

- 15 licensed providers (chiropractors, massage therapists, physical therapists, acupuncturists)
- 200+ appointments across 15 different service types
- Billing and invoicing system
- Membership program management
- Product sales tracking

Database Statistics

Metric	Count
Total Tables	14
Total Records	497
Locations	5
Patients	50
Providers	15
Services	15
Appointments	200
Invoices	147
Payments	120

Key Features

- **Referential Integrity:** All foreign key relationships properly enforced
- **No Auto-Increment:** Primary keys manually assigned as required
- **Comprehensive Queries:** Complex multi-table JOINS, subqueries, and aggregations
- **Business Intelligence:** Actionable insights derived from query results
- **Professional Documentation:** Complete technical and business analysis

SQL Queries and Results

Query 1: List all appointments with patient name, provider name, service name, appointment date, and status -- Sort by date ascending

SQL Query:

```
SELECT a.appointment_id,  
       p.first_name || ' ' || p.last_name AS patient_name,  
       pr.first_name || ' ' || pr.last_name AS provider_name,  
       s.service_name,  
       a.appointment_date,  
       a.status  
FROM appointments a  
JOIN patients p ON a.patient_id = p.patient_id  
JOIN providers pr ON a.provider_id = pr.provider_id  
JOIN services s ON a.service_id = s.service_id  
  
ORDER BY a.appointment_date ASC;
```

Output:

appointment_id	patient_name	provider_name	service_name	appointment_date	status
66	Ava Adams	Linda Gomez	Stretch Therapy	2024-01-01	Cancelled
50	Sarah Lopez	Hannah Hall	Deep Tissue Massage	2024-01-03	Cancelled
148	Maria Gomez	Olivia Wright	Relaxation Massage	2024-01-03	Scheduled
58	Karen Scott	Victor Brown	Electro Therapy	2024-01-04	Scheduled
113	Daniel Lewis	Robert Rodriguez	Cupping Therapy	2024-01-04	Cancelled
82	Daniel Miller	Michael Lewis	Cold Laser Treatment	2024-01-04	Scheduled
189	John Young	Olivia Miller	Follow-up PT Session	2024-01-05	Scheduled
28	James Lewis	Michael Lewis	Deep Tissue Massage	2024-01-06	No-Show

appointment_id	patient_name	provider_name	service_name	appointment_date	status
171	James Rodriguez	Ava Young	Cold Laser Treatment	2024-01-07	Completed
149	Victor Gomez	Linda Gomez	Chiropractic Adjustment	2024-01-08	No-Show
6	Maria King	Olivia Turner	Deep Tissue Massage	2024-01-08	Completed
97	Diana Miller	Michael Lewis	Follow-up PT Session	2024-01-09	No-Show
108	David Baker	Linda Gomez	Relaxation Massage	2024-01-10	Completed
54	Emily Adams	Olivia Miller	Follow-up PT Session	2024-01-10	Cancelled
76	Daniel Miller	Sarah Wright	Cupping Therapy	2024-01-11	Completed
184	Hannah Wilson	Victor Brown	Relaxation Massage	2024-01-11	Scheduled
14	David Baker	James Nguyen	Prenatal Massage	2024-01-12	No-Show
23	Robert Wilson	Sarah Wright	Acupuncture Session	2024-01-13	Cancelled
120	Emily Doe	Robert Rodriguez	Hot Stone Therapy	2024-01-13	Cancelled
110	Diana Wilson	Olivia Turner	Physical Therapy Eval	2024-01-13	No-Show
12	Emily Martinez	Olivia Wright	Physical Therapy Eval	2024-01-14	No-Show
117	Hannah Rodriguez	Sarah Wright	Corrective Exercise	2024-01-15	Scheduled
34	Linda Hall	Chris Lopez	Corrective Exercise	2024-01-16	Cancelled
119	Robert Wilson	Robert Rodriguez	Sports Massage	2024-01-17	Scheduled
3	Tyler Nguyen	Michael Lewis	Spinal Decompression	2024-01-17	Scheduled

appointment_id	patient_name	provider_name	service_name	appointment_date	status
177	Daniel Turner	Linda Wright	Sports Massage	2024-01-17	Cancelled
96	Emily Doe	Linda Wright	Physical Therapy Eval	2024-01-18	Scheduled
195	Daniel Turner	Linda Gomez	Acupuncture Session	2024-01-19	Cancelled
157	Emily Adams	Hannah Brown	Follow-up PT Session	2024-01-20	No-Show
93	Sarah Lopez	David Wilson	Relaxation Massage	2024-01-20	No-Show
65	Emily Martinez	James Nguyen	Corrective Exercise	2024-01-21	Scheduled
100	Maria Wilson	Robert Rodriguez	Cupping Therapy	2024-01-21	Cancelled
11	Linda Scott	Chris Lopez	Follow-up PT Session	2024-01-22	No-Show
45	Chris Rodriguez	James Nguyen	Electro Therapy	2024-01-23	No-Show
127	Robert Wilson	Michael Lewis	Acupuncture Session	2024-01-24	Scheduled
126	Emily Martinez	Linda Gomez	Physical Therapy Eval	2024-01-25	No-Show
7	Karen Miller	Victor Brown	Sports Massage	2024-01-26	Scheduled
166	Maria King	Ava Young	Stretch Therapy	2024-01-28	No-Show
143	Daniel Miller	Robert Rodriguez	Spinal Decompression	2024-01-29	Cancelled
31	Victor Doe	David Wilson	Electro Therapy	2024-01-30	Cancelled
138	Daniel Miller	Olivia Wright	Follow-up PT Session	2024-01-30	Completed
130	Diana Miller	Robert Rodriguez	Deep Tissue Massage	2024-01-30	No-Show

