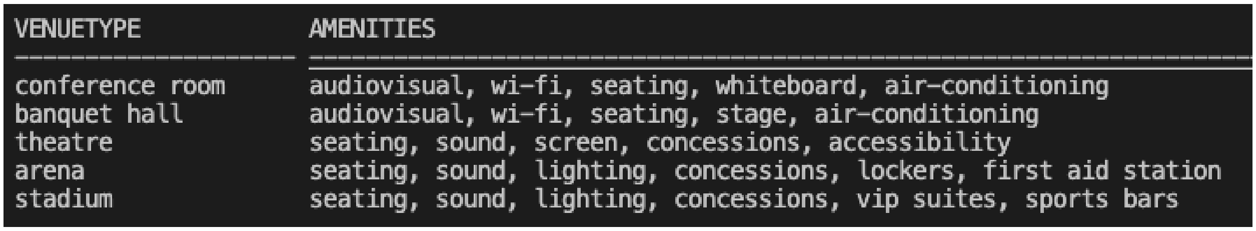
Project summary:
The Event Management database supports event planning, sponsorship management, attendee engagement, and financial transactions. All elements of the database collaborate to create a holistic ecosystem that caters to the diverse needs of event organizers, staff, and attendees across various event types and scales. The system is designed to streamline event operations, enhance external partnerships, and provide attendees with an enjoyable event experience.

Description of how our final schema differed from the schema we turned in:
We eliminated the eventnames table that we had before and added an eventname field to the event table. This is because in the previous iteration, we would have to know the venue id and date of an event in order to know its name. Having the eventname included into the event table made the data more cohesive and understandable.
The rest of the schema remained mostly the same, but we added constraints on some fields. For example, in the Customer table, we made the customer phone number and email not null, whereas it previously did not have any constraints.

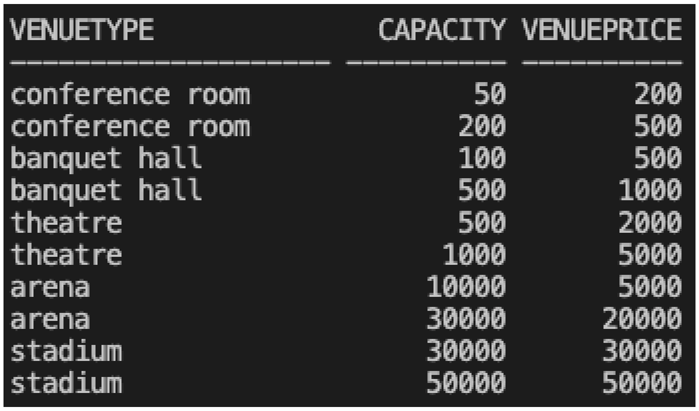
A copy of the schema and screenshots that show what data is present in each relation after the SQL script from item #2 is run:

1. Facility(venueType, amenities):



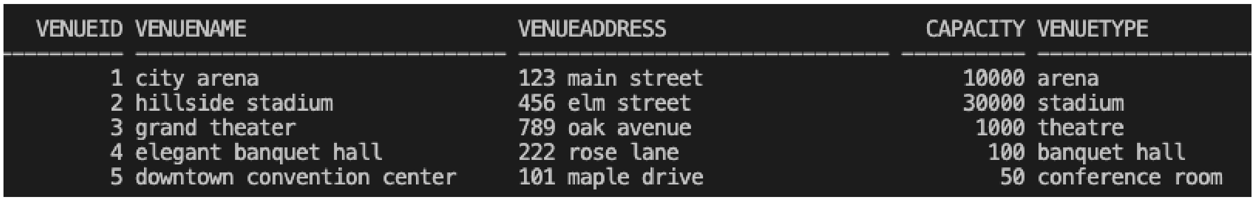
```
VENUETYPE            AMENITIES
-------------------- ----------------------------------------------------------------------
conference room      audiovisual, wi-fi, seating, whiteboard, air-conditioning
banquet hall         audiovisual, wi-fi, seating, stage, air-conditioning
theatre              seating, sound, screen, concessions, accessibility
arena                seating, sound, lighting, concessions, lockers, first aid station
stadium              seating, sound, lighting, concessions, vip suites, sports bars
```

2. Rent(**venueType**, capacity, venuePrice):



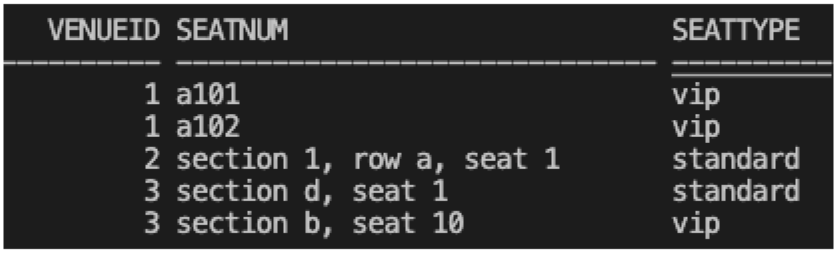
```
VENUETYPE              CAPACITY VENUEPRICE
-------------------- ---------- ----------
conference room              50        200
conference room             200        500
banquet hall                100        500
banquet hall                500       1000
theatre                     500       2000
theatre                    1000       5000
arena                     10000       5000
arena                     30000      20000
stadium                   30000      30000
stadium                   50000      50000
```

3. Venue(venueID, venueName, venueAddress, **capacity**, **venueType**)



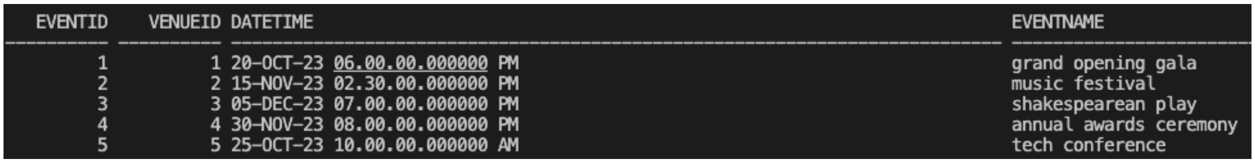
```
   VENUEID VENUENAME                      VENUEADDRESS                     CAPACITY VENUETYPE
---------- ------------------------------ ------------------------------ ---------- ------------------
         1 city arena                     123 main street                     10000 arena
         2 hillside stadium               456 elm street                      30000 stadium
         3 grand theater                  789 oak avenue                       1000 theatre
         4 elegant banquet hall           222 rose lane                         100 banquet hall
         5 downtown convention center     101 maple drive                        50 conference room
```

