



Powering Innovation with Top Tech Talent

SRM Talent Cloud Ecosystem

Enabling Premium Placements
High-Value Internships
Remote Jobs
High-End Research and Innovation
Nurturing Startups





Guided Immersion of End-to-End Data Management and Analytics

- 1. Introducing the UNOX Project
- 2. Clarification Log
- 3. UNOX ER Model
- 4. UNOX Database Design
- 5. UNOX Data Dictionary
- 6. Data Generation for UNOX
- 7. Data Loading for UNOX
- 8. Data Testing



1.Introducing the UNOX Project

 Read the document shared and understand the Project Requirements



1.Introducing the UNOX Project

What questions do you have?



2. UNOX Clarification Log

 Read the Excel document and make a list of questions that you have that will help you understand the requirements better

Goal: Eliminate assumptions and ambiguity.



ER Modeling

- A method for conceptual data modeling.
- Visualizes and organizes data within a database.
- Identifies entities, attributes, and relationships.



Connecting Entities through cardinality

• One-to-One (1:1):

 Each entity in one set is associated with at most one entity in the other set.

One-to-Many (1:N):

One entity can be associated with multiple entities in another set.

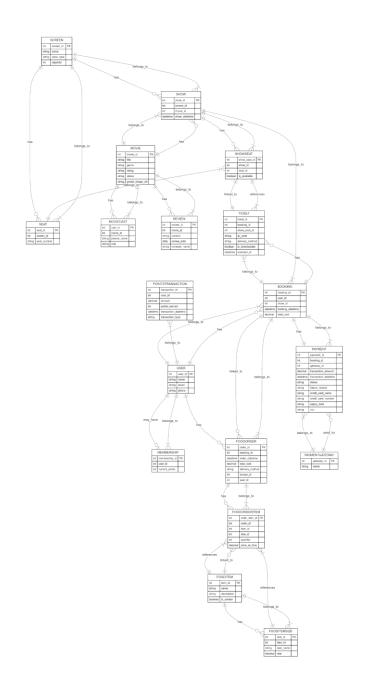
Many-to-Many (M:N):

 Entities in both sets can be associated with multiple entities in the other set.



3. UNOX ER Model

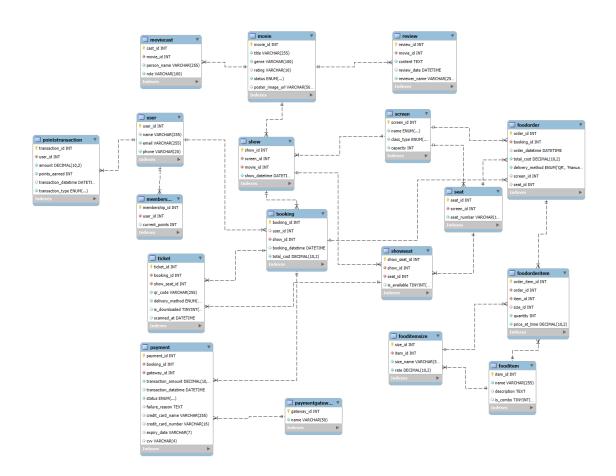
- Refer to the ER Diagram.
- Understand the Entities and their relationships





4. UNOX Database Diagram

- Refer to the Database Design Diagram.
- Understand the tables, primary keys and relationships





5. UNOX Data Dictionary

- Refer to the Data
 Dictionary Excel File.
- Understand the Data
 Types and Data
 Constraints