appointment_id	patient_name	provider_name	service_name	appointment_date	status
175	Tyler Nguyen	Hannah Brown	Corrective Exercise	2024-01-30	Completed
29	Sarah Lopez	Olivia Miller	Stretch Therapy	2024-01-31	Cancelled
74	Ava Nguyen	Linda Wright	Hot Stone Therapy	2024-01-31	No-Show
86	Hannah Rodriguez	David Wilson	Sports Massage	2024-01-31	No-Show
172	Sarah Lopez	Olivia Turner	Corrective Exercise	2024-02-01	Scheduled
144	David Baker	James Nguyen	Cupping Therapy	2024-02-01	Scheduled
123	Robert Wilson	Ava Young	Physical Therapy Eval	2024-02-02	Scheduled
79	Chris Rodriguez	Hannah Brown	Deep Tissue Massage	2024-02-02	Cancelled
137	Ava Nguyen	Olivia Wright	Corrective Exercise	2024-02-03	Scheduled
84	Emily Doe	James Nguyen	Physical Therapy Eval	2024-02-03	Completed
17	Maria Wright	James Nguyen	Sports Massage	2024-02-04	Completed
174	John Rodriguez	Hannah Hall	Prenatal Massage	2024-02-06	Cancelled
94	Michael Lewis	Victor Brown	Prenatal Massage	2024-02-06	Scheduled
139	Linda Scott	Olivia Turner	Follow-up PT Session	2024-02-06	Scheduled
176	Linda Hall	Chris Lopez	Prenatal Massage	2024-02-06	No-Show
132	John Rodriguez	Olivia Wright	Follow-up PT Session	2024-02-06	Cancelled
197	Michael King	Olivia Wright	Hot Stone Therapy	2024-02-06	Cancelled

appointment_id	patient_name	provider_name	service_name	appointment_date	status
73	Maria Gomez	Olivia Miller	Deep Tissue Massage	2024-02-06	No-Show
102	Maria Rodriguez	Hannah Brown	Cold Laser Treatment	2024-02-07	Scheduled
155	Maria Wilson	Ava Young	Sports Massage	2024-02-08	Scheduled
191	David Baker	Olivia Turner	Cold Laser Treatment	2024-02-08	Completed
24	Ava Nguyen	Ava Young	Prenatal Massage	2024-02-08	Scheduled
105	Victor Lewis	Hannah Hall	Hot Stone Therapy	2024-02-08	No-Show
147	Daniel Miller	Chris Lopez	Hot Stone Therapy	2024-02-09	Cancelled
44	Victor Gomez	Hannah Brown	Sports Massage	2024-02-10	Cancelled
193	Daniel Miller	Linda Gomez	Stretch Therapy	2024-02-10	Cancelled
101	Karen Miller	Michael Lewis	Acupuncture Session	2024-02-11	Completed
116	Jason Brown	James Nguyen	Electro Therapy	2024-02-12	Scheduled
85	Sarah Stone	Ava Young	Stretch Therapy	2024-02-12	Completed
99	Daniel Turner	Robert Rodriguez	Physical Therapy Eval	2024-02-13	No-Show
183	Maria Rodriguez	James Nguyen	Chiropractic Adjustment	2024-02-15	Scheduled
4	Karen Brown	Hannah Brown	Deep Tissue Massage	2024-02-15	No-Show
167	Maria Wright	Linda Wright	Cold Laser Treatment	2024-02-15	Cancelled
64	Ava Adams	Olivia Wright	Sports Massage	2024-02-16	Scheduled

appointment_id	patient_name	provider_name	service_name	appointment_date	status
162	Maria Wilson	Olivia Wright	Cold Laser Treatment	2024-02-16	Scheduled
41	Ava Nguyen	Sarah Wright	Prenatal Massage	2024-02-16	Cancelled
5	Sarah Lopez	David Wilson	Physical Therapy Eval	2024-02-16	No-Show
112	Maria Rodriguez	Victor Brown	Cold Laser Treatment	2024-02-17	Completed
160	Maria Rodriguez	Sarah Wright	Chiropractic Adjustment	2024-02-19	Completed
30	Maria King	Ava Young	Spinal Decompression	2024-02-20	Completed
169	Robert Wilson	Robert Rodriguez	Relaxation Massage	2024-02-20	Completed
62	Emily Adams	Chris Lopez	Cupping Therapy	2024-02-22	Cancelled
92	Maria Gomez	Robert Rodriguez	Prenatal Massage	2024-02-22	Completed
115	James Lewis	Linda Gomez	Cupping Therapy	2024-02-22	No-Show
107	Sarah Lopez	Hannah Hall	Follow-up PT Session	2024-02-23	Cancelled
129	Tyler Nguyen	Ava Young	Cupping Therapy	2024-02-23	No-Show
95	Hannah Rodriguez	Olivia Miller	Electro Therapy	2024-02-23	No-Show
32	Hannah Rodriguez	Linda Wright	Electro Therapy	2024-02-24	No-Show
46	Emily Adams	Sarah Wright	Cupping Therapy	2024-02-24	Completed
140	Daniel Lewis	James Nguyen	Acupuncture Session	2024-02-24	Scheduled
122	Ava Adams	Olivia Wright	Cold Laser Treatment	2024-02-24	Completed

appointment_id	patient_name	provider_name	service_name	appointment_date	status
78	Maria Wilson	James Nguyen	Deep Tissue Massage	2024-02-25	Cancelled
125	Diana Wilson	Michael Lewis	Follow-up PT Session	2024-02-26	No-Show
192	Emily Doe	Chris Lopez	Hot Stone Therapy	2024-02-27	Completed
156	David Baker	Chris Lopez	Sports Massage	2024-02-28	Completed
163	Diana Miller	Hannah Hall	Chiropractic Adjustment	2024-02-28	Cancelled
133	John Rodriguez	Hannah Hall	Electro Therapy	2024-02-29	Completed
15	Karen Brown	Chris Lopez	Relaxation Massage	2024-02-29	Completed
151	Chris Rodriguez	David Wilson	Corrective Exercise	2024-03-01	No-Show
69	Karen Miller	Olivia Turner	Relaxation Massage	2024-03-02	Cancelled
154	Sarah Wright	Michael Lewis	Physical Therapy Eval	2024-03-02	Completed
60	Emily Doe	Linda Gomez	Physical Therapy Eval	2024-03-02	Cancelled
72	Ava Young	David Wilson	Sports Massage	2024-03-02	No-Show
135	Victor Wilson	Chris Lopez	Stretch Therapy	2024-03-03	Scheduled
40	Daniel Turner	Hannah Brown	Follow-up PT Session	2024-03-03	Cancelled
35	James Rodriguez	Olivia Turner	Prenatal Massage	2024-03-03	Completed
181	Ava Nguyen	James Nguyen	Physical Therapy Eval	2024-03-04	No-Show
55	Victor Doe	James Nguyen	Deep Tissue Massage	2024-03-05	Cancelled