4. Seat(**venueID**, seatNum, seatType):



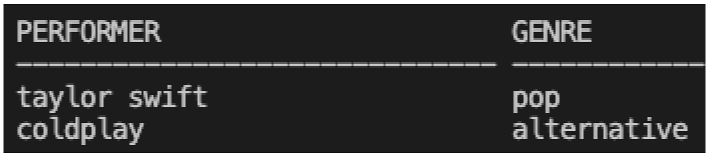
```
   VENUEID SEATNUM                        SEATTYPE
---------- ------------------------------ ----------
         1 a101                           vip
         1 a102                           vip
         2 section 1, row a, seat 1       standard
         3 section d, seat 1              standard
         3 section b, seat 10             vip
```

5. Event(eventID, **venueID**, **dateTime,** eventname):



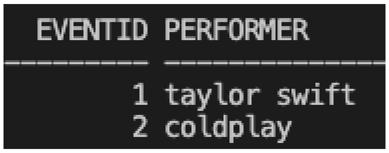
```
   EVENTID    VENUEID DATETIME                                                                    EVENTNAME
---------- ---------- --------------------------------------------------------------------------- --------------------
         1          1 20-OCT-23 06.00.00.000000 PM                                                grand opening gala
         2          2 15-NOV-23 02.30.00.000000 PM                                                music festival
         3          3 05-DEC-23 07.00.00.000000 PM                                                shakespearean play
         4          4 30-NOV-23 08.00.00.000000 PM                                                annual awards ceremony
         5          5 25-OCT-23 10.00.00.000000 AM                                                tech conference
```

6. Genre(performer, genre):



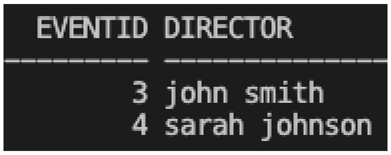
```
PERFORMER                      GENRE
------------------------------ -----------
taylor swift                   pop
coldplay                       alternative
```

7. Concert(**eventID**, **performer**):



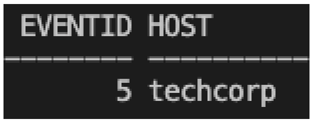
```
   EVENTID PERFORMER
---------- -----------
         1 taylor swift
         2 coldplay
```

8. Play(**eventID**, director):



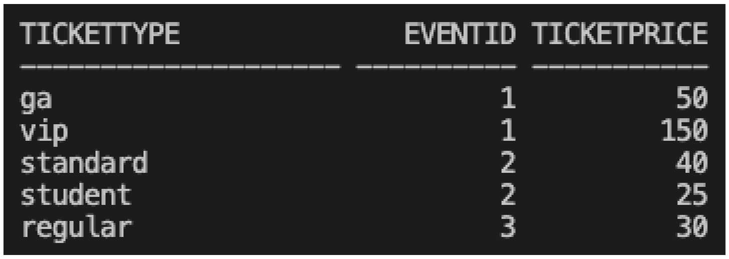
```
   EVENTID DIRECTOR
---------- ------------
         3 john smith
         4 sarah johnson
```

9. Conference(**eventID**, host):



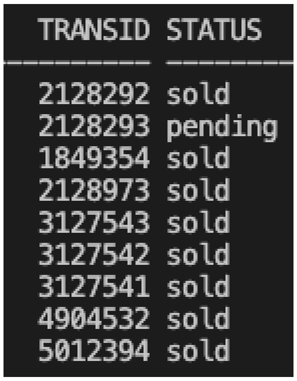
```
  EVENTID HOST
--------- ---------
        5 techcorp
```

10. TicketPrice(ticketType, **eventID**, ticketPrice):



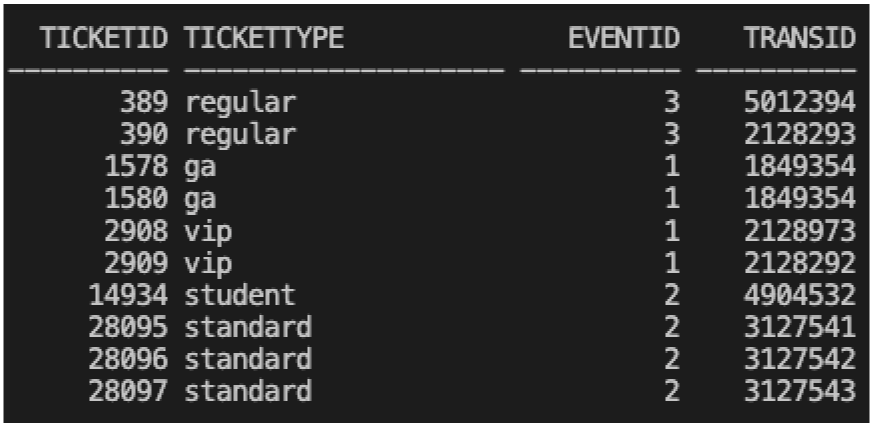
```
TICKETTYPE              EVENTID TICKETPRICE
-------------------- ---------- -----------
ga                            1          50
vip                           1         150
standard                      2          40
student                       2          25
regular                       3          30
```

11. TicketStatus(**transID**, status):



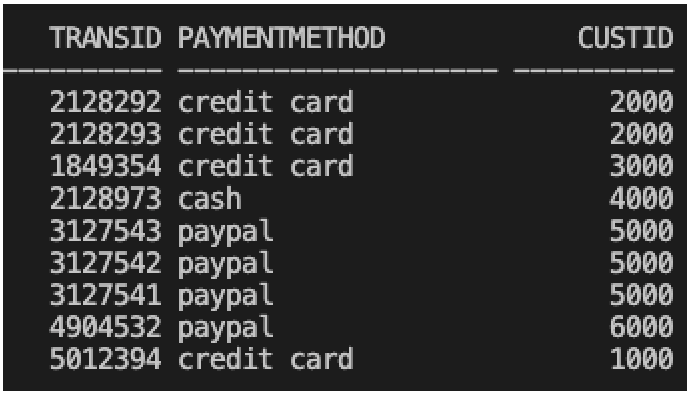
```
  TRANSID STATUS
--------- --------
  2128292 sold
  2128293 pending
  1849354 sold
  2128973 sold
  3127543 sold
  3127542 sold
  3127541 sold
  4904532 sold
  5012394 sold
```

