# **Dog walking app** (system design)

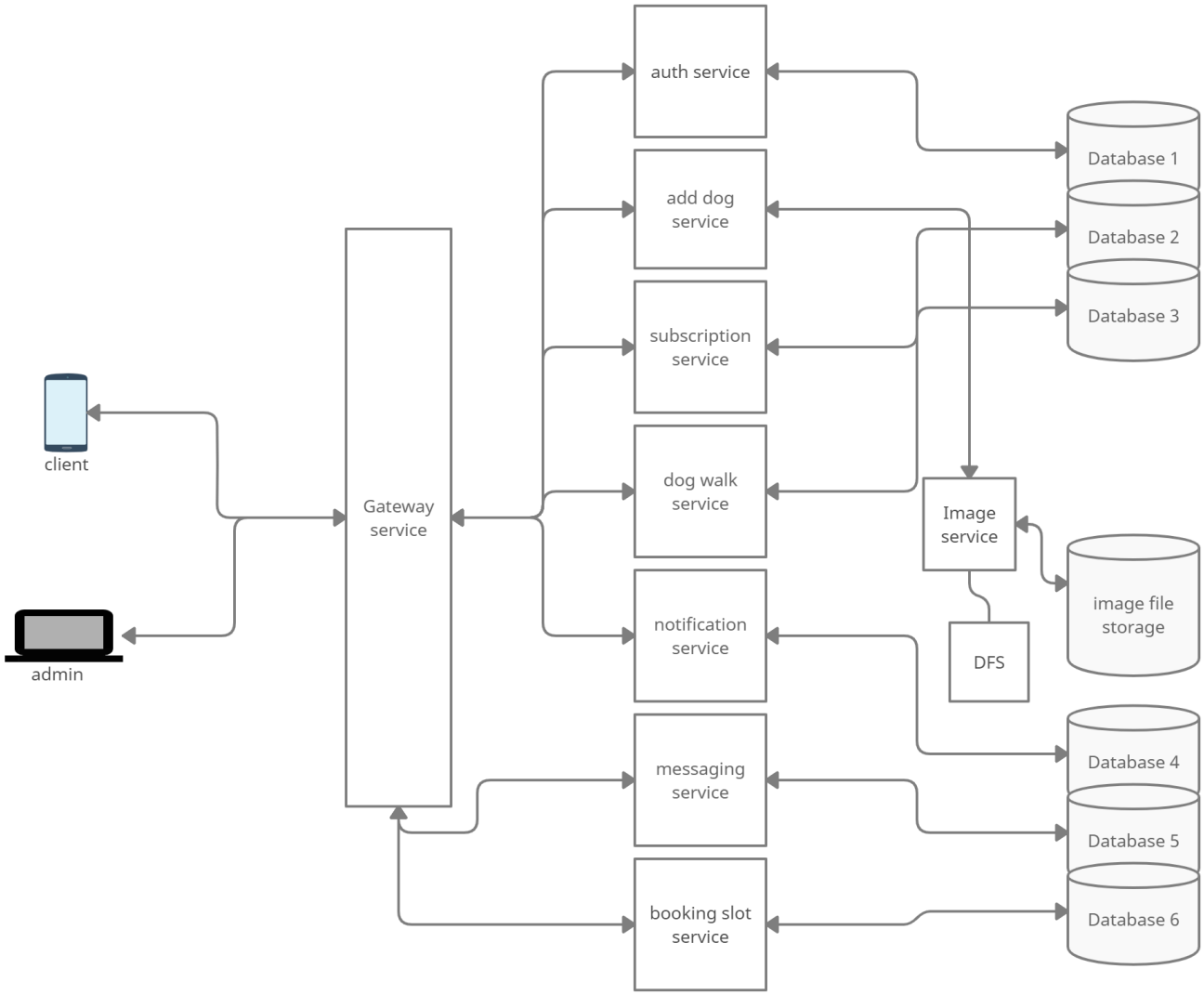
## Description:

Dog walking apps act as a platform that connects pet parents and pet walkers. In simplest terms, they’re like Uber for dogs. Pet parents can use the app to schedule dog walks and pay the dog walkers once the pup is back from a good walk.

