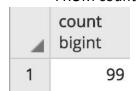# GA PROJECT #2: IOWA LIQUOR DATABASE
SQL QUERIES SAMPLE OUTPUTS

A. SUMMARIZING DATA
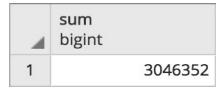### COUNTIES TABLE
- **Count the number of counties in the database**
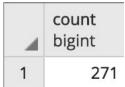 SELECT COUNT(county)
  FROM counties

	count bigint
1	99

- **Sum of total population in database**
  SELECT sum(population)
  FROM counties

	sum bigint
1	3046352

PRODUCTS TABLE
- **Count of the number of unique vendors**
  SELECT COUNT(DISTINCT vendor_name)
  FROM products

	count bigint
1	271

- **Average shelf price**
  SELECT AVG(shelf_price)
  FROM products

	avg numeric
1	27.7696348680910824

- **Average case cost**
  SELECT AVG(case_cost)

FROM products

	avg numeric
1	111.4349062092486709

SALES TABLE

- **Total sales**
  SELECT SUM(total)
  FROM sales

	sum numeric
1	392293023.61

- **Average bottle price**
  SELECT AVG(cast(btl_price as numeric))
  FROM sales

	avg numeric
1	14.3751820494551812

- **Count of liquor categories**
  SELECT COUNT(DISTINCT category_name)
  FROM sales

	count bigint
1	68

STORES TABLE

- **Count of stores**
  SELECT COUNT(DISTINCT name)
  FROM stores

	count bigint
1	1863

- **Inactive/active stores**
  a. Active stores
  SELECT *
  FROM stores
  WHERE store_status = 'A'

store integer	name text	store_status text	store_address text
1411	9907	Cory...	A	2515 Dean Avenue
1412	9908	John ...	A	3108 Cottonwoo...
1413	9909	Wirt...	A	3100 Justin Drive...
1414	9910	Broa...	A	6175 50th Ave
1415	9911	Nort...	A	Urbandale, IA 50...
1416	9912	Sout...	A	Grimes, IA 50111
1417	9913	Iowa...	A	4349 Cumming A...
1418	9914	Wer...	A	5520 190th St.
1419	9915	Sipp'n	A	303 Se 2nd St.
1420	9916	G & ...	A	Des Moines, IA 5...
1421	9917	Hon...	A	29538, 210th St.
1422	9918	Para...	A	245, Railroad Ave
1423	9919	Deh...	A	7500, University ...
1424	9920	Loui...	A	20909, South I-1...
1425	9921	maD...	A	3101, Ingersoll Ave

  b. inactive stores
  SELECT *
  FROM stores
  WHERE store_status = 'I'

store integer	name text	store_status text	store_address text	address_info text
534	4394	KUM...	I	702 Chatburn Ave	[null]
535	4399	KUM...	I	33083 Ute Ave	[null]
536	4400	Kum...	I	413 A Ave W	[null]
537	4407	KUM...	I	1201 E Main St	[null]
538	4422	KUM...	I	104 N Division St	[null]
539	4423	USA ...	I	2293 Hwy 30	[null]
540	4469	Sper...	I	516 Hwy 141	[null]
541	4479	Supe...	I	727 Se 14th St Se	[null]
542	4483	sauce	I	108 E College	[null]
543	4550	NEW...	I	1459 Ansboroug...	[null]
544	4579	USA ...	I	2293 Hwy 30	[null]
545	4587	Inde...	I	1761 Independe...	[null]
546	4666	Supe...	I	2635 Adventurel...	[null]
547	4680	Afal ...	I	4121 Se 14th St	[null]
548	4763	Park...	I	4141 Center Poi...	[null]

B. PURCHASING DATA ANALYSIS

Top 10 best selling product brands based on total sales revenue
SELECT pr.item_description, SUM(s.total) as total_revenue
FROM products pr
INNER JOIN sales s on pr.item_no = s.item
GROUP BY pr.item_description
ORDER BY SUM(s.total) DESC
LIMIT 10;

	item_description text	total_revenue numeric
1	Black Velvet	18315550.64
2	Captain Morgan Spiced Rum	13772752.25
3	Jack Daniels Old #7 Black Lbl	13701656.82
4	Fireball Cinnamon Whiskey	10739495.34
5	Crown Royal Canadian Whisky	9714022.78
6	Hawkeye Vodka	8730823.84
7	Absolut Swedish Vodka 80 Prf	7431864.05
8	Grey Goose Vodka	6444939.38
9	Jagermeister Liqueur	6298430.40
10	Jim Beam	5163920.19