12. Ticket(ticketID, **ticketType**, **eventID**, **transID**):



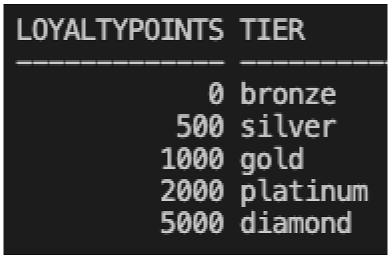
```
  TICKETID TICKETTYPE              EVENTID    TRANSID
---------- -------------------- ---------- ----------
       389 regular                       3    5012394
       390 regular                       3    2128293
      1578 ga                            1    1849354
      1580 ga                            1    1849354
      2908 vip                           1    2128973
      2909 vip                           1    2128292
     14934 student                       2    4904532
     28095 standard                      2    3127541
     28096 standard                      2    3127542
     28097 standard                      2    3127543
```

13. Transaction(transID, paymentMethod, **custID**):



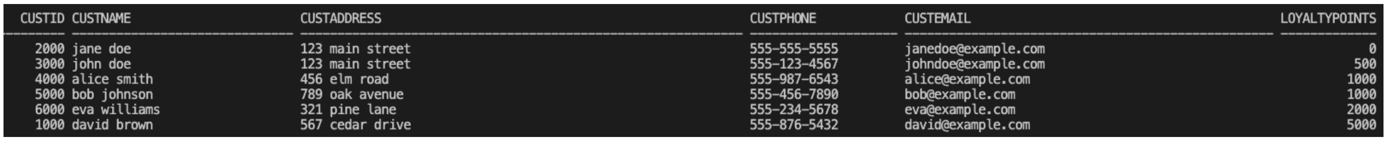
```
   TRANSID PAYMENTMETHOD            CUSTID
---------- -------------------- ----------
   2128292 credit card                2000
   2128293 credit card                2000
   1849354 credit card                3000
   2128973 cash                       4000
   3127543 paypal                     5000
   3127542 paypal                     5000
   3127541 paypal                     5000
   4904532 paypal                     6000
   5012394 credit card                1000
```

14. CustomerTier(loyaltyPoints, tier):



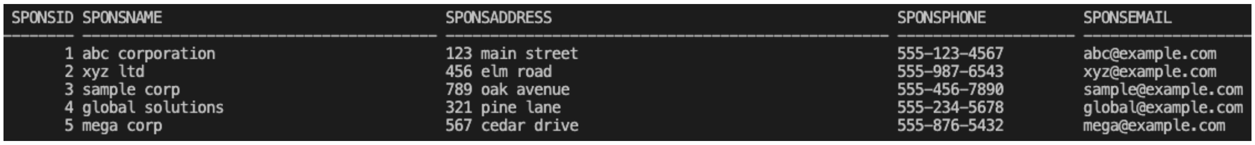
```
LOYALTYPOINTS TIER
------------- ----------
            0 bronze
          500 silver
         1000 gold
         2000 platinum
         5000 diamond
```

15. Customer(custID, custName, custAddress, custPhone, custEmail, **loyaltyPoints**)



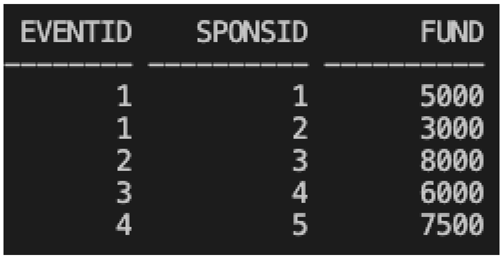
```
 CUSTID CUSTNAME                       CUSTADDRESS                                                  CUSTPHONE            CUSTEMAIL                                              LOYALTYPOINTS
------- ------------------------------ ------------------------------------------------------------ -------------------- -------------------------------------------------- -------------
   2000 jane doe                       123 main street                                              555-555-5555         janedoe@example.com                                                0
   3000 john doe                       123 main street                                              555-123-4567         johndoe@example.com                                              500
   4000 alice smith                    456 elm road                                                 555-987-6543         alice@example.com                                               1000
   5000 bob johnson                    789 oak avenue                                               555-456-7890         bob@example.com                                                 1000
   6000 eva williams                   321 pine lane                                                555-234-5678         eva@example.com                                                 2000
   1000 david brown                    567 cedar drive                                              555-876-5432         david@example.com                                               5000
```

16. Sponsor(sponsID, sponsName, sponsAddress, sponsPhone, sponsEmail)



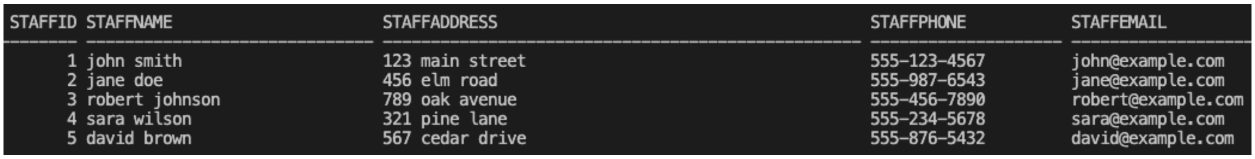
```
SPONSID SPONSNAME                                SPONSADDRESS                                                 SPONSPHONE           SPONSEMAIL
------- ---------------------------------------- ------------------------------------------------------------ -------------------- --------------------
      1 abc corporation                          123 main street                                              555-123-4567         abc@example.com
      2 xyz ltd                                  456 elm road                                                 555-987-6543         xyz@example.com
      3 sample corp                              789 oak avenue                                               555-456-7890         sample@example.com
      4 global solutions                         321 pine lane                                                555-234-5678         global@example.com
      5 mega corp                                567 cedar drive                                              555-876-5432         mega@example.com
```

17. Sponsorship(**eventID**, **sponsorID**, fund):



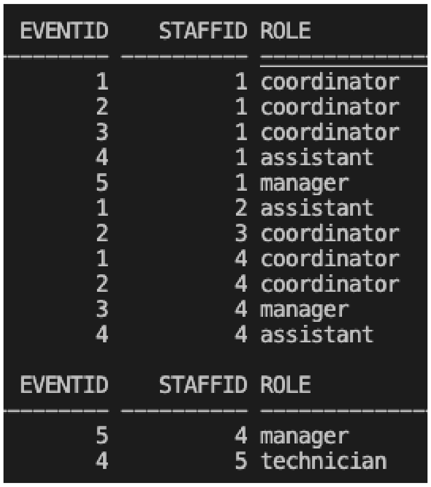
```
 EVENTID    SPONSID       FUND
-------- ---------- ----------
       1          1       5000
       1          2       3000
       2          3       8000
       3          4       6000
       4          5       7500
```