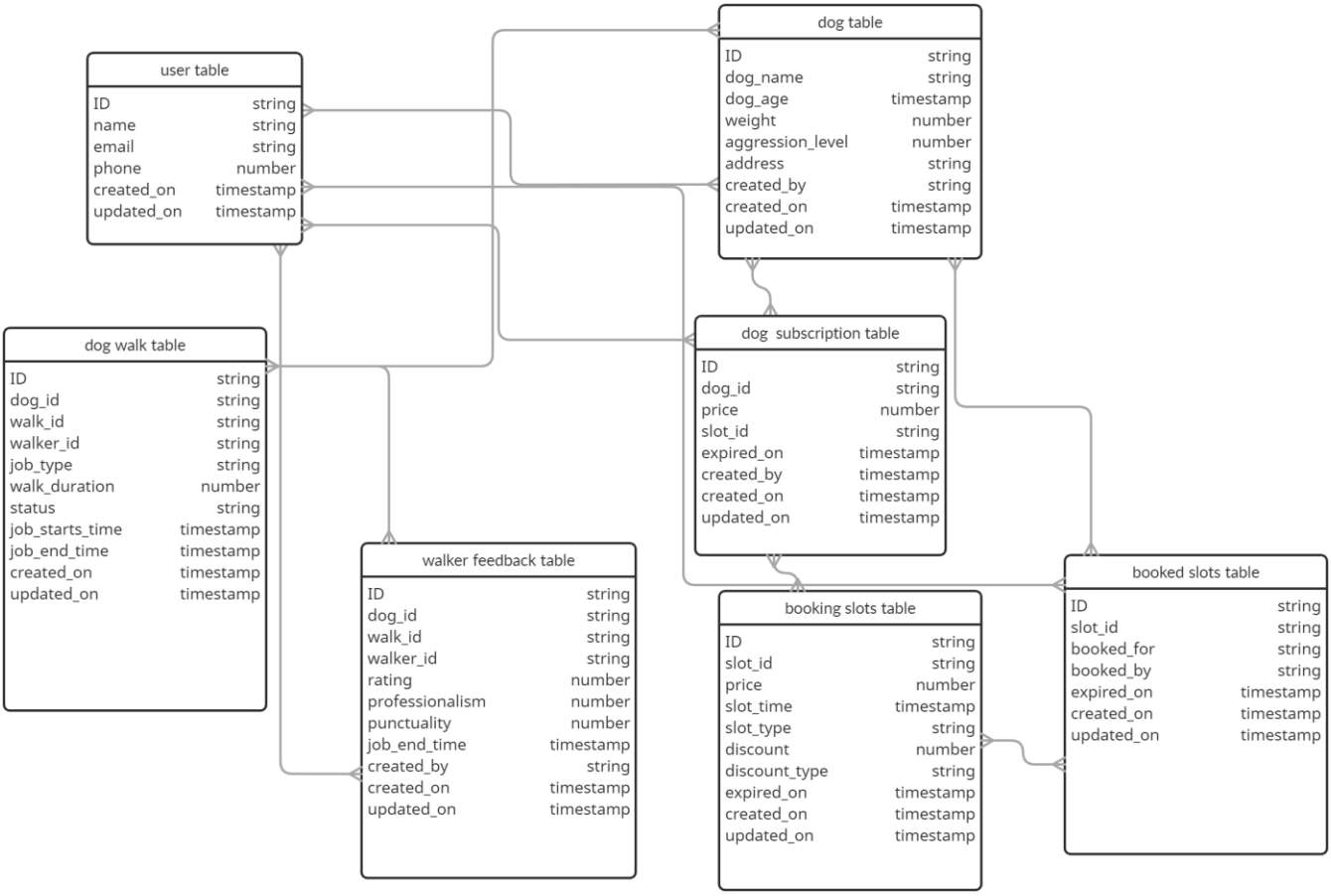
## Features:

- Auth
- Add dog
- Subscription
- Live Walk tracking
- Support messaging

# Design Architecture



# Database Design Flow



# Database and storage Capacity estimation

consider we have 1M active dog owners and owners can add number of dogs. On an average each dog upload 1 profile picture. Consider active owners can add 20% new dogs in a day with dog photo so **1 pic/dog * (20*1000000)/100 = 200K/Day.**

An average size of each picture: **100kb**

**100kb*200K = 20GB/Day Storage**

We are using live walk tracking in app so we need **google maps API** for live tracking.

Api cost of walks:

Per walk= **100ML**

We have 1M active dog owners and also, they have at least 1 dog active subscription so

Average Daily walks **1M*100ML=100M map load**

If we are cross **500k** map load in a month then we need to Contact Sales for volume pricing

consider **0.010 USD per each*10000=1M USD/per day**

Every dog had poop image in walk. Dog can poop more than 1 in a walk. Suppose 1 dog can poop twice in single walk so

Daily walks **1M*2** poop image = **2M pic/day**

An average size of each picture: **100kb**

**100kb*200 = 200GB/Day Storage**

An average size of all database tables of each dog :**100bytes**

**100bytes * 2M = 200MB/Day Storage**

Estimated **200MB** Database storage and **(20GB+200GB)** Of Image Storage is needed per day