
airbnb_database

metadata

The Airbnb database schema is a comprehensive structure designed to manage various aspects of the Airbnb platform, facilitating the rental and booking of accommodations, handling user interactions, managing payments, and addressing customer service issues.

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Technology Choices:

MySQL Server 8.0

MySQL Shell 8.0

MySQL Workbench 8.0 Community Edition

Column metadata for each table:

[Table Name – Column – Data Type/Character Maximum Length]

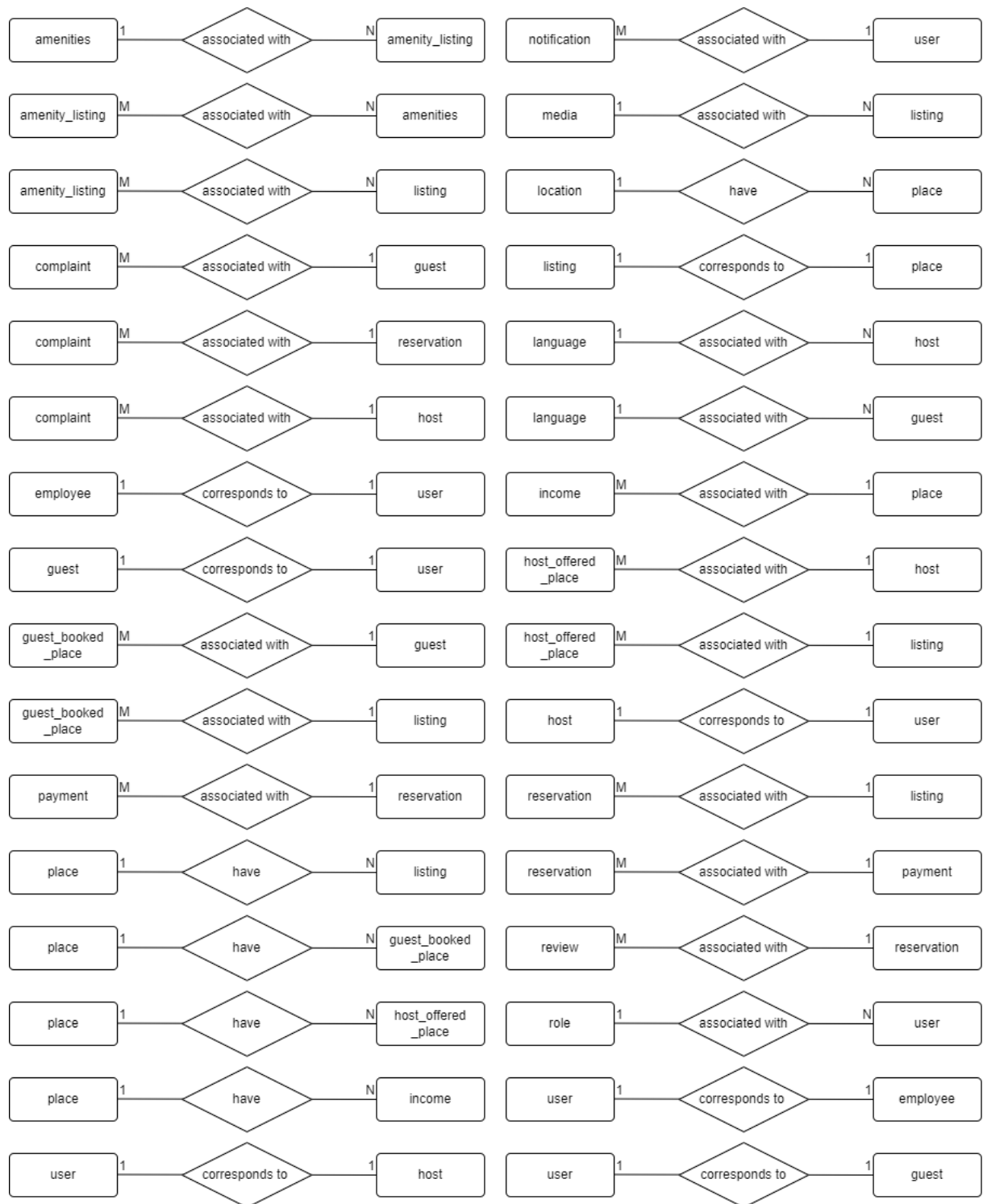
amenities	id(PK)	int
	name	varchar(45)
	description	varchar(45)
amenity_listing	place_id(FK)	int
	amenity_id(FK)	int
complaint	id(PK)	int
	explanations	varchar(250)
	status	varchar(45)
	reservation_id(FK)	int
	related_guest_id(FK)	int
	related_host_id(FK)	int
employee	id(PK)	int
	birthdate	date
	hire_date	date
	title	varchar(45)
	annual_leave	varchar(45)
	reports_to	varchar(45)
	employee_user_id(FK)	int
guest	id(PK)	int
	payment_card_info	varchar(200)
	guest_user_id(FK)	int
	description	varchar(250)
	guest_billing_address_id(FK)	int
	profile_language_id(FK)	int
guest_booked_place	guest_id(FK)	int
	booked_place_id(FK)	int
	reservation_id(FK)	int
host	id(PK)	int
	lang_speaking_id(FK)	int