18. Staff(staffID, staffName, staffAddress, staffPhone, staffEmail)



```
STAFFID STAFFNAME                      STAFFADDRESS                                       STAFFPHONE           STAFFEMAIL
------- ------------------------------ -------------------------------------------------- -------------------- --------------------
      1 john smith                     123 main street                                    555-123-4567         john@example.com
      2 jane doe                       456 elm road                                       555-987-6543         jane@example.com
      3 robert johnson                 789 oak avenue                                     555-456-7890         robert@example.com
      4 sara wilson                    321 pine lane                                      555-234-5678         sara@example.com
      5 david brown                    567 cedar drive                                    555-876-5432         david@example.com
```

19. Assignment(**eventID**, **staffID**, role):



```
   EVENTID    STAFFID ROLE
---------- ---------- --------------
         1          1 coordinator
         2          1 coordinator
         3          1 coordinator
         4          1 assistant
         5          1 manager
         1          2 assistant
         2          3 coordinator
         1          4 coordinator
         2          4 coordinator
         3          4 manager
         4          4 assistant

   EVENTID    STAFFID ROLE
---------- ---------- --------------
         5          4 manager
         4          5 technician
```

All SQL queries:

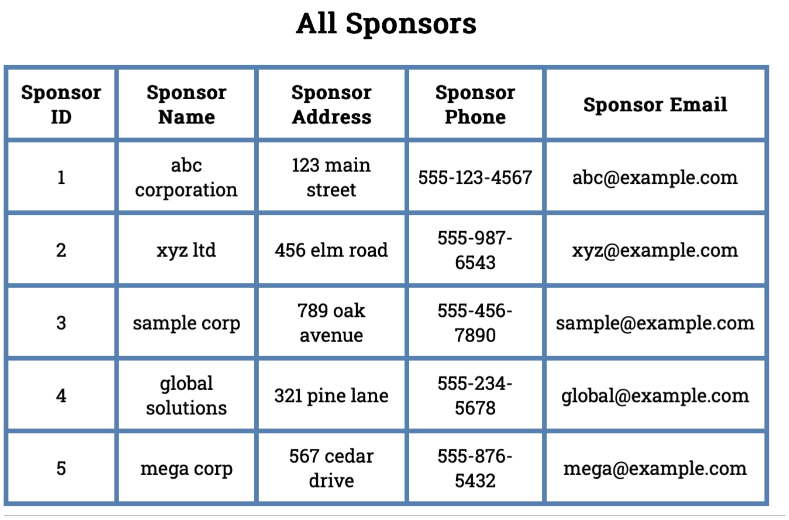
INSERT

Query:

```
INSERT INTO sponsor (sponsid, sponsname, sponsaddress, sponsphone,
sponsemail)
VALUES ($sponsID, '$sponsName', '$sponsAddress', '$sponsPhone',
'$sponsEmail');
```

Location: event_manager.php, line 340

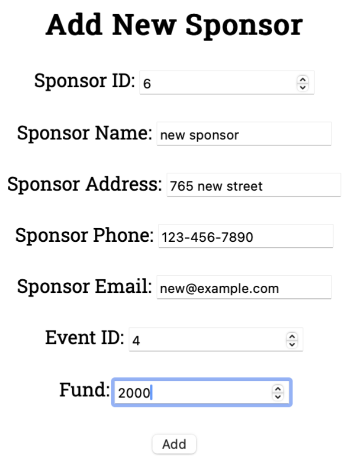
Before:



All Sponsors

Sponsor ID	Sponsor Name	Sponsor Address	Sponsor Phone	Sponsor Email
1	abc corporation	123 main street	555-123-4567	abc@example.com
2	xyz ltd	456 elm road	555-987-6543	xyz@example.com
3	sample corp	789 oak avenue	555-456-7890	sample@example.com
4	global solutions	321 pine lane	555-234-5678	global@example.com
5	mega corp	567 cedar drive	555-876-5432	mega@example.com

During:



Add New Sponsor

Sponsor ID: 6

Sponsor Name: new sponsor

Sponsor Address: 765 new street

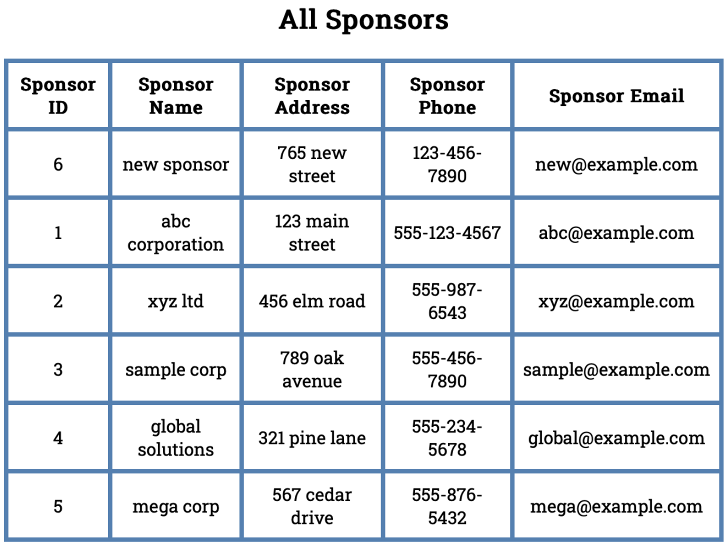
Sponsor Phone: 123-456-7890

Sponsor Email: new@example.com

Event ID: 4

Fund: 2000

After:



All Sponsors

Sponsor ID	Sponsor Name	Sponsor Address	Sponsor Phone	Sponsor Email
6	new sponsor	765 new street	123-456-7890	new@example.com
1	abc corporation	123 main street	555-123-4567	abc@example.com
2	xyz ltd	456 elm road	555-987-6543	xyz@example.com
3	sample corp	789 oak avenue	555-456-7890	sample@example.com
4	global solutions	321 pine lane	555-234-5678	global@example.com
5	mega corp	567 cedar drive	555-876-5432	mega@example.com