	Table Name	Column Name	Data Type	Size/Length	Primary Key	Foreign Key	Allow Nulls	Default Value	Constraints	Description
1 5	Screen	screen_id	INT		Yes		No		Auto Increment	Unique identifier for each screen.
_		name	VARCHAR		No		No			Name of the screen (A, B, C, D).
ш		class_type	VARCHAR	10	No		No			Class type of the screen (Gold, Silver, Iron).
_		capacity	INT		No		No			Seating capacity of the screen.
2 5	Seat	seat_id	INT		Yes	screen_id	No		Auto Increment	Unique identifier for each seat.
\Box		seat_number	VARCHAR	10	No		No			Seat number (e.g., "A1").
31	Movie	movie_id	INT		Yes		No		Auto Increment	Unique identifier for each movie.
\neg		title	VARCHAR	255	No		No			Movie title.
Т		genre	VARCHAR	50	No		No			Genre of the movie.
\neg		rating	DECIMAL	3,1	No		No			Movie rating (e.g., 8.5).
\neg		status	VARCHAR	20	No		No			Status of the movie (e.g., "Now Showing", "Upcomi
\neg		poster_image_url	VARCHAR	255	No		Yes	NULL		URL of the movie poster image.
41		cast_id	INT		Yes	movie id	No		Auto Increment	Unique identifier for each movie cast.
\dashv		person_name	VARCHAR	100	No		No			Name of the actor/actress.
\dashv		role	VARCHAR	100	No		No			Role played by the actor/actress in the movie.
5.0		review_id	INT		Yes	movie_id	No		Auto Increment	Unique identifier for each review.
		content	TEXT		No	inovicau	No		Page merement	Review content.
\rightarrow		review date	DATETIME		No		No			Date and time when the review was posted.
+		review_date reviewer name	VARCHAR	100	No		No No			Name of the reviewer
-				100						
6 5	Show	show_id	INT		Yes	screen_id, movie_id	No	-	Auto Increment	Unique identifier for each show.
_		show_datetime	DATETIME		No		No			Date and time when the show is scheduled.
7 5	ShowSeat	show_seat_id	INT		Yes	show_id, seat_id	No		Auto Increment	Unique identifier for each seat in a show.
_		is_available	BOOLEAN		No		No	TRUE		Availability status of the seat in the show (TRUE/FA
8 (user_id	INT		Yes		No		Auto Increment	Unique identifier for each user.
_		name	VARCHAR	100	No		No			Name of the user.
		email	VARCHAR	150	No		No			Email address of the user.
		phone	VARCHAR	15	No		Yes	NULL		Phone number of the user.
91	Membership	membership_id	INT		Yes	user_id	No		Auto Increment	Unique identifier for each membership.
Т		current_points	INT		No		No	0		Current loyalty points of the user.
10 F	Booking	booking_id	INT		Yes	user_id, show_id	No		Auto Increment	Unique identifier for each booking.
\neg		booking_datetime	DATETIME		No		No			Date and time when the booking was made.
\neg		total cost	DECIMAL	10.2	No		No			Total cost of the booking.
11 '	Ticket	ticket id	INT		Yes	booking_id, show_seat_id	No		Auto Increment	Unique identifier for each ticket.
\neg		gr_code	VARCHAR	100	No		No			OR code for the ticket
+		delivery_method	VARCHAR	50	No		No			Delivery method of the ticket (WhatsApp/App).
\dashv		is downloaded	BOOLEAN	50	No		No	FALSE		Indicates if the ticket has been downloaded.
\rightarrow		scanned_at	DATETIME		No		Yes	NULL		Timestamp when the ticket was scanned.
40		gateway id	INT		Yes		No.	IVOLL	Auto Increment	Unique identifier for each payment gateway.
121	PaymentGateway		VARCHAR	100	No.		No		Auto increment	Name of the payment gateway (e.g., PayPal, Bill De
		name		100						