County size based on population
SELECT county, population,
CASE
WHEN population >= 300000 THEN 'large'
WHEN population >= 100000 AND population < 300000 THEN 'medium'
ELSE 'small'
END AS county_size
FROM counties

	county text	population integer	county_size text
1	Adair	7682	small
2	Adams	4029	small
3	Allamakee	14330	small
4	Appanoose	12884	small
5	Audubon	6119	small
6	Benton	26076	small
7	Black Hawk	131090	medium
8	Boone	26306	small
9	Bremer	24276	small
10	Buchanan	20958	small
11	Buena Vista	20260	small
12	Butler	14867	small
13	Calhoun	9670	small

Top 10 vendors by total revenue

```
SELECT pr.vendor_name, SUM(s.total) as total_revenue
FROM products pr
INNER JOIN sales s on pr.item_no = s.item
GROUP BY pr.vendor_name
ORDER BY SUM(s.total) DESC
LIMIT 10;
```

	vendor_name text	total_revenue numeric
1	Diageo Americas	84255873.62
2	Jim Beam Brands	31772152.16
3	Pernod Ricard U...	28157424.53
4	Luxco-st Louis	27244119.39
5	Constellation Wi...	26674158.79
6	Brown-forman C...	25492453.90
7	Sazerac Co. Inc.	22808903.17
8	Bacardi U.s.a. Inc.	21225271.22
9	Sazerac North A...	14501094.58
10	Phillips Beverag...	12429757.59

Top 10 product categories by total revenue

```
SELECT pr.category_name, SUM(s.total) as total_revenue
FROM products pr
INNER JOIN sales s on pr.item_no = s.item
GROUP BY pr.category_name ORDER BY SUM(s.total) DESC
LIMIT 10;
```

	category_name text	total_revenue numeric
1	CANADIAN WHISKIES	48059037.63
2	80 PROOF VODKA	48040023.20
3	SPICED RUM	31586392.99
4	IMPORTED VODKA	23884662.13
5	TEQUILA	21413525.94
6	STRAIGHT BOURBON WHISKIES	20904099.16
7	WHISKEY LIQUEUR	19346811.30
8	TENNESSEE WHISKIES	17600801.58
9	PUERTO RICO & VIRGIN ISLAN...	12729072.76
10	BLENDED WHISKIES	12018198.55

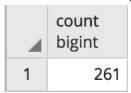**Case costs greater than $100 for Canadian Whiskies**
select * from products
where case_cost > 100 and category_name = 'CANADIAN WHISKIES'

ner_pack nteger	age text	proof text	list_date timestamp without time zone	upc text	scc text	bottle_price money	shelf_price numeric (10,2)	case_cost numeric (10,2)
1	[null]	80	2001-12-03 00:00:00	4841...	4841...	$37.49	56.24	224.94
1	[null]	80	2002-01-31 00:00:00	[null]	1008...	$13.64	20.46	163.68
1	[null]	80	1987-12-15 00:00:00	[null]	8068...	$10.29	15.44	123.47
1	[null]	80	2000-05-26 00:00:00	[null]	5008...	$11.54	17.31	138.50
1	[null]	80	1999-11-10 00:00:00	[null]	9035...	$9.33	14.00	111.92
1	[null]	80	2000-09-19 00:00:00	[null]	[null]	$18.85	28.27	113.09
1	[null]	80	2003-07-14 00:00:00	[null]	[null]	$8.53	12.80	102.35
1	[null]	90	2003-07-23 00:00:00	8711...	1008...	$10.00	15.00	120.00
1	[null]	80	2005-09-23 00:00:00	[null]	1089...	$11.58	17.37	138.96
1	[null]	80	2011-03-11 00:00:00	[null]	[null]	$62.50	93.75	250.00
1	[null]	80	2009-12-04 00:00:00	[null]	[null]	$18.98	28.47	227.81
1	[null]	80	2009-10-28 00:00:00	[null]	1089...	$23.61	35.42	141.65
1	[null]	80	2009-10-28 00:00:00	[null]	1089...	$14.45	21.68	173.37

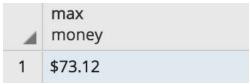**Count the number of Canadian Whiskies**
SELECT COUNT(category_name)
FROM products
WHERE category_name = 'CANADIAN WHISKIES'

	count bigint
1	261

Most expensive price of Canadian Whiskies
SELECT max(bottle_price)
FROM products
WHERE category_name = 'CANADIAN WHISKIES'

	max money
1	$73.12

Cheapest price of Canadian Whiskies
SELECT MIN(bottle_price)
FROM products
WHERE category_name = 'CANADIAN WHISKIES'

	min money
1	$0.38

Top 10 best-selling Canadian Whiskies
SELECT pr.item_description, SUM(s.total) as total_revenue
FROM products pr
INNER JOIN sales s ON pr.item_no = s.item
WHERE pr.category_name LIKE '%CANADIAN WHISKIES%'
GROUP BY pr.item_description
HAVING SUM(s.total) >= 10000
ORDER BY SUM(s.total) DESC
LIMIT 10;

	item_description text	total_revenue numeric
1	Black Velvet	18315550.64
2	Crown Royal Canadian Whisky	9714022.78
3	Crown Royal	4124703.73
4	Canadian Ltd Whisky	2405739.82
5	Canadian Club Whisky	1886339.33
6	Black Velvet Toasted Caramel	1704555.00
7	Windsor Canadian Pet	1287731.28
8	Black Velvet Traveler	1174753.73
9	Canadian Mist Canadian Why Pet	659216.25
10	Black Velvet Reserve	642799.66

