project structure

Goverment API

project DB
(FireBase)

Angular Framework
(running on FireBase)
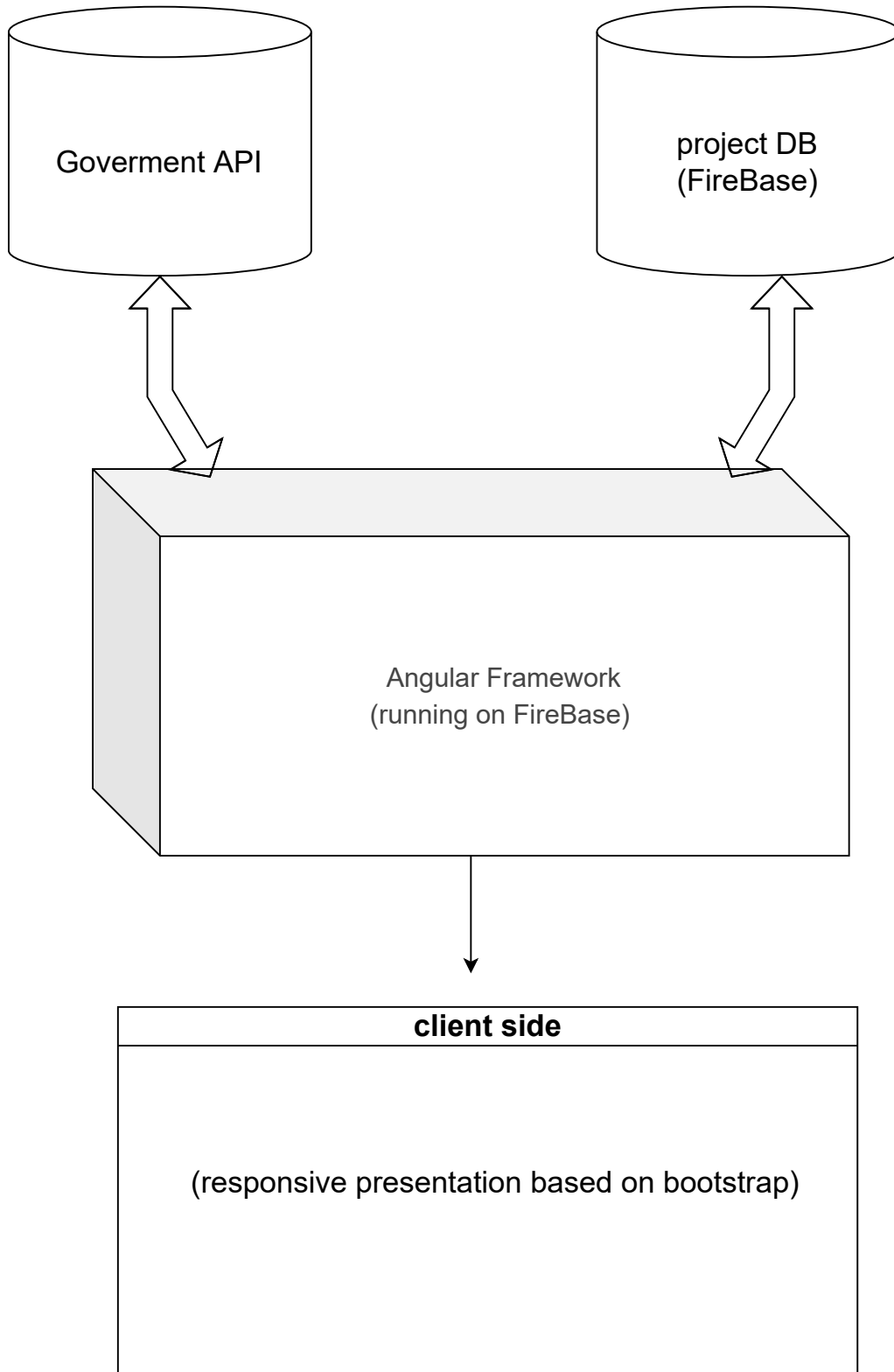
client side

(responsive presentation based on bootstrap)

Logical explanation:

The government database in Israel provides data on vehicles, and on streets in the country.

The goal:
to retrieve a random record from the database and present it to the customer.

Here are the complications:

Facts that are important to know about the government database:
1. The government database reveals an api that accesses by http request (get)
2. It is not possible to retrieve from the database according to id
3.large masses of data
3. The id is not numbered continuously due to deleted records
4. You can limit the amount of records we want to get in each query

In order to overcome the complexity:
I decided to use certain fields that unite smaller groups of records,
And so I can pull out a random set of records each time and select a specific random record from this small group.

The following is the implementation of my solution presented in the project for vehicles, and for addresses:

In the government vehicle database:
I use the moedAliaLacvish field which represents the date of entry of a group of vehicles, I also filter it by specific brand, I map the database using an interface I built that runs across the entire database and brings me all the entry dates of each model and the number of records on each date...
This data is stored in my db of the project and this is how I retrieve a record from my db and through it I go to the government database and retrieve a group of random information from it.

Example of object from the db of the project, for the Citroen brand:
moedAliaLacvish: 2008-6
countOfThisMoed: 223

When I retrieve the data from the government database, I will receive 223 records.
From them, I will select a random value and present it to the customer.

In the government address database:
In the streets there is a field called "street_sign" The field can be used as index but the problem that it is not continuous because of deleted records so I built an interface that runs on the whole repository and maps the ranges of the numbers that are exsist.. I saved these ranges in db of the project.
Example of range object in the db:
start: 100
end: 1461

From the code on the client side I retrieve such a record from the db of the project and selects a random number from the range, and with it I build a query to the government database that way I get a random street ..

firebase DB structure

full name

firstName

lastName

Data From Data Gov

generateCarIdFromDataGov

Citroen

Ds

Mg

Opel

index=x

Peugeot

countOfThisMoed

moedAliaLacvish

GoodNumbersForStreets

index=x

start

end