appointment_id	patient_name	provider_name	service_name	appointment_date	status
145	Emily Martinez	Sarah Wright	Follow-up PT Session	2024-03-05	Completed
170	Robert Wilson	Hannah Hall	Physical Therapy Eval	2024-03-05	Completed
77	Emily Adams	Hannah Brown	Prenatal Massage	2024-03-06	No-Show
124	Tyler Nguyen	Sarah Wright	Physical Therapy Eval	2024-03-06	Completed
38	Karen Scott	Hannah Brown	Corrective Exercise	2024-03-06	No-Show
47	Victor Nguyen	Olivia Wright	Relaxation Massage	2024-03-07	Scheduled
186	Daniel Lewis	Chris Lopez	Chiropractic Adjustment	2024-03-07	Completed
161	Victor Doe	Sarah Wright	Cupping Therapy	2024-03-08	Cancelled
26	Karen Miller	Sarah Wright	Cupping Therapy	2024-03-08	Cancelled
179	Ava Young	Linda Gomez	Follow-up PT Session	2024-03-08	Cancelled
68	Michael King	Olivia Turner	Spinal Decompression	2024-03-08	Scheduled
106	Diana Miller	James Nguyen	Deep Tissue Massage	2024-03-08	Cancelled
2	Victor Gomez	Linda Wright	Cupping Therapy	2024-03-09	Cancelled
75	Daniel Turner	Sarah Wright	Sports Massage	2024-03-09	Cancelled
21	Maria Gomez	Linda Wright	Physical Therapy Eval	2024-03-11	Completed
121	Diana Miller	Sarah Wright	Hot Stone Therapy	2024-03-11	Completed
196	Karen Miller	Olivia Turner	Deep Tissue Massage	2024-03-11	Completed

appointment_id	patient_name	provider_name	service_name	appointment_date	status
141	Michael Lewis	Olivia Wright	Chiropractic Adjustment	2024-03-12	Cancelled
56	Linda Scott	Hannah Brown	Stretch Therapy	2024-03-12	Scheduled
198	David Baker	Hannah Hall	Electro Therapy	2024-03-13	Completed
13	Ava Adams	Linda Gomez	Cold Laser Treatment	2024-03-13	No-Show
180	Emily Doe	Olivia Wright	Stretch Therapy	2024-03-14	Cancelled
1	James Lewis	James Nguyen	Hot Stone Therapy	2024-03-15	Cancelled
153	Daniel Turner	Victor Brown	Follow-up PT Session	2024-03-15	Scheduled
190	Tyler Nguyen	Olivia Wright	Deep Tissue Massage	2024-03-15	Scheduled
178	Emily Doe	Robert Rodriguez	Prenatal Massage	2024-03-17	Cancelled
114	Michael Lewis	Olivia Miller	Spinal Decompression	2024-03-17	Completed
87	Hannah Doe	Olivia Turner	Spinal Decompression	2024-03-18	No-Show
146	Victor Doe	Linda Wright	Spinal Decompression	2024-03-18	Scheduled
91	Hannah Wilson	Victor Brown	Electro Therapy	2024-03-19	Cancelled
25	Ava Nguyen	James Nguyen	Deep Tissue Massage	2024-03-19	Scheduled
42	Ava Adams	Olivia Miller	Chiropractic Adjustment	2024-03-19	Completed
81	Karen Scott	Chris Lopez	Sports Massage	2024-03-21	No-Show

appointment_id	patient_name	provider_name	service_name	appointment_date	status
173	Maria Rodriguez	Linda Wright	Hot Stone Therapy	2024-03-22	Scheduled
128	Victor Lewis	Olivia Miller	Prenatal Massage	2024-03-22	Completed
89	Emily Doe	Linda Gomez	Hot Stone Therapy	2024-03-23	Cancelled
61	Karen Brown	Michael Lewis	Cupping Therapy	2024-03-23	Cancelled
131	Hannah Wilson	Linda Wright	Relaxation Massage	2024-03-25	Completed
27	Victor Lewis	Michael Lewis	Deep Tissue Massage	2024-03-25	Completed
194	Daniel Turner	Ava Young	Spinal Decompression	2024-03-25	Completed
37	Sarah Wright	Linda Wright	Electro Therapy	2024-03-25	Scheduled
88	Daniel Miller	Chris Lopez	Relaxation Massage	2024-03-27	No-Show
43	Daniel Miller	Linda Wright	Cold Laser Treatment	2024-03-30	Scheduled
188	Diana Scott	Linda Wright	Cold Laser Treatment	2024-03-30	Completed
48	James Rodriguez	James Nguyen	Cold Laser Treatment	2024-04-01	No-Show
19	John Rodriguez	Ava Young	Prenatal Massage	2024-04-01	Completed
90	Linda Scott	Robert Rodriguez	Corrective Exercise	2024-04-01	Scheduled
70	Emily Martinez	Olivia Wright	Sports Massage	2024-04-01	Cancelled
165	Sarah Stone	Sarah Wright	Chiropractic Adjustment	2024-04-03	Cancelled
51	Maria King	James Nguyen	Cold Laser Treatment	2024-04-03	No-Show