	host_user_id(FK)	int
host_offered_place	offered_place_id(FK)	int
	reservation_id(FK)	Int
	host_id(FK)	int
	yearly_income_id(FK)	int
income	id(PK)	int
	year	varchar(45)
	amount	float
	place_id(FK)	int
language	id(PK)	int
	name	varchar(45)
listing	id(PK)	int
	listed_place_id(FK)	int
	cover_photo_id(FK)	int
	description	varchar(100)
location	id(PK)	int
	country	varchar(45)
	region	varchar(45)
	city	varchar(45)
	street	varchar(45)
	post_code	varchar(45)
media	id(PK)	int
	type	varchar(45)
	media	longblob
notification	id(PK)	int
	user_id(FK)	int
	message	varchar(45)
	date	datetime
payment	id(PK)	int
	date	datetime
	discount	float
	amount	float
	currency	varchar(45)
	payment_method	varchar(45)
	payment_status	varchar(45)
place	id(PK)	Int
	place_location_id (FK)	int

	number_of_room	int
	max_guest_capacity	varchar(50)
	price_per_night	float
reservation	id(PK)	int
	listing_id(FK)	int
	check_in	datetime
	check_out	datetime
	rez_payment_id(FK)	int
review	id(PK)	int
	reviewed_reservation_id (FK)	int
	rating	varchar(45)
	comment	varchar(200)
role	id(PK)	int
	role_name	varchar(45)
user	id(PK)	int
	first_name	varchar(45)
	last_name	varchar(45)
	email	varchar(45)
	password	varchar(45)
	profile_img_id(FK)	Int
	contact_number	varchar(45)
	location_id(FK)	int
	role_id(FK)	int

Cardinality:

Here is the cardinality of each table in the Airbnb database schema:



Information Schema:

	CATALOG_NAME	SCHEMA_NAME	DEFAULT_CHARACTER_SET_NAME	DEFAULT_COLLATION_NAME	SQL_PATH	DEFAULT_ENCRYPTION
►	def	airbnb_database	utf8mb4	utf8mb4_0900_ai_ci	HULL	NO

	TABLE_CATALOG	TABLE_SCHEMA	TABLE_NAME	TABLE_TYPE	ENGINE	VERSION	ROW_FORMAT	TABLE_ROWS	AVG_ROW_LENGTH	DATA_LENGTH	MAX_DATA_LENGTH	INDEX_LENGTH
►	def	airbnb_database	amenities	BASE TABLE	InnoDB	10	Dynamic	20	819	16384	0	0
	def	airbnb_database	amenity_listing	BASE TABLE	InnoDB	10	Dynamic	145	112	16384	0	32768
	def	airbnb_database	complaint	BASE TABLE	InnoDB	10	Dynamic	30	546	16384	0	49152
	def	airbnb_database	employee	BASE TABLE	InnoDB	10	Dynamic	20	819	16384	0	16384
	def	airbnb_database	guest	BASE TABLE	InnoDB	10	Dynamic	35	468	16384	0	49152
	def	airbnb_database	guest_booked_place	BASE TABLE	InnoDB	10	Dynamic	39	420	16384	0	49152
	def	airbnb_database	host	BASE TABLE	InnoDB	10	Dynamic	25	655	16384	0	32768
	def	airbnb_database	host_offered_place	BASE TABLE	InnoDB	10	Dynamic	40	409	16384	0	65536
	def	airbnb_database	income	BASE TABLE	InnoDB	10	Dynamic	30	546	16384	0	16384
	def	airbnb_database	language	BASE TABLE	InnoDB	10	Dynamic	20	819	16384	0	0
	def	airbnb_database	listing	BASE TABLE	InnoDB	10	Dynamic	30	546	16384	0	32768
	def	airbnb_database	location	BASE TABLE	InnoDB	10	Dynamic	105	156	16384	0	0
	def	airbnb_database	media	BASE TABLE	InnoDB	10	Dynamic	79	2780924	219693056	0	0
	def	airbnb_database	notification	BASE TABLE	InnoDB	10	Dynamic	20	819	16384	0	16384
	def	airbnb_database	payment	BASE TABLE	InnoDB	10	Dynamic	40	409	16384	0	0
	def	airbnb_database	place	BASE TABLE	InnoDB	10	Dynamic	30	546	16384	0	16384
	def	airbnb_database	reservation	BASE TABLE	InnoDB	10	Dynamic	40	409	16384	0	32768
	def	airbnb_database	review	BASE TABLE	InnoDB	10	Dynamic	20	819	16384	0	16384
	def	airbnb_database	role	BASE TABLE	InnoDB	10	Dynamic	20	819	16384	0	0
	def	airbnb_database	user	BASE TABLE	InnoDB	10	Dynamic	80	204	16384	0	49152