13 1		payment_id	INT	10.2	Yes	booking_id, gateway_id	No		Auto Increment	Unique identifier for each payment.
-		transaction_amount	DECIMAL	10,2	No		No			Transaction amount of the payment.
4		transaction_datetime	DATETIME		No		No			Date and time of the transaction.
4		status	VARCHAR	20	No		No			Payment status (e.g., "Completed", "Failed").
_		failure_reason	TEXT		No		Yes	NULL		Reason for failure if payment status is failed.
_		credit_card_name	VARCHAR	100	No		Yes	NULL		Name on the credit card used for payment.
		credit_card_number	VARCHAR	20	No		Yes	NULL		Credit card number used for payment.
_[expiry_date	DATE		No		Yes	NULL		Expiry date of the credit card used for payment.
⅃		cw	VARCHAR	4	No		Yes	NULL		CVV of the credit card used for payment.
14	FoodItem	item_id	INT		Yes		No		Auto Increment	Unique identifier for each food item.
7		name	VARCHAR	100	No		No			Name of the food item.
7		description	TEXT		No		Yes	NULL		Description of the food item.
7		is_combo	BOOLEAN		No		No	FALSE		Indicates if the food item is part of a combo.
		size id	INT		Yes	item id	No		Auto Increment	Unique identifier for each food item size.
15					No		No	 	moonlellt	Size name (e.g., "Small", "Large").
15 F	FoodItemSize	size_Id size name		50						
15 F	FoodItemSize	size_name	VARCHAR				No			
		size_name rate	VARCHAR DECIMAL	50 10,2	No	hooking id screen id coot id	No No		Auto Increment	Rate of the food item size.
	FoodOrder	size_name rate order_id	VARCHAR DECIMAL INT		No Yes	booking_id, screen_id, seat_id	No		Auto Increment	Unique identifier for each food order.
	FoodOrder	size_name rate order_id order_datetime	VARCHAR DECIMAL INT DATETIME	10,2	No Yes No	booking_id, screen_id, seat_id	No No		Auto Increment	Unique identifier for each food order. Date and time when the food order was placed.
	FoodOrder	size_name rate order_id order_datetime total_cost	VARCHAR DECIMAL INT DATETIME DECIMAL	10,2	No Yes No No	booking_id, screen_id, seat_id	No No No		Auto Increment	Unique identifier for each food order. Date and time when the food order was placed. Total cost of the food order.
16	FoodOrder	size_name rate order_id order_datetime total_cost delivery_method	VARCHAR DECIMAL INT DATETIME DECIMAL VARCHAR	10,2	No Yes No No		No No No No			Unique identifier for each food order. Date and time when the food order was placed. Total cost of the food order. Delivery method for the food order (QR/Manual).
16	FoodOrder FoodOrderItem	size_name rate order_id order_datetime total_cost delivery_method order_item_id	VARCHAR DECIMAL INT DATETIME DECIMAL VARCHAR INT	10,2	No Yes No No No Yes	booking_id, screen_id, seat_id order_id, item_id, size_id	No No No No No			Unique identifier for each food order. Date and time when the food order was placed. Total cost of the food order. Delivery method for the food order (QR/Manual). Unique identifier for each food order item.
16	FoodOrder FoodOrderItem	size_name rate order_id order_datetime total_cost delivery_method order_item_id quantity	VARCHAR DECIMAL INT DATETIME DECIMAL VARCHAR INT	10,2 10,2 50	No Yes No No No Yes		No No No No No No			Unique identifier for each food order. Date and time when the lood order was placed. Total cost of the food order. Delivery method for the food order (QR/Manual). Linique identifier for each food order item. Quantity of the food item ordered.