appointment_id	patient_name	provider_name	service_name	appointment_date	status
22	Michael Lewis	Olivia Turner	Deep Tissue Massage	2024-04-03	Completed
164	Diana Miller	James Nguyen	Corrective Exercise	2024-04-04	No-Show
20	Daniel Turner	Linda Gomez	Sports Massage	2024-04-05	Scheduled
150	Ava Adams	Olivia Miller	Relaxation Massage	2024-04-05	Cancelled
134	Daniel Turner	Victor Brown	Prenatal Massage	2024-04-05	Completed
103	Daniel Miller	Hannah Hall	Corrective Exercise	2024-04-07	Cancelled
9	Karen Scott	Olivia Turner	Cupping Therapy	2024-04-07	No-Show
168	Maria Gomez	Olivia Miller	Electro Therapy	2024-04-08	Scheduled
109	Diana Scott	Hannah Hall	Stretch Therapy	2024-04-08	No-Show
10	Hannah Wilson	Sarah Wright	Prenatal Massage	2024-04-09	No-Show
67	Jason Brown	Hannah Brown	Spinal Decompression	2024-04-09	Cancelled
52	Maria Wright	Chris Lopez	Stretch Therapy	2024-04-10	Completed
8	Maria Wright	Ava Young	Cupping Therapy	2024-04-10	Cancelled
83	Maria King	Olivia Wright	Hot Stone Therapy	2024-04-10	No-Show
185	Michael Lewis	Olivia Miller	Prenatal Massage	2024-04-12	No-Show
182	Daniel Turner	Olivia Turner	Sports Massage	2024-04-13	Completed
98	Daniel Miller	Linda Gomez	Chiropractic Adjustment	2024-04-14	Completed

appointment_id	patient_name	provider_name	service_name	appointment_date	status
39	Chris Rodriguez	Ava Young	Relaxation Massage	2024-04-15	Scheduled
80	Diana Miller	Linda Gomez	Sports Massage	2024-04-16	Scheduled
49	Sarah Wright	Robert Rodriguez	Physical Therapy Eval	2024-04-16	No-Show
71	Emily Doe	Ava Young	Cupping Therapy	2024-04-16	Scheduled
18	Sarah Lopez	Hannah Hall	Prenatal Massage	2024-04-16	Cancelled
136	Karen Miller	Linda Wright	Deep Tissue Massage	2024-04-18	Scheduled
53	Victor Wilson	Olivia Miller	Spinal Decompression	2024-04-19	Completed
187	Michael Lewis	Olivia Wright	Acupuncture Session	2024-04-19	Completed
199	John Rodriguez	David Wilson	Cupping Therapy	2024-04-19	Cancelled
63	Tyler Nguyen	Olivia Miller	Corrective Exercise	2024-04-20	Completed
118	Michael Lewis	Ava Young	Deep Tissue Massage	2024-04-21	Scheduled
104	Linda Scott	Ava Young	Cold Laser Treatment	2024-04-21	Completed
57	Linda Adams	Sarah Wright	Relaxation Massage	2024-04-21	Cancelled
16	Sarah Lopez	Linda Wright	Chiropractic Adjustment	2024-04-21	Scheduled
158	Jason Brown	James Nguyen	Relaxation Massage	2024-04-22	Cancelled
142	Linda Hall	Victor Brown	Stretch Therapy	2024-04-23	No-Show
36	Hannah Wilson	Olivia Miller	Physical Therapy Eval	2024-04-24	Completed

appointment_id	patient_name	provider_name	service_name	appointment_date	status
33	Jason Brown	Hannah Brown	Hot Stone Therapy	2024-04-25	Completed
59	Karen Brown	James Nguyen	Spinal Decompression	2024-04-28	Completed
159	Maria King	Hannah Hall	Follow-up PT Session	2024-04-28	Completed
200	Emily Martinez	Olivia Miller	Cold Laser Treatment	2024-04-28	No-Show
152	Maria Rodriguez	Victor Brown	Electro Therapy	2024-04-29	Scheduled
111	Karen Scott	Ava Young	Prenatal Massage	2024-04-29	No-Show

Query 2: -- Show all patients who have NEVER had an appointment

SQL Query:

SELECT

patient_id,
first_name || ' ' || last_name **AS** patient_name,
email,
phone
FROM patients

WHERE patient_id **NOT IN** (SELECT DISTINCT patient_id **FROM** appointments);

Output:

patient_id	patient_name	email	phone
10	James Lewis	james.lewis9@email.com	555-1009
30	Maria Lopez	maria.lopez29@email.com	555-1029

Query 3: -- For each provider, show total number of appointments completed

SQL Query:

```
SELECT

pr.provider_id,
pr.first_name || ' ' || pr.last_name AS provider_name,
pr.specialty,
COUNT(*) AS completed_appointments
FROM providers pr
JOIN appointments a ON pr.provider_id = a.provider_id
WHERE a.status = 'Completed'
GROUP BY pr.provider_id, pr.first_name, pr.last_name, pr.specialty
HAVING COUNT(*) > 10

ORDER BY completed_appointments DESC;
```

Output:

Query 4: -- List all invoices that are overdue (invoice due date passed AND no payment)

SQL Query:

```
SELECT

i.invoice_id,
p.first_name || ' ' || p.last_name AS patient_name,
a.appointment_date,
i.total_amount,
i.invoice_date,
i.due_date
FROM invoices i
JOIN appointments a ON i.appointment_id = a.appointment_id
JOIN patients p ON a.patient_id = p.patient_id
LEFT JOIN payments pay ON i.invoice_id = pay.invoice_id
WHERE i.due_date < CURRENT_DATE
AND pay.payment_id IS NULL

ORDER BY i.due_date ASC;
```

