslist app - mobile classifieds	5
4	Education	Elevate - Brain Training and Games	5
5	Entertainment	Bruh-Button	5
6	Finance	Credit Karma: Free Credit Scores, Reports & Alerts	5
7	Food & Drink	Domino's Pizza USA	5
8	Games	Head Soccer	5
9	Health & Fitness	Yoga Studio	5
10	Lifestyle	ipsy - Makeup, subscription and beauty tips	5
11	Medical	Blink Health	5
12	Music	Tenuto	5
13	Navigation	parkOmator – for Apple Watch meter expiration t...	5
14	News	The Guardian	5
15	Photo & Video	Pic Collage - Picture Editor & Photo Collage Maker	5
16	Productivity	VPN Proxy Master - Unlimited WiFi security VPN	5
17	Reference	Sky Guide: View Stars Night or Day	5
18	Shopping	Zappos: shop shoes & clothes, fast free shipping	5
19	Social Networ...	We Heart It - Fashion, wallpapers, quotes, tattoos	5
20	Sports	J23 - Jordan Release Dates and History	5
21	Travel	Urlaubspiraten	5
22	Utilities	Flashlight ☺	5
23	Weather	NOAA Hi-Def Radar Pro - Storm Warnings, Hurric...	5

Insights

- Paid apps have better ratings
- Apps supporting between 10 and 30 languages have better ratings
- Finance and books apps have low ratings
- Apps with a longer description have better ratings
- A new app should aim for an average rating above 3.5
- Games and entertainment have higher competition