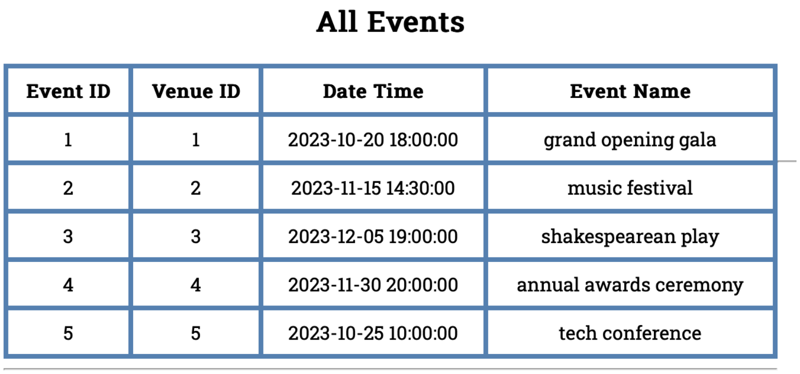
DELETE

Query:

```
DELETE FROM event WHERE eventID = $eventID;
```

Location: event_manager.php, line 288

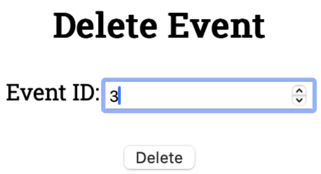
Before:



All Events

Event ID	Venue ID	Date Time	Event Name
1	1	2023-10-20 18:00:00	grand opening gala
2	2	2023-11-15 14:30:00	music festival
3	3	2023-12-05 19:00:00	shakespearean play
4	4	2023-11-30 20:00:00	annual awards ceremony
5	5	2023-10-25 10:00:00	tech conference

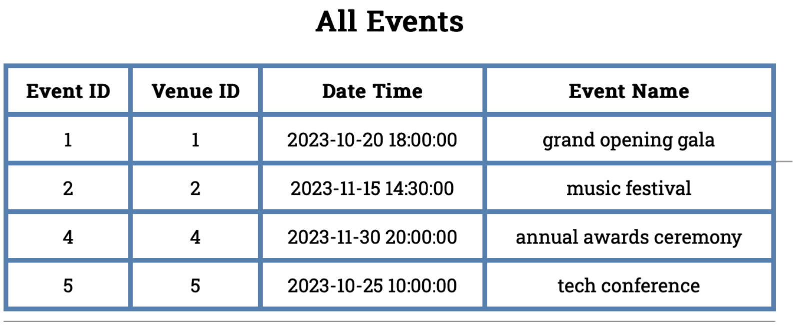
During:



Delete Event

Event ID: 3

After:



All Events

Event ID	Venue ID	Date Time	Event Name
1	1	2023-10-20 18:00:00	grand opening gala
2	2	2023-11-15 14:30:00	music festival
4	4	2023-11-30 20:00:00	annual awards ceremony
5	5	2023-10-25 10:00:00	tech conference

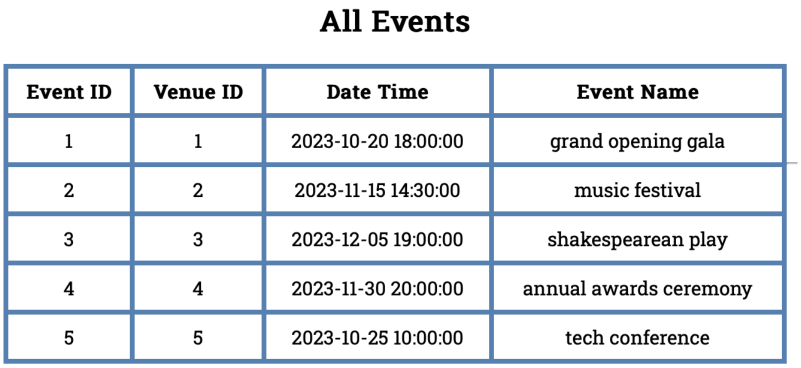
UPDATE

Query:

```
UPDATE event SET venueid = $venueID
, datetime=timestamp'" . $formattedDatetime . "'
, eventname='" . $eventName . "'
WHERE eventid = $eventID;
```

Location: event_manager.php, line 321

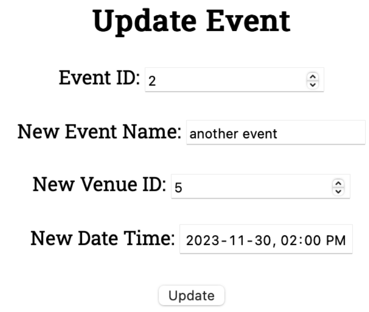
Before:



All Events

Event ID	Venue ID	Date Time	Event Name
1	1	2023-10-20 18:00:00	grand opening gala
2	2	2023-11-15 14:30:00	music festival
3	3	2023-12-05 19:00:00	shakespearean play
4	4	2023-11-30 20:00:00	annual awards ceremony
5	5	2023-10-25 10:00:00	tech conference

During:



Update Event

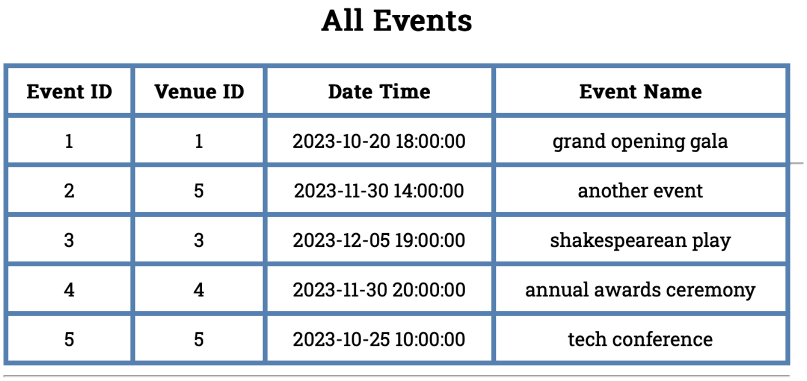
Event ID: 2

New Event Name: another event

New Venue ID: 5

New Date Time: 2023-11-30, 02:00 PM

After:



