#### Relational Algebra Query Results (Total 15)

#### Query 1: Full Names of Attendees who bought a "VIP" ticket for "Tech Summit"

Query:  $\pi_{FirstName, LastName} (\sigma_{Type='VIP' \land EventName='TechSummit'} (Attendees \bowtie Tickets \bowtie Events))$ 

Table 1: Result 1: Attendees for VIP Tickets at Tech Summit

FirstName	LastName
Jose	Ramirez

### Query 2: Names of Venues that hosted an event where the ticket payment method was "GCash"

**Query:**  $\pi_{VenueName}\left(\sigma_{Method='GCash'}\left(Venues \bowtie Events \bowtie Tickets \bowtie Payments\right)\right)$ 

Table 2: Result 2: Venues with GCash Payments

VenueName	
CDO Convention Center	
Limketkai Auditorium	

### Query 3: Contact Info of Individual Organizers who hosted an event with a Base Price of 500

 $\textbf{Query:} \ \pi_{ContactInfo} \left( \sigma_{BasePrice=500} \left( Individual Organizers \bowtie Organizers \bowtie Events \bowtie TicketTypePricing \right) \right)$ 

Table 3: Result 3: Contact Info of Individual Organizers (Price 500)

${\bf Contact Info}$
917423431
9814739849

## Query 4: Email of Attendees who bought a VIP Ticket for an Individual-Hosted Event

 $\mathbf{Query:}\ \pi_{Email}\left(\sigma_{BasePrice=1000}\left(Attendees\bowtie Tickets\bowtie TicketTypePricing\bowtie Events\bowtie IndividualOrganizers)\right)$ 

Table 4: Result 4: Attendees' Email (VIP Ticket, Individual Host)

Email	
jose@gmail.com	

#### Query 5: Names of Venues with Capacity greater than 4000

Query:  $\pi_{VenueName} \left( \sigma_{VenueCapacity > 4000}(Venues) \right)$ 

Table 5: Result 5: Venues with Capacity ; 4000

VenueName	
Limketkai Auditorium	

#### Query 6: Ticket IDs paid for with "Cash"

Query:  $\pi_{TicketID} \left( \sigma_{Method='Cash'}(Payments) \right)$ 

Table 6: Result 6: Tickets Paid with Cash

TicketID
3
4

# Query 7: First and Last Names of Attendees whose email ends with 'gmail.com'

Query:  $\pi_{FirstName, LastName} \left( \sigma_{Emaillike'\%gmail.com'}(Attendees) \right)$ 

Table 7: Result 7: Attendees with @gmail.com

FirstName	LastName
Jose	Ramirez
Rose	Ramirez
Levi	Lanyen
Gina	Lloyd

## Query 8: Names and SSNs of Individual Organizers who hosted an event at the "Limketkai Mall"

Query:  $\pi_{FirstName,LastName,SSN}$  ( $\sigma_{VenueName='LimketkaiMall'}$  (IndividualOrganizers  $\bowtie$  Organizers  $\bowtie$  Events  $\bowtie$  VenueName='LimketkaiMall')

Table 8: Result 8: Individual Organizers at Limketkai Mall

FirstName	LastName	SSN
Kassandra	Liza	738-19-4592

#### Query 9: Date and Amount of payments made for "VIP" tickets

Query:  $\pi_{PaymentDate,Amount} \left( \sigma_{Type='VIP'} \left( Payments \bowtie Tickets \right) \right)$ 

Table 9: Result 9: VIP Ticket Payment Details

PaymentDate	Amount
2025-09-30	1000
2025-10-05	1000

#### Query 10: Names of Attendees who purchased a ticket with Extra Benefits

 $\mathbf{Query:} \ \pi_{FirstName, LastName} \left( \sigma_{ExtraBenefits = True} \left( Attendees \bowtie Tickets \bowtie TicketExtraBenefits \right) \right)$ 

Table 10: Result 10: Attendees with Extra Benefits

FirstName	LastName
Jose	Ramirez
Gina	Lloyd

#### Query 11: Attendees who purchased an 'R' ticket OR an 'S' ticket (Union)

Query:  $(\pi_{FirstName, LastName} (\sigma_{Type='R'} (Attendees \bowtie Tickets))) \cup (\pi_{FirstName, LastName} (\sigma_{Type='S'} (Attendees \bowtie Tickets)))) \cup (\pi_{FirstName, LastName} (\sigma_{Type='S'} (Attendees \bowtie Tickets)))) \cup (\pi_{FirstName, LastName} (\sigma_{Type='S'} (Attendees \bowtie Tickets)))))$ 

Table 11: Result 11: Attendees with 'R' or 'S' Tickets

FirstName	LastName
Maria	Santos
Rose	Ramirez
Levi	Lanyen

## Query 12: Event IDs for which both a VIP ticket AND a Regular ('R') ticket were sold (Intersection)

Query:  $(\pi_{EventID} (\sigma_{Type='VIP'}(Tickets))) \cap (\pi_{EventID} (\sigma_{Type='R'}(Tickets)))$ 

Table 12: Result 12: Event IDs with Both VIP and R Tickets

EventID	
1	

## Query 13: Names of Organizers who hosted events at ALL Venues with capacity $\geq 4000$ (Division)

Query:  $\pi_{Name}(Organizers \bowtie (\pi_{OrganizerID}(Events) \div \pi_{VenueID}(\sigma_{VenueCapacity \ge 4000}(Venues))))$ 

Table 13: Result 13: Organizers Hosting at ALL Large Venues

Name	
No matching row	s

# Query 14: Names of Venues that hosted MORE THAN ONE event (Group By/Aggregation)

Query:  $\pi_{VenueName} \left( \sigma_{CountEventID>1} \left( \gamma_{VenueID,COUNT(EventID) \to CountEventID}(Events) \right) \bowtie Venues \right)$ 

Table 14: Result 14: Venues Hosting More Than One Event

VenueName	
No matching rows	

## Query 15: Emails of Attendees who purchased a ticket type whose BasePrice is 500 or less

 $\mathbf{Query:} \ \pi_{Email} \left( \sigma_{BasePrice \leq 500} \left( Attendees \bowtie Tickets \bowtie TicketTypePricing \right) \right)$ 

Table 15: Result 15: Attendees with Tickets  $\leq 500$ 

Email
maria@email.com
rose@gmail.com
levi@gmail.com