Step 1: Define components

-Stays

-Experiences

Step 2: Define entities

E1. Hosting

E2. User

E3. Trips

E4. Review

E5. Host

E6. Category

E7. Stats

E8. Booking

-E9. Tourist sites

-E10. Services

-E11. Host Stats

Step 3: Define attributes per entity

E1. Hosting: Type, guests, description, ubication, price, rooms, beds.

E2. User: Username, password, email address, phone number, verify.

E3. Trips: Duration, guests, description, ubication, type, languages.

E4. Review: Comments, author, stars, timestamp, ubication.

E5. Host: Username, password, email address, phone number, languages, occupation, description, verify.

E6. Category: Type, restrictions.

E7. Stats: Rating, Cleanliness, Accuracy, Communication, Check-in, Location

E8. Booking: Date check-in, date check-out, total price, stay price, adults, children, pets, infants,

-E9. Tourist sites: Type, ubication.

-E10. Services: Wifi, food, tv, Air conditioning , kitchen, Lockbox, view, Parking, bathroom, drink.

-E11. Host stats: Rating, years experience, number of reviews

Step 4:

	E1	E2	E3	E4	E5	E6	E7	E8	E9	E10	E11
E1				XXX	XXX	XXX	XXX	XXX		XXX	
E2				XXX							
E3				XXX		XXX	XXX	XXX	XXX	XXX	
E4	XXX	XXX	XXX		XXX		XXX		XXX		XXX
E5	XXX			XXX							XXX
E6	XXX		XXX						XXX		
E7	XXX		XXX	XXX							
E8	XXX		XXX								
E9			XXX	XXX		XXX					
E10	XXX		XXX								
E11				XXX	XXX						

Step 5:

E1-E4: One to many.

E1-E5: Many to one.

E1-E6: Many to one.

E1-E7: One to one.

E1-E8: One to many.

E1-E10: One to one.