All Events

Event ID	Venue ID	Date Time	Event Name
1	1	2023-10-20 18:00:00	grand opening gala
2	5	2023-11-30 14:00:00	another event
3	3	2023-12-05 19:00:00	shakespearean play
4	4	2023-11-30 20:00:00	annual awards ceremony
5	5	2023-10-25 10:00:00	tech conference

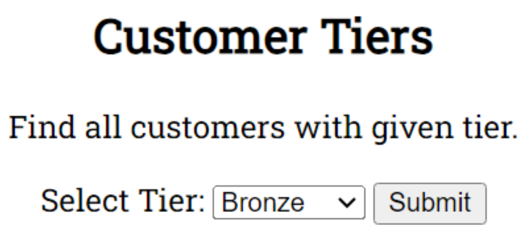
Selection

Query:

```
SELECT c.custid, c.custname, c.custaddress, c.custemail,
c.loyaltypoints
FROM customer c, customertier ct
WHERE c.loyaltypoints = ct.loyaltypoints and ct.tier = '" . $tier .
"';
```

Location: customerservice.php,line 185

Before:

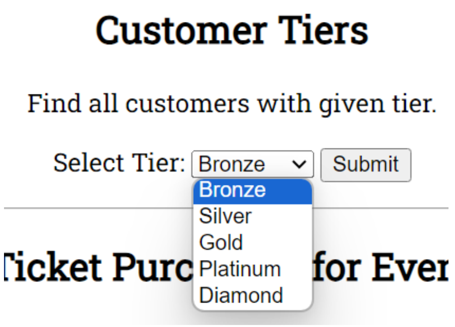


Customer Tiers

Find all customers with given tier.

Select Tier: Bronze Submit

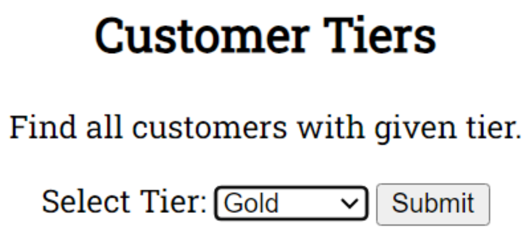
During:



Customer Tiers

Find all customers with given tier.

Select Tier: Bronze Submit

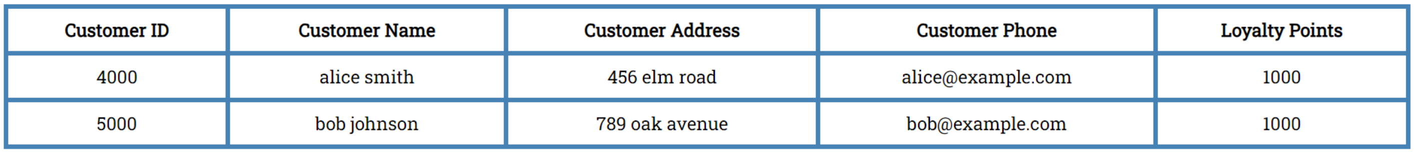


Customer Tiers

Find all customers with given tier.

Select Tier: Gold Submit

After:



Customer ID	Customer Name	Customer Address	Customer Phone	Loyalty Points
4000	alice smith	456 elm road	alice@example.com	1000
5000	bob johnson	789 oak avenue	bob@example.com	1000

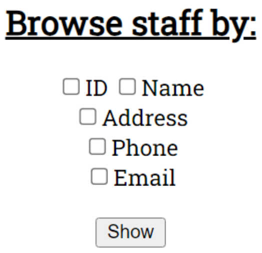
Projection

Query:

```
SELECT $selectedAttributes  --hr can choose different fields to view
FROM staff;
```

Location: hr.php, line 149

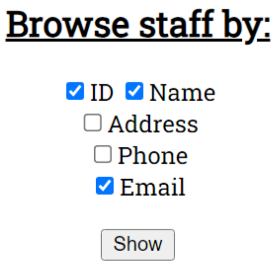
Before:



Browse staff by:

☐ ID ☐ Name
☐ Address
☐ Phone
☐ Email

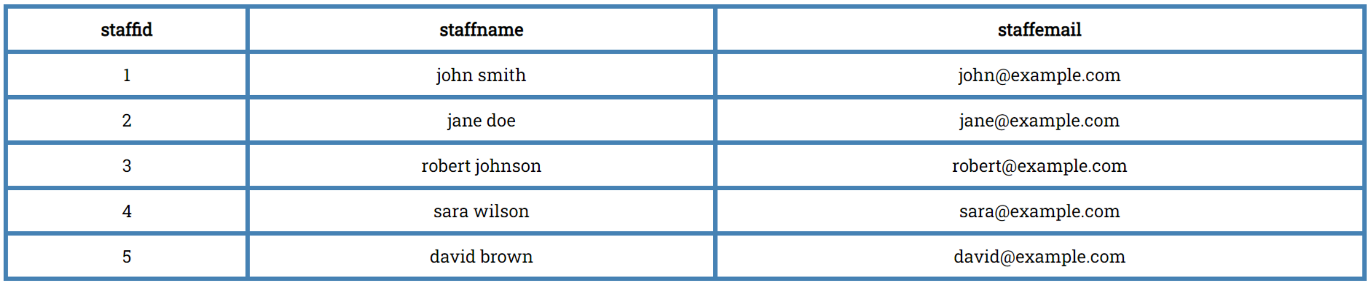
During:



Browse staff by:

☑ ID ☑ Name
☐ Address
☐ Phone
☑ Email

After:



staffid	staffname	staffemail
1	john smith	john@example.com
2	jane doe	jane@example.com
3	robert johnson	robert@example.com
4	sara wilson	sara@example.com
5	david brown	david@example.com

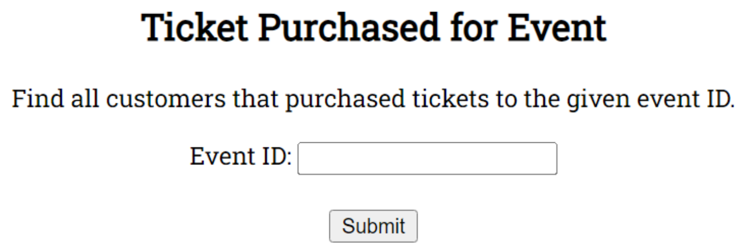
Join

Query:

```
SELECT distinct c.custid, c.custname, c.custemail
FROM customer c, transaction tr, ticket ti
WHERE c.custid = tr.custid
and tr.transid = ti.transid
and ti.eventid = $eventID;
```

Location: customerservice.php, line: 172

Before:

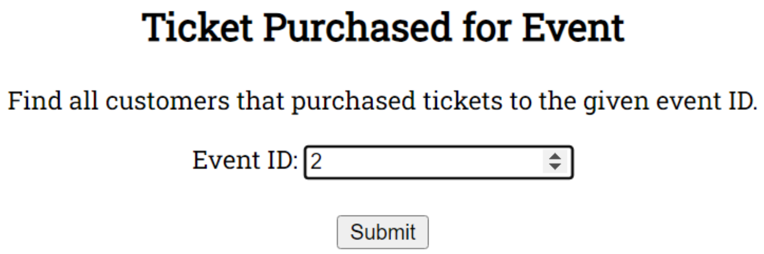


Ticket Purchased for Event

Find all customers that purchased tickets to the given event ID.