16 F	FoodOrder FoodOrderItem	size_name rate order_id order_datetime total_cost delivery_method order_item_id quantity price_at_time	VARCHAR DECIMAL INT DATETIME DECIMAL VARCHAR INT INT DECIMAL	10,2	No Yes No No No Yes No	order_id, item_id, size_id	No No No No No No No		Auto Increment	Unique identifier for each food order. Date and time when the bood order was placed. Total cost of the food order. Delivery method for the food order (QR/Manuat). Unique identifier for each food order item. Quantity of the food item ordered. Price of the food item at the time of the order.
16 F	FoodOrder FoodOrderItem	size_name rate order_id order_datetime total_cost delivery_method order_them_id quantity price_at_time transaction_id	VARCHAR DECIMAL INT DATETIME DECIMAL VARCHAR INT INT DECIMAL INT DECIMAL INT	10,2 10,2 50	No Yes No No No Yes No No Yes		No No No No No No No		Auto Increment	Unique identifier for each food order. Date and time when the food order was placed. Total cost of the food order. Delivery method for the food order (QR/Manual). Unique identifier for each food order item. Quantity of the food item ordered. Picc of the food item of the time of the order. Unique identifier for each plont transaction.
16 F	FoodOrder FoodOrderItem	size_name rate order_id order_datetime total_cost delivery_method order_item_id quantity price_at_time	VARCHAR DECIMAL INT DATETIME DECIMAL VARCHAR INT INT DECIMAL	10,2 10,2 50	No Yes No No No Yes No	order_id, item_id, size_id	No No No No No No No		Auto Increment	Unique identifier for each food order. Date and time when the bood order was placed. Total cost of the food order. Delivery method for the food order (QR/Manuat). Unique identifier for each food order item. Quantity of the food item ordered. Price of the food item at the time of the order.
16 F	FoodOrder FoodOrderItem	size_name rate order_id order_datetime total_cost delivery_method order_them_id quantity price_at_time transaction_id	VARCHAR DECIMAL INT DATETIME DECIMAL VARCHAR INT INT DECIMAL INT DECIMAL INT	10,2 10,2 50	No Yes No No No Yes No No Yes	order_id, item_id, size_id	No No No No No No No		Auto Increment	Unique identifier for each food order. Date and time when the food order was placed. Total cost of the food order. Delivery method for the food order (QR/Manual). Unique identifier for each food order item. Quantity of the food item ordered. Picc of the food item of the time of the order. Unique identifier for each plont transaction.
16 F	FoodOrder FoodOrderItem	size_name rate order_id order_datetime total_cost delivery_method order_itkm_id quantity price_at_time transaction_id amount	VARCHAR DECIMAL INT DATETIME DECIMAL VARCHAR INT INT DECIMAL INT DECIMAL INT DECIMAL	10,2 10,2 50	No Yes No No No Yes No No Yes	order_id, item_id, size_id	No No No No No No No No No		Auto Increment	Unique identifier for each tood order. Date and time when the bod order was placed. Total cost of the food order. Delivery method for the food order (QRVManuat). Unique identifier for each food order item. Quantity of the food tem ordered. Price of the food them ordered. Price of the food them at the time of the order. Unique identifier for each points transaction. Amount of money spentifearned.



