

## Business Requirements

How many total bookings are made on Airbnb?

- Breakdown by geographical regions.
- Determine the source of bookings.

What is the daily rate of new bookings?

- Calculate the percentage of website visitors who convert to making bookings.

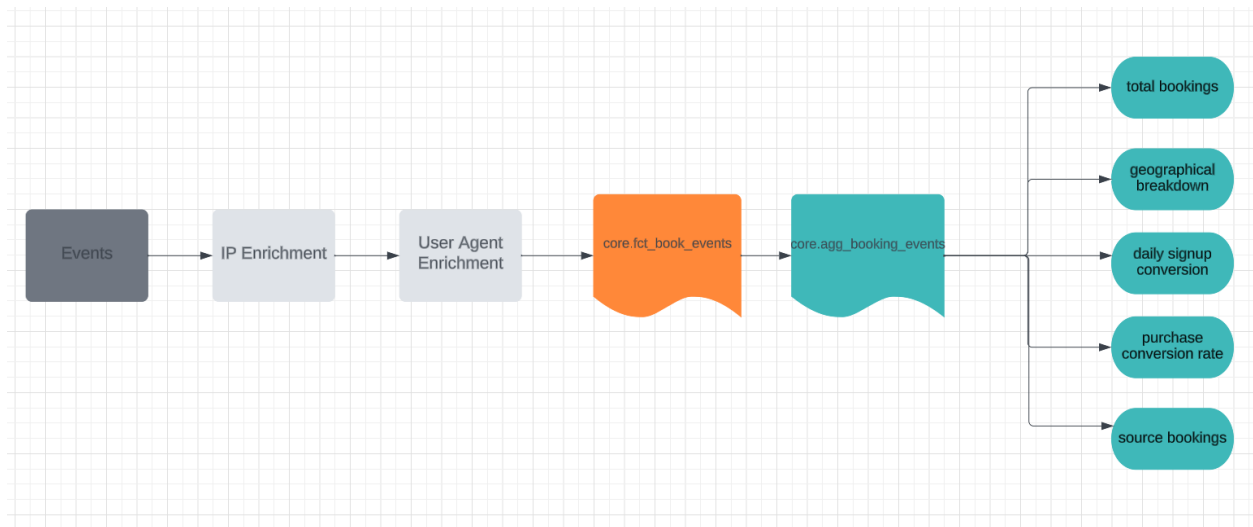
How many users are purchasing Airbnb experiences?

- Calculate the percentage of signups that result in purchases.

## Business Metrics

Metric Name	Definition	Is Guardrail?
total_bookings	COUNT(bookings)	YES
geographical_breakdown	COUNT(bookings) GROUP BY region	NO
daily_signup_conversion	COUNT(bookings) / COUNT(website_visitors)	YES
purchase_conversion_rate	COUNT(experiences) / COUNT(signups)	YES
source_of_bookings	COUNT(bookings) GROUP BY referral_source	NO

## Flow Diagram



## Schemas

**core.fct\_booking\_events:** This table contains a list of all booking events on Airbnb, including information about users and bookings.

Column Name	Column Type	Column Comment
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<b>user_id</b>	BIGINT	User ID associated with the booking (nullable)
<b>booking_id</b>	BIGINT	Unique identifier for each booking
<b>region</b>	STRING	Geographical region associated with the booking
<b>referral_source</b>	STRING	The source through which the booking was made
<b>booking_timestamp</b>	TIMESTAMP	UTC timestamp for when the booking occurred
<b>other_properties</b>	MAP[string,string]	Additional properties related to the booking
<b>ds</b>	STRING	Date partition for the table

Quality Checks:

- Check for null values in user\_id, booking\_id, region, referral\_source, and booking\_timestamp.
- Ensure no duplicate booking IDs.
- Verify that the region values are in the expected format.
- Perform row count checks for different regions and referral sources.
- Enumerate the referral\_source values (e.g., direct, search, referral).

**Core.agg\_booking\_events:** This table is an aggregated view of all booking events.

Column Name	Column Type	Column Comment
<b>dim_region</b>	STRING	The geographical region
<b>dim_referral_source</b>	STRING	The referral source
<b>m_total_bookings</b>	BIGINT	The total number of bookings for this slice
<b>aggregation_level</b>	STRING	How the aggregation is grouped (e.g., dim_region, dim_referral_source, overall)
<b>ds</b>	STRING	Date partition for the table

Quality Checks:

- Perform row count checks to ensure that the "overall" rollup has the highest count.
- Analyze the seasonality of m\_total\_bookings.
- Ensure m\_total\_bookings is greater than a minimum threshold.