Event ID:

During:

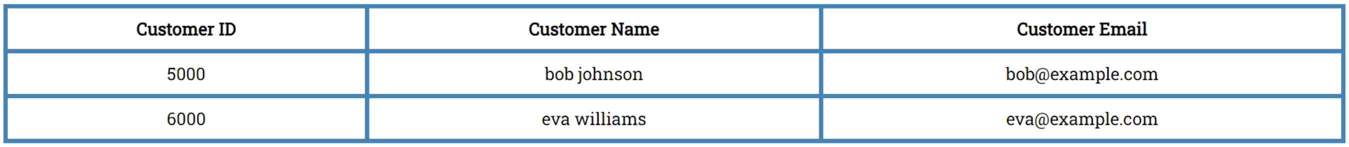


Ticket Purchased for Event

Find all customers that purchased tickets to the given event ID.

Event ID: 2

After:



Customer ID	Customer Name	Customer Email
5000	bob johnson	bob@example.com
6000	eva williams	eva@example.com

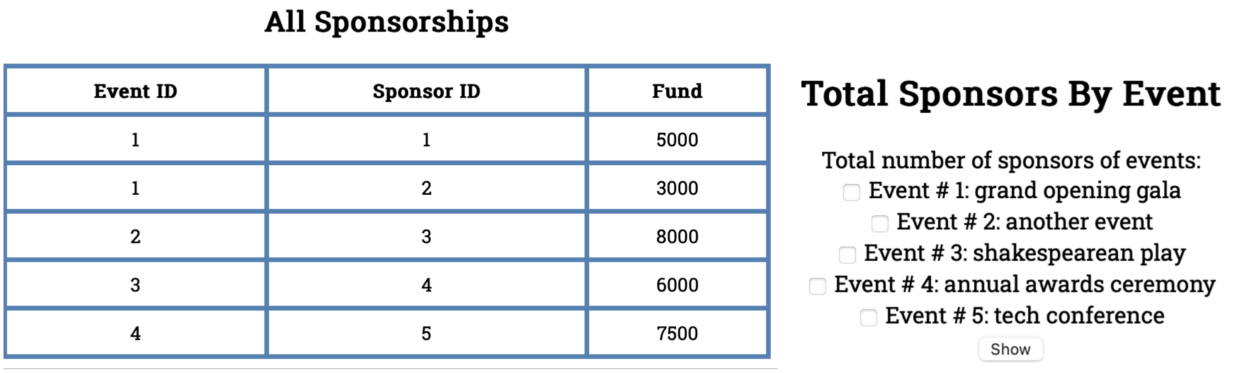
Aggregation with GROUP BY

Query:

```
SELECT e.EVENTID
, e.EVENTNAME
, COUNT(s.SPONSID) AS TOTAL_SPONSORS
FROM event e
LEFT JOIN sponsorship s ON e.EVENTID = s.EVENTID
WHERE e.EVENTID IN (" . implode(",", $selectedEventIDs) . ")
GROUP BY e.EVENTID, e.EVENTNAME;
```

Location: event_manager.php, line 375

Before:



All Sponsorships

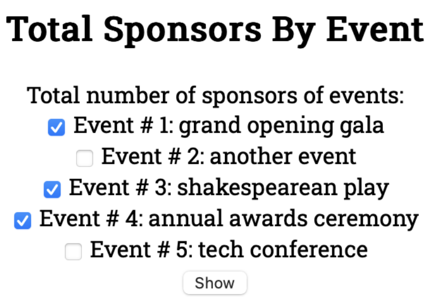
Event ID	Sponsor ID	Fund
1	1	5000
1	2	3000
2	3	8000
3	4	6000
4	5	7500

Total Sponsors By Event

Total number of sponsors of events:

□ Event # 1: grand opening gala
□ Event # 2: another event
□ Event # 3: shakespearean play
□ Event # 4: annual awards ceremony
□ Event # 5: tech conference

During:

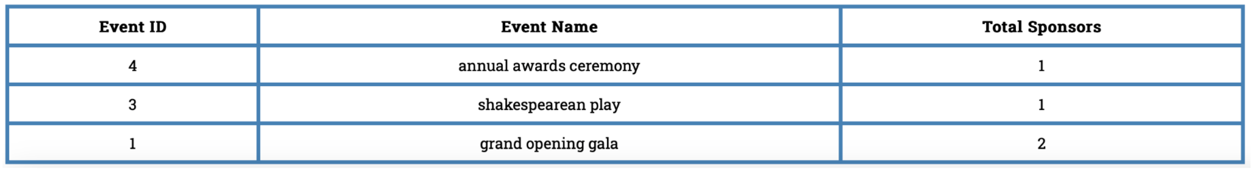


Total Sponsors By Event

Total number of sponsors of events:

☑ Event # 1: grand opening gala
□ Event # 2: another event
☑ Event # 3: shakespearean play
☑ Event # 4: annual awards ceremony
□ Event # 5: tech conference

After:



Event ID	Event Name	Total Sponsors
4	annual awards ceremony	1
3	shakespearean play	1
1	grand opening gala	2