6. UNOX Data Generation

 Go through the CSV files and understand how the data looks like.

. No	Table Name	Column Name	Data Type	Size/Length	Primary Key	Foreign Key	Allow Nulls	Default Value	Constraints	Description
- 1	Screen	screen_id	INT		Yes		No		Auto Increment	Unique identifier for each screen.
		name	VARCHAR		No		No			Name of the screen (A, B, C, D).
2		class_type	VARCHAR	10	No		No			Class type of the screen (Gold, Silver, Iron).
		capacity	INT		No		No			Seating capacity of the screen.
	Seat	seat_id	INT		Yes	screen_id	No		Auto Increment	Unique identifier for each seat.
		seat_number	VARCHAR	10	No		No			Seat number (e.g., "A1").
	Movie	movie_id	INT		Yes		No		Auto Increment	Unique identifier for each movie.
		title	VARCHAR	255			No			Movie title.
		genre	VARCHAR	50	No		No			Genre of the movie.
		rating	DECIMAL	3,1	No		No			Movie rating (e.g., 8.5).
		status	VARCHAR	20			No			Status of the movie (e.g., "Now Showing", "Upcoming"
5		poster_image_url	VARCHAR	255	No		Yes	NULL		URL of the movie poster image.
	MovieCast	cast_id	INT		Yes	movie_id	No		Auto Increment	Unique identifier for each movie cast.
		person_name	VARCHAR	100	No		No			Name of the actor/actress.
		role	VARCHAR	100	No		No			Role played by the actor/actress in the movie.
	Review	review_id	INT		Yes	movie_id	No		Auto Increment	Unique identifier for each review.
		content	TEXT		No		No			Review content.
		review_date	DATETIME		No		No			Date and time when the review was posted.
		reviewer_name	VARCHAR	100	No		No			Name of the reviewer.
	Show	show_id	INT		Yes	screen_id, movie_id	No		Auto Increment	Unique identifier for each show.
	1	show_datetime	DATETIME		No		No	-		Date and time when the show is scheduled.
7	ShowSeat	show_seat_id	INT		Yes	show_id, seat_id	No		Auto Increment	Unique identifier for each seat in a show.
	1	is_available	BOOLEAN		No		No	TRUE		Availability status of the seat in the show (TRUE/FALS
8	User	user_id	INT		Yes		No		Auto Increment	Unique identifier for each user.
		name	VARCHAR		No		No			Name of the user.
		email	VARCHAR		No		No			Email address of the user.
		phone	VARCHAR	15	No		Yes	NULL		Phone number of the user.
9	Membership	membership_id	INT		Yes	user_id	No		Auto Increment	Unique identifier for each membership.
11		current_points	INT		No		No	0		Current loyalty points of the user.
	Booking	booking_id	INT		Yes	user_id, show_id	No		Auto Increment	Unique identifier for each booking.
		booking_datetime	DATETIME		No		No			Date and time when the booking was made.
		total_cost	DECIMAL	10,2	No		No			Total cost of the booking.
	Ticket	ticket_id	INT		Yes	booking_id, show_seat_id	No		Auto Increment	Unique identifier for each ticket.
		qr_code	VARCHAR		No		No			QR code for the ticket.
		delivery_method	VARCHAR	50			No			Delivery method of the ticket (WhatsApp/App).
		is_downloaded	BOOLEAN		No		No	FALSE		Indicates if the ticket has been downloaded.
		scanned_at	DATETIME		No		Yes	NULL		Timestamp when the ticket was scanned.
	PaymentGateway	gateway_id	INT		Yes		No		Auto Increment	Unique identifier for each payment gateway.
		name	VARCHAR	100	No		No			Name of the payment gateway (e.g., PayPal, Bill Desk
	Payment	payment_id	INT		Yes	booking_id, gateway_id	No		Auto Increment	Unique identifier for each payment.
		transaction_amount	DECIMAL	10,2	No		No			Transaction amount of the payment.
		transaction_datetime	DATETIME		No		No			Date and time of the transaction.
		status	VARCHAR	20	No		No			Payment status (e.g., "Completed", "Failed").
14		failure_reason	TEXT		No		Yes	NULL		Reason for failure if payment status is failed.
		credit_card_name	VARCHAR	100			Yes	NULL		Name on the credit card used for payment.
		credit_card_number	VARCHAR	20	No		Yes	NULL		Credit card number used for payment.
		expiry_date	DATE		No		Yes	NULL	l	Expiry date of the credit card used for payment.
	-	cw	VARCHAR	4	No		Yes	NULL		CVV of the credit card used for payment.
	FoodItem	item_id	INT		Yes		No		Auto Increment	Unique identifier for each food item.
		name	VARCHAR	100			No			Name of the food item.
15		description	TEXT		No		Yes	NULL	ļ	Description of the food item.
		is_combo	BOOLEAN		No		No	FALSE		Indicates if the food item is part of a combo.
	FoodItemSize	size_id	INT		Yes	item_id	No		Auto Increment	Unique identifier for each food item size.
	1	size_name	VARCHAR	50	No		No	ļ		Size name (e.g., "Small", "Large").
		rate	DECIMAL	10,2	No		No		ļ	Rate of the food item size.
	FoodOrder	order_id	INT		Yes	booking_id, screen_id, seat_id	No		Auto Increment	Unique identifier for each food order.
		order_datetime	DATETIME		No		No			Date and time when the food order was placed.
		total_cost	DECIMAL	10,2	No		No			Total cost of the food order.
		delivery_method	VARCHAR	50	No		No			Delivery method for the food order (QR/Manual).
17	FoodOrderItem	order_item_id	INT		Yes	order_id, item_id, size_id	No		Auto Increment	Unique identifier for each food order item.
		quantity	INT		No		No			Quantity of the food item ordered.
		price_at_time	DECIMAL	10,2	No		No			Price of the food item at the time of the order.
		transaction_id	INT		Yes	user_id	No		Auto Increment	Unique identifier for each points transaction.
18	PointsTransaction				No		No			Amount of money spent/earned.
18	PointsTransaction	amount	DECIMAL	10,2						
18	PointsTransaction	points_earned	INT	10,2	No		No			Number of points earned in the transaction.
18	PointsTransaction			10,2						



7. Data Loading for UNOX

- •Import the SQL database file.
- View the contents in the database tables



8. Data Testing

- Test the data in the tables and ensure correctness by comparing with the CSV files.
- Run the test cases to test the data.



Q&A

•What questions do you have?