Output:

invoice_id	patient_name	appointment_date	total_amount	invoice_date	due_date
42	Karen Scott	2024-01-04	70.00	2024-01-04	2024-02-03
140	John Young	2024-01-05	115.00	2024-01-05	2024-02-04
52	Daniel Miller	2024-01-11	65.00	2024-01-11	2024-02-10
135	Hannah Wilson	2024-01-11	90.00	2024-01-11	2024-02-10
78	Diana Wilson	2024-01-13	150.00	2024-01-13	2024-02-12
68	Emily Doe	2024-01-18	150.00	2024-01-18	2024-02-17
58	Emily Doe	2024-02-03	150.00	2024-02-03	2024-03-04
14	Maria Wright	2024-02-04	110.00	2024-02-04	2024-03-05
116	Maria Wilson	2024-02-08	110.00	2024-02-08	2024-03-09
142	David Baker	2024-02-08	85.00	2024-02-08	2024-03-09
3	Sarah Lopez	2024-02-16	150.00	2024-02-16	2024-03-17
95	Tyler Nguyen	2024-02-23	65.00	2024-02-23	2024-03-24
143	Emily Doe	2024-02-27	140.00	2024-02-27	2024-03-28
98	John Rodriguez	2024-02-29	70.00	2024-02-29	2024-03-30
100	Victor Wilson	2024-03-03	70.00	2024-03-03	2024-04-02
47	Michael King	2024-03-08	100.00	2024-03-08	2024-04-07
145	Karen Miller	2024-03-11	120.00	2024-03-11	2024-04-10

invoice_id	patient_name	appointment_date	total_amount	invoice_date	due_date
146	David Baker	2024-03-13	70.00	2024-03-13	2024-04-12
141	Tyler Nguyen	2024-03-15	120.00	2024-03-15	2024-04-14
61	Hannah Doe	2024-03-18	100.00	2024-03-18	2024-04-17
20	Ava Nguyen	2024-03-19	120.00	2024-03-19	2024-04-18
144	Daniel Turner	2024-03-25	100.00	2024-03-25	2024-04-24
139	Diana Scott	2024-03-30	85.00	2024-03-30	2024-04-29
133	Daniel Turner	2024-04-13	110.00	2024-04-13	2024-05-13
138	Michael Lewis	2024-04-19	95.00	2024-04-19	2024-05-19
147	Emily Martinez	2024-04-28	85.00	2024-04-28	2024-05-28
119	Maria King	2024-04-28	115.00	2024-04-28	2024-05-28

Query 5: -- Show top 5 most frequently used services based on appointment count

SQL Query:

SELECT

s.service_id,
 s.service_name,
 s.category,
 s.base_price,
 COUNT(*) AS appointment_count
FROM services s
JOIN appointments a **ON** s.service_id = a.service_id
GROUP BY s.service_id, s.service_name, s.category, s.base_price
ORDER BY appointment_count **DESC**

LIMIT 5;

Output:

service_id	service_name	category	base_price	appointment_count
2	Deep Tissue Massage	Massage	120.00	17
11	Prenatal Massage	Massage	105.00	17
9	Sports Massage	Massage	110.00	16
4	Physical Therapy Eval	PT	150.00	16
7	Cupping Therapy	Acupuncture	65.00	16

Query 6: -- Find all patients who purchased products totaling more than \$100 across all purchases

SQL Query:

```
SELECT
    p.patient_id,
    p.first_name || ' ' || p.last_name AS patient_name,
    SUM(ps.total_amount) AS total_purchases
FROM patients p
JOIN product_sales ps ON p.patient_id = ps.patient_id
GROUP BY p.patient_id, p.first_name, p.last_name
HAVING SUM(ps.total_amount) > 100

ORDER BY total_purchases DESC;
```

Output:

Query 7: -- List all providers who offer services at locations outside their assigned home location

SQL Query:

```
SELECT DISTINCT
    pr.provider_id,
```

```

pr.first_name || ' ' || pr.last_name AS provider_name,
pr.specialty,
l_home.name AS home_location,
l_appt.name AS appointment_location
FROM providers pr
JOIN appointments a ON pr.provider_id = a.provider_id
JOIN rooms r ON a.room_id = r.room_id
JOIN locations l_appt ON r.location_id = l_appt.location_id
JOIN locations l_home ON pr.location_id = l_home.location_id
WHERE r.location_id != pr.location_id

ORDER BY pr.provider_id;

```

Output:

provider_id	provider_name	specialty	home_location	appointment_location
1	Sarah Wright	Massage Therapist	WellnessCare North	WellnessCare Clearwater
1	Sarah Wright	Massage Therapist	WellnessCare North	WellnessCare Downtown
1	Sarah Wright	Massage Therapist	WellnessCare North	WellnessCare St Pete
1	Sarah Wright	Massage Therapist	WellnessCare North	WellnessCare Wesley Chapel
2	Hannah Hall	Chiropractor	WellnessCare Downtown	WellnessCare Clearwater
2	Hannah Hall	Chiropractor	WellnessCare Downtown	WellnessCare North
2	Hannah Hall	Chiropractor	WellnessCare Downtown	WellnessCare St Pete
2	Hannah Hall	Chiropractor	WellnessCare Downtown	WellnessCare Wesley Chapel
3	Robert Rodriguez	Physical Therapist	WellnessCare St Pete	WellnessCare Clearwater
3	Robert Rodriguez	Physical Therapist	WellnessCare St Pete	WellnessCare Downtown
3	Robert Rodriguez	Physical Therapist	WellnessCare St Pete	WellnessCare North

provider_id	provider_name	specialty	home_location	appointment_location
3	Robert Rodriguez	Physical Therapist	WellnessCare St Pete	WellnessCare Wesley Chapel
4	Chris Lopez	Chiropractor	WellnessCare Downtown	WellnessCare Clearwater
4	Chris Lopez	Chiropractor	WellnessCare Downtown	WellnessCare North
4	Chris Lopez	Chiropractor	WellnessCare Downtown	WellnessCare St Pete
4	Chris Lopez	Chiropractor	WellnessCare Downtown	WellnessCare Wesley Chapel
5	Ava Young	Acupuncturist	WellnessCare Wesley Chapel	WellnessCare Clearwater
5	Ava Young	Acupuncturist	WellnessCare Wesley Chapel	WellnessCare Downtown
5	Ava Young	Acupuncturist	WellnessCare Wesley Chapel	WellnessCare North
5	Ava Young	Acupuncturist	WellnessCare Wesley Chapel	WellnessCare St Pete
6	Olivia Wright	Chiropractor	WellnessCare Downtown	WellnessCare Clearwater
6	Olivia Wright	Chiropractor	WellnessCare Downtown	WellnessCare North
6	Olivia Wright	Chiropractor	WellnessCare Downtown	WellnessCare St Pete
7	David Wilson	Massage Therapist	WellnessCare North	WellnessCare Clearwater
7	David Wilson	Massage Therapist	WellnessCare North	WellnessCare Downtown
7	David Wilson	Massage Therapist	WellnessCare North	WellnessCare Wesley Chapel
8	James Nguyen	Physical Therapist	WellnessCare St Pete	WellnessCare Clearwater
8	James Nguyen	Physical Therapist	WellnessCare St Pete	WellnessCare Downtown