Top 10 Canadian Whiskies sales by county
SELECT c.county, SUM(s.total) as total_revenue
FROM sales s
LEFT JOIN counties c ON c.county = s.county
WHERE s.category_name LIKE '% CANADIAN WHISKEY%'
GROUP BY c.county
ORDER BY SUM(s.total) DESC
LIMIT 10;

	county text	total_revenue numeric
1	Polk	7828411.94
2	Linn	3484235.17
3	Black Hawk	2433013.04
4	Scott	2167916.17
5	Woodbury	1725925.86
6	Johnson	1547791.75
7	Story	1377202.14
8	Pottawattamie	1351145.19
9	Cerro Gordo	1313718.69
10	Dubuque	1146222.17

Percentage of product category that is Canadian Whiskies
SELECT ROUND(AVG(CASE WHEN category_name ILIKE '%CANADIAN WHISKIES%' THEN 1 ELSE 0 END),2) AS percent_cadwhiskey
FROM products

	percent_cadwhiskey numeric
1	0.03

Average case cost for Diageo Americas
SELECT AVG(CAST(case_cost as numeric))
FROM products
WHERE vendor_name = 'Diageo Americas'

	avg numeric
1	135.8262183020948181

Average bottle price for Diageo Americas
SELECT AVG(CAST(bottle_price as numeric))
FROM products
WHERE vendor_name = 'Diageo Americas'

	avg numeric
1	18.1583020948180816

Product categories for Diageo Americas
SELECT category_name
FROM products
WHERE vendor_name = 'Diageo Americas'

	category_name text
895	FLAVORED RUM
896	FLAVORED RUM
897	IMPORTED DRY GINS
898	MISC. IMPORTED CORDIALS & LIQUEURS
899	FLAVORED VODKA
900	FLAVORED VODKA
901	SCOTCH WHISKIES
902	FLAVORED VODKA

Top 10 counties based on total sales revenue
SELECT c.county, SUM(s.total) as total_revenue
FROM counties c
LEFT JOIN sales s ON c.county = s.county
GROUP BY c.county
ORDER BY SUM(s.total) DESC
LIMIT 10;

	county text	total_revenue numeric
1	Polk	86397461.79
2	Linn	34460047.49
3	Scott	27902848.67
4	Johnson	24200402.25
5	Black H...	22967283.29
6	Pottawa...	14177698.30
7	Woodb...	13242016.16
8	Story	12267027.18
9	Dubuque	11879190.38
10	Cerro G...	7998958.92

Top 10 performing stores in Polk county based on total sales revenue
SELECT b.name, SUM(s.total) as total_revenue, s.county
FROM sales s

LEFT JOIN stores b ON b.store = s.store
WHERE s.county LIKE '%Polk%'
GROUP BY b.name, s.county

	name text	total_revenue numeric	county text
1	Adventureland Inn	106547.26	Polk
2	Best Food Mart / D...	112114.02	Polk
3	Cambridge Country...	44185.09	Polk
4	Casey's General Sto...	22281.54	Polk
5	Casey's General Sto...	91407.13	Polk
6	Casey's General Sto...	36951.48	Polk
7	Casey's General Sto...	43356.46	Polk
8	Casey's General Sto...	64300.86	Polk
9	Casey's General Sto...	44522.34	Polk
10	Casey's General Sto...	48759.15	Polk

Top 10 performing product brands in Polk county based on total sales revenue
SELECT s.county, SUM(s.total) as total_revenue, s.description as product_description, s.store
FROM sales s
LEFT JOIN stores b ON b.store = s.store
WHERE s.county LIKE '%Polk%'
GROUP BY s.county, s.store, s.description

	county text	total_revenue numeric	product_description text	store integer
20	Polk	2069.58	Aberlour 16yr Scotch	2190
21	Polk	2249.70	Aberlour 18yr	2190
22	Polk	3599.40	Aberlour A'bunadh 10yr	2190
23	Polk	1428.20	Absente	2190
24	Polk	762.99	Absolut Apeach	2190
25	Polk	349.28	Absolut Cilantro	2190
26	Polk	2729.72	Absolut Citron (lemon V...	2190
27	Polk	34.48	Absolut Citron w/Cranb...	2190
28	Polk	68.96	Absolut Hibiskus	2190
29	Polk	523.18	Absolut Mandrin	2190