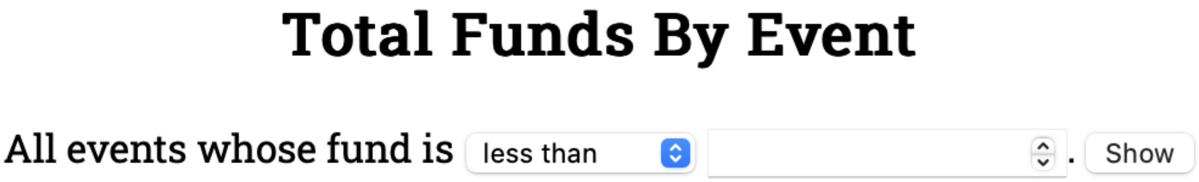
Aggregation with HAVING

Query:

```
SELECT e.EVENTID
, e.EVENTNAME
, SUM(s.FUND) AS TOTAL_FUND
FROM event e, sponsorship s
WHERE e.EVENTID = s.EVENTID
GROUP BY e.EVENTID, e.EVENTNAME
HAVING SUM(s.FUND) $comparator $fund;
```

Location: event_manager.php, line 394

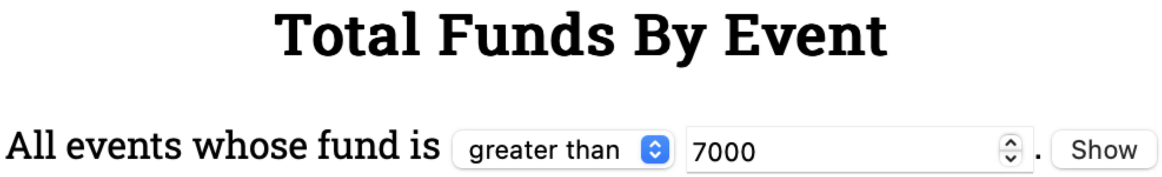
Before:



Total Funds By Event

All events whose fund is less than .

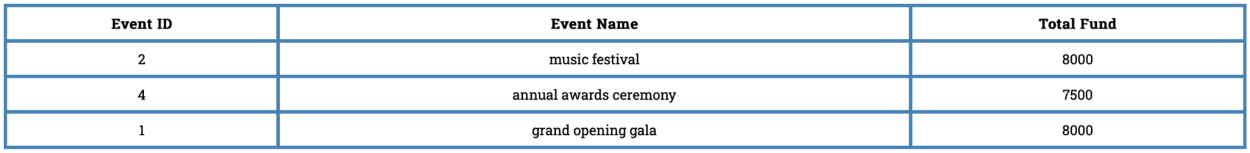
During:



Total Funds By Event

All events whose fund is greater than 7000.

After:



Event ID	Event Name	Total Fund
2	music festival	8000
4	annual awards ceremony	7500
1	grand opening gala	8000

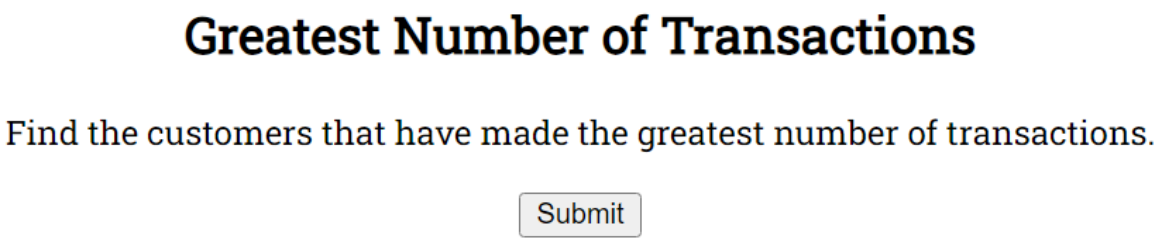
Nested Aggregation with GROUP BY

Query:

```
SELECT t.custid, count(*) as count
FROM transaction t
GROUP BY t.custid
HAVING COUNT(*) >= all (SELECT COUNT(*)
                        FROM transaction t2
                        GROUP BY t2.custid);
```

Location: customerservice.php, line: 196

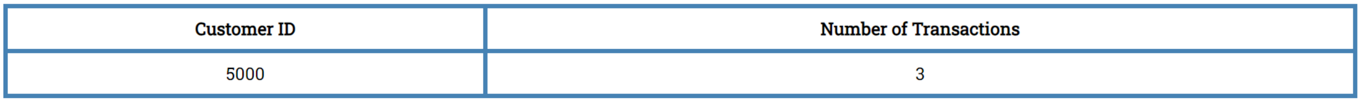
Before:



Greatest Number of Transactions

Find the customers that have made the greatest number of transactions.

After:



Customer ID	Number of Transactions
5000	3

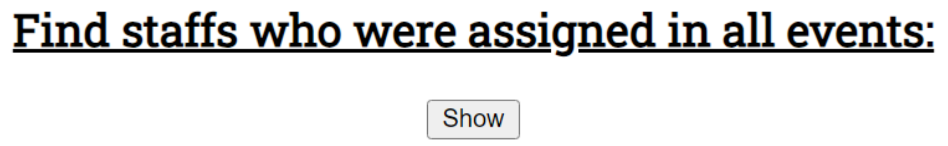
Division

Query:

```
SELECT DISTINCT s.staffid, s.staffname
FROM staff s, assignment a
WHERE NOT EXISTS (
          SELECT e.eventid
          FROM event e
          WHERE NOT EXISTS (
                    SELECT a.eventid
                    FROM assignment a
                    WHERE a.staffid = s.staffid
                    AND a.eventid = e.eventid));
```

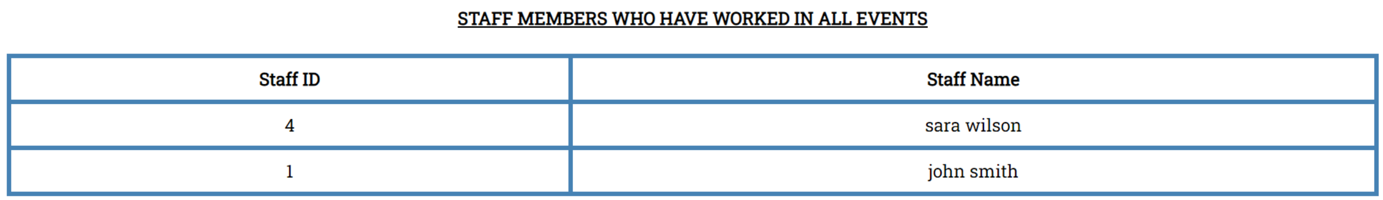
Location: hr.php, line: 170.

Before:



Find staffs who were assigned in all events:

After:



STAFF MEMBERS WHO HAVE WORKED IN ALL EVENTS

Staff ID	Staff Name
4	sara wilson
1	john smith