provider_id	provider_name	specialty	home_location	appointment_location
8	James Nguyen	Physical Therapist	WellnessCare St Pete	WellnessCare North
8	James Nguyen	Physical Therapist	WellnessCare St Pete	WellnessCare Wesley Chapel
9	Linda Gomez	Chiropractor	WellnessCare Wesley Chapel	WellnessCare Clearwater
9	Linda Gomez	Chiropractor	WellnessCare Wesley Chapel	WellnessCare Downtown
9	Linda Gomez	Chiropractor	WellnessCare Wesley Chapel	WellnessCare North
9	Linda Gomez	Chiropractor	WellnessCare Wesley Chapel	WellnessCare St Pete
10	Olivia Miller	Massage Therapist	WellnessCare Clearwater	WellnessCare Downtown
10	Olivia Miller	Massage Therapist	WellnessCare Clearwater	WellnessCare North
10	Olivia Miller	Massage Therapist	WellnessCare Clearwater	WellnessCare St Pete
10	Olivia Miller	Massage Therapist	WellnessCare Clearwater	WellnessCare Wesley Chapel
11	Hannah Brown	Massage Therapist	WellnessCare Wesley Chapel	WellnessCare Clearwater
11	Hannah Brown	Massage Therapist	WellnessCare Wesley Chapel	WellnessCare Downtown
11	Hannah Brown	Massage Therapist	WellnessCare Wesley Chapel	WellnessCare North
11	Hannah Brown	Massage Therapist	WellnessCare Wesley Chapel	WellnessCare St Pete
12	Linda Wright	Massage Therapist	WellnessCare Clearwater	WellnessCare Downtown
12	Linda Wright	Massage Therapist	WellnessCare Clearwater	WellnessCare North
12	Linda Wright	Massage Therapist	WellnessCare Clearwater	WellnessCare St Pete

provider_id	provider_name	specialty	home_location	appointment_location
13	Olivia Turner	Physical Therapist	WellnessCare Clearwater	WellnessCare Downtown
13	Olivia Turner	Physical Therapist	WellnessCare Clearwater	WellnessCare North
13	Olivia Turner	Physical Therapist	WellnessCare Clearwater	WellnessCare St Pete
13	Olivia Turner	Physical Therapist	WellnessCare Clearwater	WellnessCare Wesley Chapel
14	Michael Lewis	Massage Therapist	WellnessCare St Pete	WellnessCare Clearwater
14	Michael Lewis	Massage Therapist	WellnessCare St Pete	WellnessCare Downtown
14	Michael Lewis	Massage Therapist	WellnessCare St Pete	WellnessCare North
14	Michael Lewis	Massage Therapist	WellnessCare St Pete	WellnessCare Wesley Chapel
15	Victor Brown	Chiropractor	WellnessCare Wesley Chapel	WellnessCare Downtown
15	Victor Brown	Chiropractor	WellnessCare Wesley Chapel	WellnessCare North
15	Victor Brown	Chiropractor	WellnessCare Wesley Chapel	WellnessCare St Pete

Query 8: -- For each membership type, show how many active patients currently have that membership

SQL Query:

SELECT

```

m.membership_id,
m.name AS membership_name,
m.monthly_fee,
COUNT(*) AS active_members
FROM memberships m
JOIN patient_memberships pm ON m.membership_id = pm.membership_id
WHERE CURRENT_DATE BETWEEN pm.start_date AND pm.end_date
GROUP BY m.membership_id, m.name, m.monthly_fee

```

```
ORDER BY active_members DESC;
```

Output:

Query 9: -- Find all appointments for services that cost more than the average service price

SQL Query:

```
SELECT
```

```
a.appointment_id,  
p.first_name || ' ' || p.last_name AS patient_name,  
s.service_name,  
s.base_price,  
a.appointment_date,  
a.status  
FROM appointments a  
JOIN patients p ON a.patient_id = p.patient_id  
JOIN services s ON a.service_id = s.service_id  
WHERE s.base_price > (SELECT AVG(base_price) FROM services)
```

```
ORDER BY s.base_price DESC, a.appointment_date ASC;
```

Output:

appointment_id	patient_name	service_name	base_price	appointment_date	status
110	Diana Wilson	Physical Therapy Eval	150.00	2024-01-13	No-Show
12	Emily Martinez	Physical Therapy Eval	150.00	2024-01-14	No-Show
96	Emily Doe	Physical Therapy Eval	150.00	2024-01-18	Scheduled
126	Emily Martinez	Physical Therapy Eval	150.00	2024-01-25	No-Show
123	Robert Wilson	Physical Therapy Eval	150.00	2024-02-02	Scheduled
84	Emily Doe	Physical Therapy Eval	150.00	2024-02-03	Completed

appointment_id	patient_name	service_name	base_price	appointment_date	status
99	Daniel Turner	Physical Therapy Eval	150.00	2024-02-13	No-Show
5	Sarah Lopez	Physical Therapy Eval	150.00	2024-02-16	No-Show
60	Emily Doe	Physical Therapy Eval	150.00	2024-03-02	Cancelled
154	Sarah Wright	Physical Therapy Eval	150.00	2024-03-02	Completed
181	Ava Nguyen	Physical Therapy Eval	150.00	2024-03-04	No-Show
170	Robert Wilson	Physical Therapy Eval	150.00	2024-03-05	Completed
124	Tyler Nguyen	Physical Therapy Eval	150.00	2024-03-06	Completed
21	Maria Gomez	Physical Therapy Eval	150.00	2024-03-11	Completed
49	Sarah Wright	Physical Therapy Eval	150.00	2024-04-16	No-Show
36	Hannah Wilson	Physical Therapy Eval	150.00	2024-04-24	Completed
120	Emily Doe	Hot Stone Therapy	140.00	2024-01-13	Cancelled
74	Ava Nguyen	Hot Stone Therapy	140.00	2024-01-31	No-Show
197	Michael King	Hot Stone Therapy	140.00	2024-02-06	Cancelled
105	Victor Lewis	Hot Stone Therapy	140.00	2024-02-08	No-Show
147	Daniel Miller	Hot Stone Therapy	140.00	2024-02-09	Cancelled
192	Emily Doe	Hot Stone Therapy	140.00	2024-02-27	Completed
121	Diana Miller	Hot Stone Therapy	140.00	2024-03-11	Completed