The total size of the database schema:

	Total Size (MB)
►	210.2656

List of tables in the database schema:

TABLE_NAME
► amenities
amenity_listing
complaint
employee
guest
guest_booked_place
host
host_offered_place
income
language
listing
location
media
notification
payment
place
reservation
review
role
user

The indexes for all tables within the database schema:

	TABLE_NAME	INDEX_NAME
►	amenities	PRIMARY
	amenity_listing	place_id
	amenity_listing	amenity_id
	complaint	PRIMARY
	complaint	reservation_id
	complaint	related_guest_id
	complaint	related_host_id
	employee	PRIMARY
	employee	employee_user_id
	guest	PRIMARY
	guest	guest_user_id
	guest	guest_billing_address_id
	guest	profile_language_id
	guest_booked_place	guest_id
	guest_booked_place	booked_place_id
	guest_booked_place	reservation_id
	host	PRIMARY
	host	lang_speaking_id
	host	host_user_id
	host_offered_place	offered_place_id
	host_offered_place	reservation_id
	host_offered_place	host_id
	host_offered_place	yearly_income_id
	income	PRIMARY
	income	place_id
	language	PRIMARY
	listing	PRIMARY
	listing	listed_place_id
	listing	cover_photo_id
	location	PRIMARY
	media	PRIMARY
	notification	PRIMARY
	notification	user_id
	payment	PRIMARY
	place	PRIMARY
	place	place_location_id
	reservation	PRIMARY
	reservation	listing_id
	reservation	rez_payment_id
	review	PRIMARY
	review	reviewed_reservation_id
	role	PRIMARY
	user	PRIMARY
	user	profile_img_id
	user	location_id
	user	role_id

The total size of indexes in the database schema:

	Total Index Size (MB)
►	0.4531

The list of tables in the database schema, the number of entries of each table in this schema, and the size of the schema:

	TABLE_NAME	Number of Entries	Table Size (MB)
▶	amenities	20	0.02
	amenity_listing	145	0.05
	complaint	30	0.06
	employee	20	0.03
	guest	35	0.06
	guest_booked_place	39	0.06
	host	25	0.05
	host_offered_place	40	0.08
	income	30	0.03
	language	20	0.02
	listing	30	0.05
	location	105	0.02
	media	79	209.52
	notification	20	0.03
	payment	40	0.02
	place	30	0.03
	reservation	40	0.05
	review	20	0.03
	role	20	0.02
	user	80	0.06

The list of foreign key constraints of the database schema:

	CONSTRAINT_NAME	TABLE_NAME	COLUMN_NAME	REFERENCED_TABLE_NAME	REFERENCED_COLUMN_NAME
▶	amenity_listing_ibfk_1	amenity_listing	place_id	place	id
	amenity_listing_ibfk_2	amenity_listing	amenity_id	amenities	id
	complaint_ibfk_1	complaint	reservation_id	reservation	id
	complaint_ibfk_2	complaint	related_guest_id	guest	id
	complaint_ibfk_3	complaint	related_host_id	host	id
	employee_ibfk_1	employee	employee_user_id	user	id
	guest_ibfk_2	guest	guest_user_id	user	id
	guest_ibfk_3	guest	guest_billing_address_id	location	id
	guest_ibfk_4	guest	profile_language_id	language	id
	guest_booked_place_ibfk_1	guest_booked_place	guest_id	guest	id
	guest_booked_place_ibfk_2	guest_booked_place	booked_place_id	place	id
	guest_booked_place_ibfk_3	guest_booked_place	reservation_id	reservation	id
	host_ibfk_1	host	lang_speaking_id	language	id
	host_ibfk_2	host	host_user_id	user	id
	host_offered_place_ibfk_1	host_offered_place	offered_place_id	place	id
	host_offered_place_ibfk_2	host_offered_place	reservation_id	reservation	id
	host_offered_place_ibfk_3	host_offered_place	host_id	host	id
	host_offered_place_ibfk_4	host_offered_place	yearly_income_id	income	id
	income_ibfk_1	income	place_id	place	id
	listing_ibfk_1	listing	listed_place_id	place	id
	listing_ibfk_2	listing	cover_photo_id	media	id
	notification_ibfk_1	notification	user_id	user	id
	place_ibfk_1	place	place_location_id	location	id
	reservation_ibfk_1	reservation	listing_id	listing	id
	reservation_ibfk_2	reservation	rez_payment_id	payment	id
	review_ibfk_1	review	reviewed_reservation_id	reservation	id
	user_ibfk_1	user	profile_img_id	media	id
	user_ibfk_2	user	location_id	location	id
	user_ibfk_3	user	role_id	role	id