Top 10 performing product categories in Polk county based on total sales revenue
SELECT s.county, SUM(s.total) as total_revenue, s.category_name as product_category, s.store
FROM sales s
LEFT JOIN stores b ON b.store = s.store
WHERE s.county LIKE '%Polk%'
GROUP BY s.county, s.store, s.category_name

	county text	total_revenue numeric	product_category text	store integer
1	Polk	804.98	100 PROOF VODKA	2190
2	Polk	182437.38	80 PROOF VODKA	2190
3	Polk	3520.00	AMERICAN ALCOHOL	2190
4	Polk	585.65	AMERICAN AMARETTO	2190
5	Polk	12325.25	AMERICAN COCKTAILS	2190
6	Polk	71762.64	AMERICAN DRY GINS	2190
7	Polk	74088.36	AMERICAN GRAPE B…	2190
8	Polk	141.78	AMERICAN SLOE GINS	2190
9	Polk	28.00	ANISETTE	2190
10	Polk	1434.76	APPLE SCHNAPPS	2190
11	Polk	252.77	APRICOT BRANDIES	2190
12	Polk	5205.27	BARBADOS RUM	2190
13	Polk	465.55	BLACKBERRY BRAND…	2190

Top 10 performing stores by total sales revenue
SELECT b.name, SUM(s.total) as total_revenue, s.store
FROM sales s
LEFT JOIN stores b ON b.store = s.store
GROUP BY b.name, s.store
ORDER BY SUM(s.total) DESC
LIMIT 10;

	name text	total_revenue numeric	store integer
1	Hy-vee #3 / Bdi / Des Moines	13920087.22	2633
2	Central City 2	11942399.97	4829
3	Sam's Club 6344 / Windsor Hei…	6159480.06	3420
4	Sam's Club 8162 / Cedar Rapids	5734721.57	3385
5	Hy-vee Wine and Spirits / Iowa …	5665143.70	2512
6	Costco Wholesale #788	4907465.88	3814
7	Lot-a-spirits	4289169.59	3952
8	Sam's Club 8238 / Davenport	3308625.56	3354
9	Hy-Vee Wine and Spirits #2	3169984.14	2625
10	Benz Distributing	3129506.57	3773

Top 10 stores with average bottle prices higher than $20
SELECT b.name, AVG(CAST(s.btl_price AS numeric)) as avg_bottleprice
FROM sales s
LEFT JOIN stores b ON b.store = s.store
GROUP BY b.name
HAVING AVG(CAST(s.btl_price AS numeric)) >= 20
ORDER BY avg_bottleprice DESC

LIMIT 10;

	name text	avg_bottleprice numeric
1	Grand Falls Casino Resort	28.5966856330014225
2	Vom Fass / Des Moines	28.4895490196078431
3	Hard Rock Hotel & Casino Sioux City	27.6222246220302376
4	Lake Ohana Market / Mineola	26.8973148148148148
5	Cork & Bottle / Iowa City	26.4157142857142857
6	Costco Wholesale #1111 / Coralville	25.7014957507082153
7	C Fresh Market	25.5302830188679245
8	Costco Wholesale #788	24.8038430059523810
9	Paradise Distilling Company	24.2500000000000000
10	New Pioneer Food Co-op / Center Poi	24.2218644067796610

Top 10 selling product brands at Hy-vee #3
SELECT b.name, SUM(s.total) as total_revenue, s.description as product_description, s.store
FROM sales s
LEFT JOIN stores b ON b.store = s.store
WHERE b.name LIKE '%Hy-vee #3 / Bdi / Des Moines%'
GROUP BY b.name, s.store, s.description
ORDER BY total_revenue DESC
LIMIT 10;

	name text	total_revenue numeric	product_description text	store integer
1	Hy-vee #3 / Bdi / De…	957519.36	Fireball Cinnamon Whiskey	2633
2	Hy-vee #3 / Bdi / De…	839834.28	Captain Morgan Spiced Rum	2633
3	Hy-vee #3 / Bdi / De…	753256.44	Crown Royal Canadian Whisky	2633
4	Hy-vee #3 / Bdi / De…	594677.10	Juarez Tequila Gold	2633
5	Hy-vee #3 / Bdi / De…	570558.24	Jack Daniels Old #7 Black Lbl	2633
6	Hy-vee #3 / Bdi / De…	429399.00	Patron Tequila Silver	2633
7	Hy-vee #3 / Bdi / De…	424372.08	Grey Goose Vodka	2633
8	Hy-vee #3 / Bdi / De…	379759.12	Jagermeister Liqueur	2633
9	Hy-vee #3 / Bdi / De…	330783.36	Absolut Swedish Vodka 80 Prf	2633
10	Hy-vee #3 / Bdi / De…	313005.60	Phillips Vodka	2633