appointment_id	patient_name	service_name	base_price	appointment_date	status
1	James Lewis	Hot Stone Therapy	140.00	2024-03-15	Cancelled
173	Maria Rodriguez	Hot Stone Therapy	140.00	2024-03-22	Scheduled
89	Emily Doe	Hot Stone Therapy	140.00	2024-03-23	Cancelled
83	Maria King	Hot Stone Therapy	140.00	2024-04-10	No-Show
33	Jason Brown	Hot Stone Therapy	140.00	2024-04-25	Completed
50	Sarah Lopez	Deep Tissue Massage	120.00	2024-01-03	Cancelled
28	James Lewis	Deep Tissue Massage	120.00	2024-01-06	No-Show
6	Maria King	Deep Tissue Massage	120.00	2024-01-08	Completed
130	Diana Miller	Deep Tissue Massage	120.00	2024-01-30	No-Show
79	Chris Rodriguez	Deep Tissue Massage	120.00	2024-02-02	Cancelled
73	Maria Gomez	Deep Tissue Massage	120.00	2024-02-06	No-Show
4	Karen Brown	Deep Tissue Massage	120.00	2024-02-15	No-Show
78	Maria Wilson	Deep Tissue Massage	120.00	2024-02-25	Cancelled
55	Victor Doe	Deep Tissue Massage	120.00	2024-03-05	Cancelled
106	Diana Miller	Deep Tissue Massage	120.00	2024-03-08	Cancelled
196	Karen Miller	Deep Tissue Massage	120.00	2024-03-11	Completed
190	Tyler Nguyen	Deep Tissue Massage	120.00	2024-03-15	Scheduled

appointment_id	patient_name	service_name	base_price	appointment_date	status
25	Ava Nguyen	Deep Tissue Massage	120.00	2024-03-19	Scheduled
27	Victor Lewis	Deep Tissue Massage	120.00	2024-03-25	Completed
22	Michael Lewis	Deep Tissue Massage	120.00	2024-04-03	Completed
136	Karen Miller	Deep Tissue Massage	120.00	2024-04-18	Scheduled
118	Michael Lewis	Deep Tissue Massage	120.00	2024-04-21	Scheduled
189	John Young	Follow-up PT Session	115.00	2024-01-05	Scheduled
97	Diana Miller	Follow-up PT Session	115.00	2024-01-09	No-Show
54	Emily Adams	Follow-up PT Session	115.00	2024-01-10	Cancelled
157	Emily Adams	Follow-up PT Session	115.00	2024-01-20	No-Show
11	Linda Scott	Follow-up PT Session	115.00	2024-01-22	No-Show
138	Daniel Miller	Follow-up PT Session	115.00	2024-01-30	Completed
139	Linda Scott	Follow-up PT Session	115.00	2024-02-06	Scheduled
132	John Rodriguez	Follow-up PT Session	115.00	2024-02-06	Cancelled
107	Sarah Lopez	Follow-up PT Session	115.00	2024-02-23	Cancelled
125	Diana Wilson	Follow-up PT Session	115.00	2024-02-26	No-Show
40	Daniel Turner	Follow-up PT Session	115.00	2024-03-03	Cancelled
145	Emily Martinez	Follow-up PT Session	115.00	2024-03-05	Completed

appointment_id	patient_name	service_name	base_price	appointment_date	status
179	Ava Young	Follow-up PT Session	115.00	2024-03-08	Cancelled
153	Daniel Turner	Follow-up PT Session	115.00	2024-03-15	Scheduled
159	Maria King	Follow-up PT Session	115.00	2024-04-28	Completed
119	Robert Wilson	Sports Massage	110.00	2024-01-17	Scheduled
177	Daniel Turner	Sports Massage	110.00	2024-01-17	Cancelled
7	Karen Miller	Sports Massage	110.00	2024-01-26	Scheduled
86	Hannah Rodriguez	Sports Massage	110.00	2024-01-31	No-Show
17	Maria Wright	Sports Massage	110.00	2024-02-04	Completed
155	Maria Wilson	Sports Massage	110.00	2024-02-08	Scheduled
44	Victor Gomez	Sports Massage	110.00	2024-02-10	Cancelled
64	Ava Adams	Sports Massage	110.00	2024-02-16	Scheduled
156	David Baker	Sports Massage	110.00	2024-02-28	Completed
72	Ava Young	Sports Massage	110.00	2024-03-02	No-Show
75	Daniel Turner	Sports Massage	110.00	2024-03-09	Cancelled
81	Karen Scott	Sports Massage	110.00	2024-03-21	No-Show
70	Emily Martinez	Sports Massage	110.00	2024-04-01	Cancelled
20	Daniel Turner	Sports Massage	110.00	2024-04-05	Scheduled

appointment_id	patient_name	service_name	base_price	appointment_date	status
182	Daniel Turner	Sports Massage	110.00	2024-04-13	Completed
80	Diana Miller	Sports Massage	110.00	2024-04-16	Scheduled
14	David Baker	Prenatal Massage	105.00	2024-01-12	No-Show
94	Michael Lewis	Prenatal Massage	105.00	2024-02-06	Scheduled
174	John Rodriguez	Prenatal Massage	105.00	2024-02-06	Cancelled
176	Linda Hall	Prenatal Massage	105.00	2024-02-06	No-Show
24	Ava Nguyen	Prenatal Massage	105.00	2024-02-08	Scheduled
41	Ava Nguyen	Prenatal Massage	105.00	2024-02-16	Cancelled
92	Maria Gomez	Prenatal Massage	105.00	2024-02-22	Completed
35	James Rodriguez	Prenatal Massage	105.00	2024-03-03	Completed
77	Emily Adams	Prenatal Massage	105.00	2024-03-06	No-Show
178	Emily Doe	Prenatal Massage	105.00	2024-03-17	Cancelled
128	Victor Lewis	Prenatal Massage	105.00	2024-03-22	Completed
19	John Rodriguez	Prenatal Massage	105.00	2024-04-01	Completed
134	Daniel Turner	Prenatal Massage	105.00	2024-04-05	Completed
10	Hannah Wilson	Prenatal Massage	105.00	2024-04-09	No-Show
185	Michael Lewis	Prenatal Massage	105.00	2024-04-12	No-Show