E2-E4: One to many

E3-E4: One to many

E3-E6: Many to one

E3-E7: One to one

E3-E8: One to many

E3-E9: One to many

E3-E10: One to one

E4-E5: One to many

E4-E7: Many to one

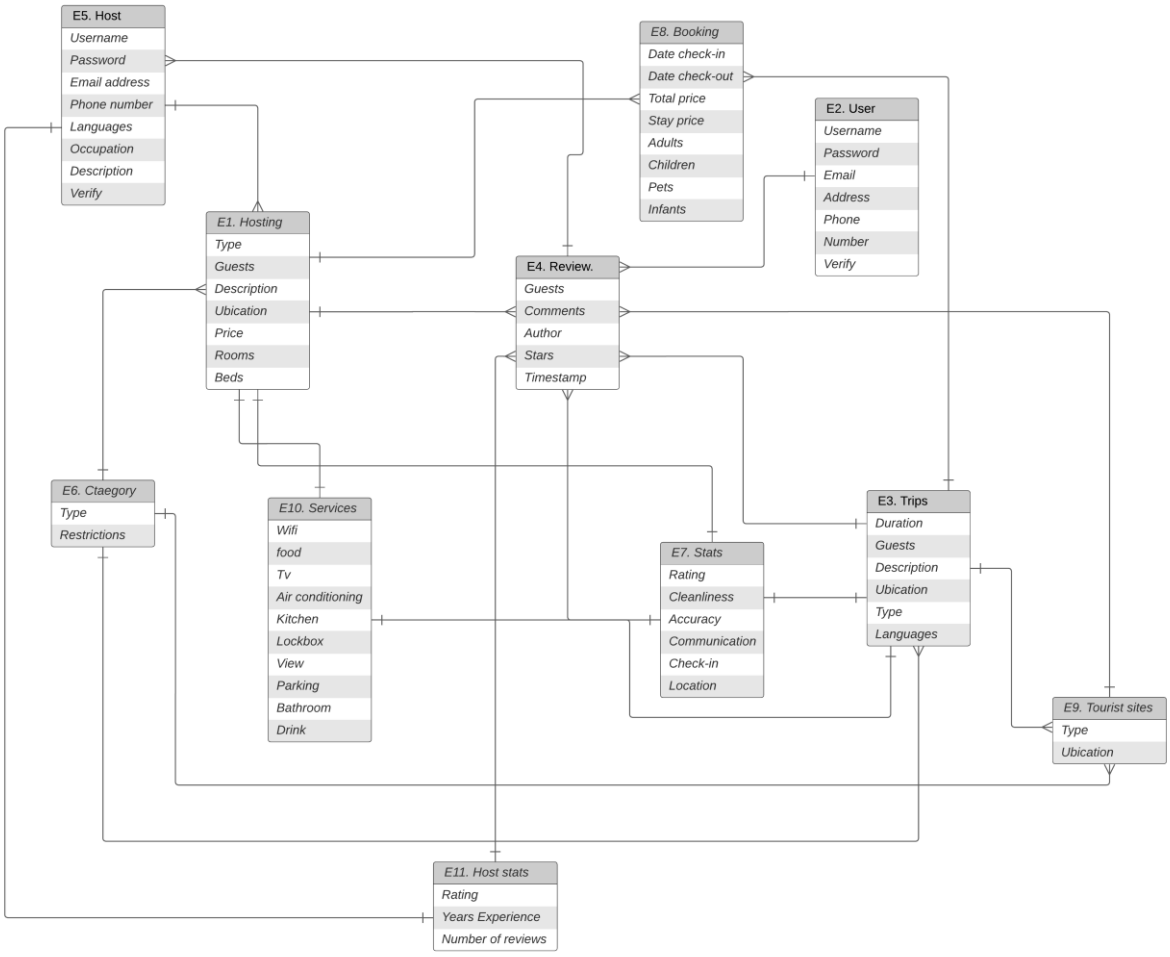
E4-E9: Many to one

E4-E11: Many to one

E5-E11: One to one

E6-E9: One to many

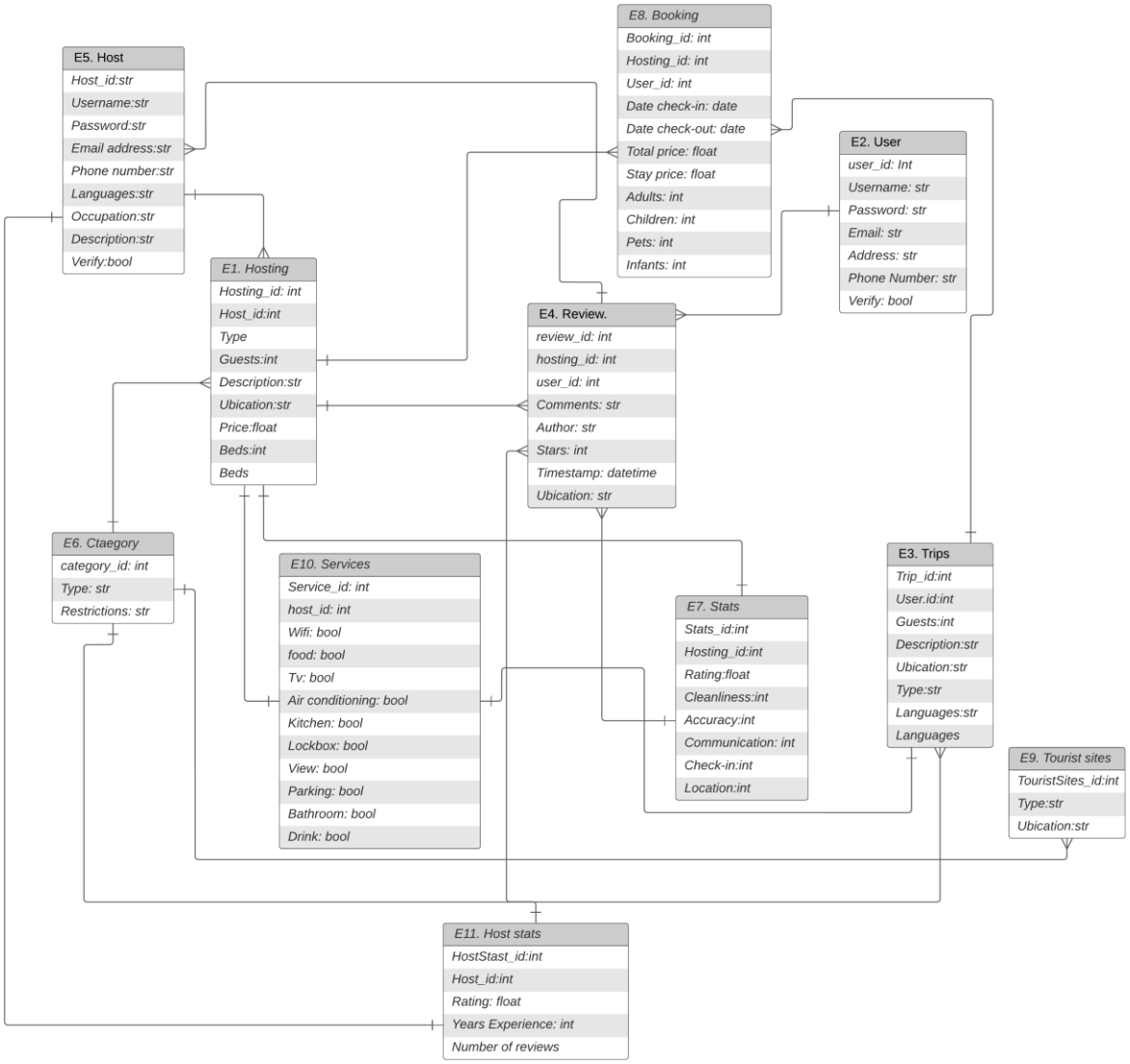
Step 6:



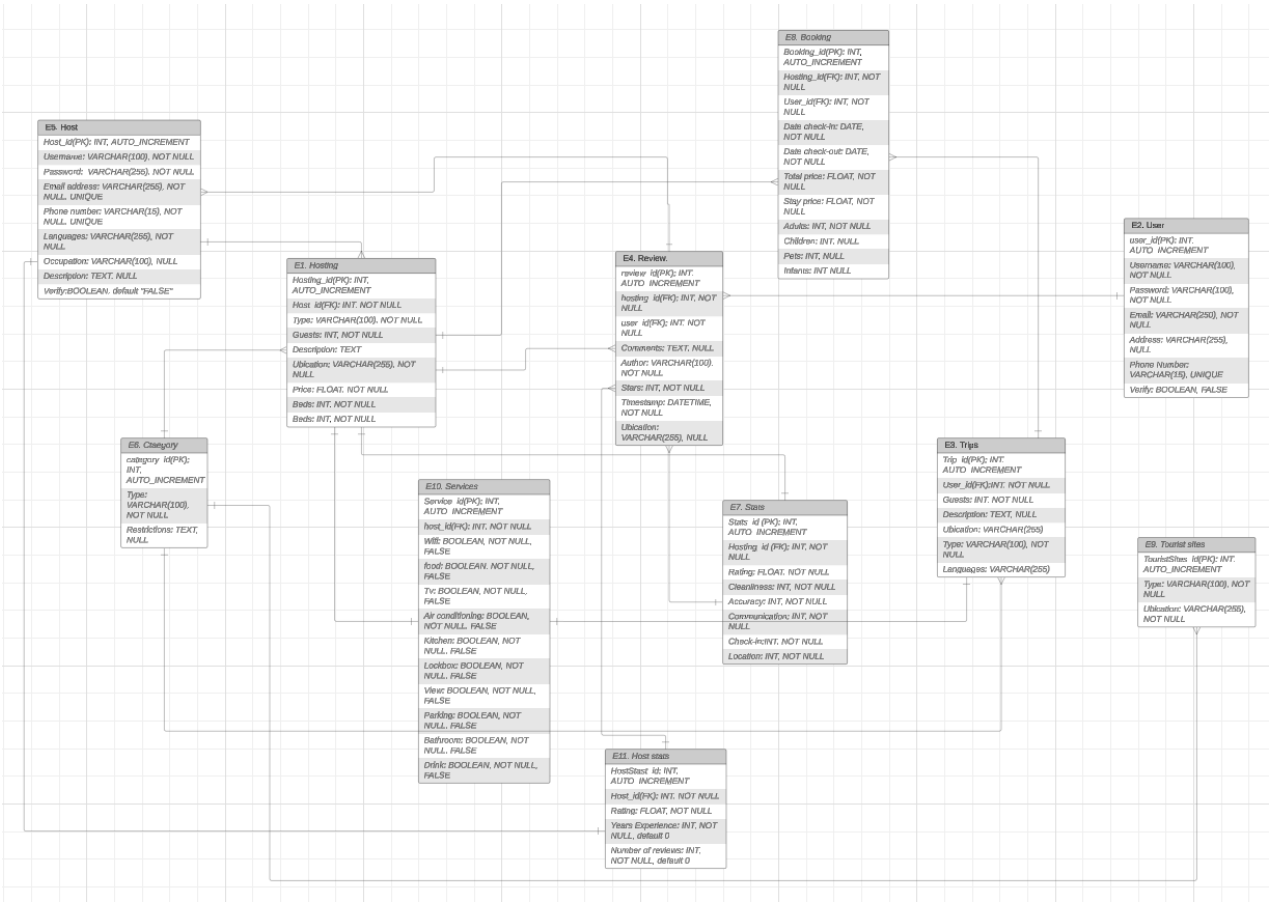
Step 7 and step 8:

To break down many-to-many relationships, we declare the Booking entity, which acts as an intermediary that breaks down these types of relationships between the entities involved. By introducing an intermediate entity, a many-to-many relationship is transformed into two one-to-many relationships, making it easier to manage and store information. This booking entity not only records the connections between the other entities but can also store additional data relevant to the relationship, such as dates, specific details of the reservation, or any other contextual information that is needed.