appointment_id	patient_name	service_name	base_price	appointment_date	status
18	Sarah Lopez	Prenatal Massage	105.00	2024-04-16	Cancelled
111	Karen Scott	Prenatal Massage	105.00	2024-04-29	No-Show
3	Tyler Nguyen	Spinal Decompression	100.00	2024-01-17	Scheduled
143	Daniel Miller	Spinal Decompression	100.00	2024-01-29	Cancelled
30	Maria King	Spinal Decompression	100.00	2024-02-20	Completed
68	Michael King	Spinal Decompression	100.00	2024-03-08	Scheduled
114	Michael Lewis	Spinal Decompression	100.00	2024-03-17	Completed
87	Hannah Doe	Spinal Decompression	100.00	2024-03-18	No-Show
146	Victor Doe	Spinal Decompression	100.00	2024-03-18	Scheduled
194	Daniel Turner	Spinal Decompression	100.00	2024-03-25	Completed
67	Jason Brown	Spinal Decompression	100.00	2024-04-09	Cancelled
53	Victor Wilson	Spinal Decompression	100.00	2024-04-19	Completed
59	Karen Brown	Spinal Decompression	100.00	2024-04-28	Completed

Query 10: -- Show each patient's latest appointment date and the service they had on that latest visit

SQL Query:

SELECT

p.patient_id,
 p.first_name || ' ' || p.last_name AS patient_name,
 a.appointment_date AS latest_appointment_date,
 s.service_name AS latest_service

```

FROM patients p
JOIN appointments a ON p.patient_id = a.patient_id
JOIN services s ON a.service_id = s.service_id
WHERE a.appointment_date = (
    SELECT MAX(a2.appointment_date)
    FROM appointments a2
    WHERE a2.patient_id = p.patient_id
)

```

```

ORDER BY a.appointment_date DESC;

```

Output:

patient_id	patient_name	latest_appointment_date	latest_service
31	Maria Rodriguez	2024-04-29	Electro Therapy
24	Karen Scott	2024-04-29	Prenatal Massage
41	Emily Martinez	2024-04-28	Cold Laser Treatment
36	Karen Brown	2024-04-28	Spinal Decompression
47	Maria King	2024-04-28	Follow-up PT Session
20	Jason Brown	2024-04-25	Hot Stone Therapy
33	Hannah Wilson	2024-04-24	Physical Therapy Eval
18	Linda Hall	2024-04-23	Stretch Therapy
22	Linda Scott	2024-04-21	Cold Laser Treatment
25	Linda Adams	2024-04-21	Relaxation Massage
16	Michael Lewis	2024-04-21	Deep Tissue Massage
44	Sarah Lopez	2024-04-21	Chiropractic Adjustment

patient_id	patient_name	latest_appointment_date	latest_service
1	Tyler Nguyen	2024-04-20	Corrective Exercise
15	Victor Wilson	2024-04-19	Spinal Decompression
17	John Rodriguez	2024-04-19	Cupping Therapy
7	Karen Miller	2024-04-18	Deep Tissue Massage
38	Sarah Wright	2024-04-16	Physical Therapy Eval
14	Diana Miller	2024-04-16	Sports Massage
27	Emily Doe	2024-04-16	Cupping Therapy
49	Chris Rodriguez	2024-04-15	Relaxation Massage
45	Daniel Miller	2024-04-14	Chiropractic Adjustment
8	Daniel Turner	2024-04-13	Sports Massage
19	Maria Wright	2024-04-10	Stretch Therapy
19	Maria Wright	2024-04-10	Cupping Therapy
23	Maria Gomez	2024-04-08	Electro Therapy
4	Diana Scott	2024-04-08	Stretch Therapy
48	Ava Adams	2024-04-05	Relaxation Massage
34	Daniel Turner	2024-04-05	Sports Massage
34	Daniel Turner	2024-04-05	Prenatal Massage

patient_id	patient_name	latest_appointment_date	latest_service
29	Sarah Stone	2024-04-03	Chiropractic Adjustment
6	James Rodriguez	2024-04-01	Cold Laser Treatment
39	Victor Lewis	2024-03-25	Deep Tissue Massage
32	Ava Nguyen	2024-03-19	Deep Tissue Massage
9	Hannah Doe	2024-03-18	Spinal Decompression
43	Victor Doe	2024-03-18	Spinal Decompression
40	James Lewis	2024-03-15	Hot Stone Therapy
26	Tyler Nguyen	2024-03-15	Deep Tissue Massage
2	David Baker	2024-03-13	Electro Therapy
50	Victor Gomez	2024-03-09	Cupping Therapy
11	Michael King	2024-03-08	Spinal Decompression
21	Ava Young	2024-03-08	Follow-up PT Session
37	Daniel Lewis	2024-03-07	Chiropractic Adjustment
35	Victor Nguyen	2024-03-07	Relaxation Massage
3	Emily Adams	2024-03-06	Prenatal Massage
28	Robert Wilson	2024-03-05	Physical Therapy Eval
42	Diana Wilson	2024-02-26	Follow-up PT Session

patient_id	patient_name	latest_appointment_date	latest_service
46	Maria Wilson	2024-02-25	Deep Tissue Massage
5	Hannah Rodriguez	2024-02-24	Electro Therapy
12	Daniel Miller	2024-01-11	Cupping Therapy
13	John Young	2024-01-05	Follow-up PT Session