Step 9:



Step 10:


E8. Booking
Booking_Id(PK): INT, AUTO_INCREMENT
Hosting_Id(FK): INT, NOT NULL
User_Id(FK): INT, NOT NULL
Date check-In: DATE, NOT NULL
Date check-out: DATE, NOT NULL
Total price: FLOAT, NOT NULL
Stay price: FLOAT, NOT NULL
Adults: INT, NOT NULL
Children: INT. NULL
Pets: INT, NULL
Infants: INT NULL
E5. Host
Host_Id(PK): INT, AUTO_INCREMENT
Username: VARCHAR(100), NOT NULL
Password: VARCHAR(255), NOT NULL
Email address: VARCHAR(255), NOT NULL, UNIQUE
Phone number: VARCHAR(15), NOT NULL, UNIQUE
Languages: VARCHAR(255), NOT NULL
Occupation: VARCHAR(100), NULL
Description: TEXT. NULL
Verify:BOOLEAN. default "FALSE"
E1. Hosting
Hosting_Id(PK): INT, AUTO_INCREMENT
Host_Id(FK): INT. NOT NULL
Type: VARCHAR(100), NOT NULL
Guests: INT, NOT NULL
Description: TEXT
Ubication: VARCHAR(255), NOT NULL
Price: FLOAT. NOT NULL
Beds: INT, NOT NULL
Beds: INT, NOT NULL
E4. Review.
review_Id(PK): INT, AUTO_INCREMENT
hosting_Id(FK): INT, NOT NULL
user_Id(FK): INT. NOT NULL
Comments: TEXT, NULL
Author: VARCHAR(100). NOT NULL
Stars: INT, NOT NULL
Timestamp: DATETIME, NOT NULL
Ubicación: VARCHAR(255), NULL
E2. User
user_Id(PK): INT, AUTO_INCREMENT
Username: VARCHAR(100), NOT NULL
Password: VARCHAR(100), NOT NULL
Email: VARCHAR(250), NOT NULL
Address: VARCHAR(255), NULL
Phone Number: VARCHAR(15), UNIQUE
Verify: BOOLEAN, FALSE
E6. Category
category_Id(PK): INT, AUTO_INCREMENT
Type: VARCHAR(100), NOT NULL
Restrictions: TEXT, NULL
E10. Services
Service_Id(PK): INT, AUTO_INCREMENT
host_Id(FK): INT. NOT NULL
Wifi: BOOLEAN, NOT NULL, FALSE
food: BOOLEAN. NOT NULL, FALSE
Tv: BOOLEAN, NOT NULL, FALSE
Air conditioning: BOOLEAN, NOT NULL. FALSE
Kitchen: BOOLEAN, NOT NULL. FALSE
Lockbox: BOOLEAN, NOT NULL. FALSE
View: BOOLEAN, NOT NULL, FALSE
Parking: BOOLEAN, NOT NULL. FALSE
Bathroom: BOOLEAN, NOT NULL. FALSE
Drink: BOOLEAN, NOT NULL, FALSE
E7. Stats
Stats_Id (PK): INT, AUTO_INCREMENT
Hosting_Id (FK): INT, NOT NULL
Rating: FLOAT. NOT NULL
Cleanliness: INT, NOT NULL
Accuracy: INT, NOT NULL
Communication: INT, NOT NULL
Check-InINT, NOT NULL
Location: INT, NOT NULL
E3. Trips
Trip_Id(PK): INT. AUTO_INCREMENT
User_Id(FK):INT. NOT NULL
Guests: INT. NOT NULL
Description: TEXT, NULL
Ubication: VARCHAR(255)
Type: VARCHAR(100), NOT NULL
Languages: VARCHAR(255)
E9. Tourist sites
TouristSites_Id(PK): INT. AUTO_INCREMENT
Type: VARCHAR(100), NOT NULL
Ubication: VARCHAR(255), NOT NULL
E11. Host stats
HostStast_Id: INT, AUTO_INCREMENT
Host_Id(FK): INT. NOT NULL
Rating: FLOAT, NOT NULL
Years Experience: INT, NOT NULL, default 0
Number of reviews: INT, NOT NULL, default 0