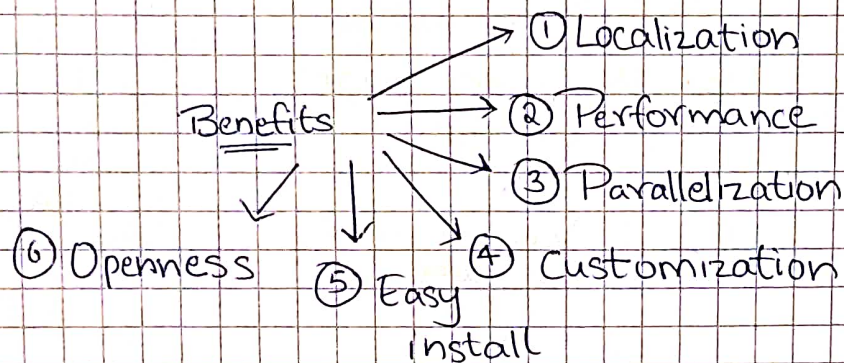


\* Valhalla : open source routing engine  
with Open Street Map Data.



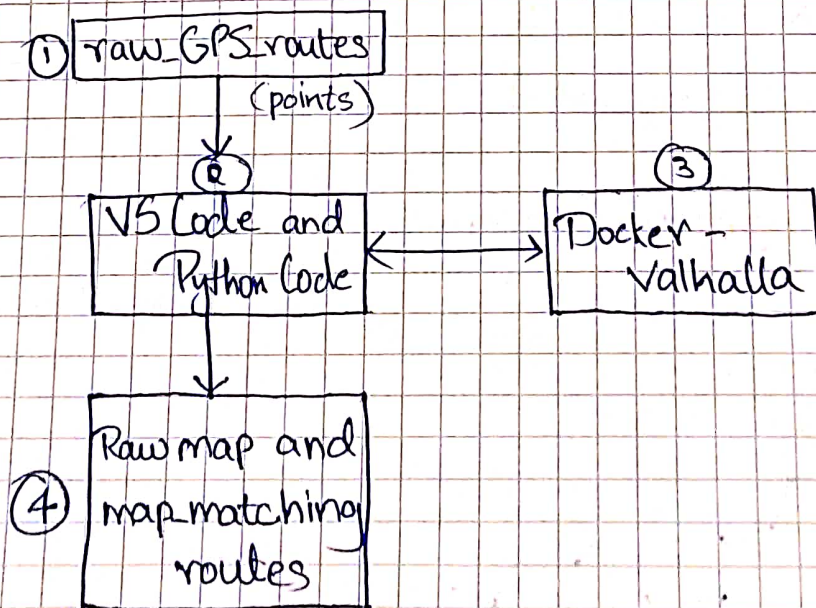
\* Meilli - main modules inside Valhalla.

- function : map matching

- detects highest probability map match  
using Viterbi Algorithm in HMM - "Hidden Markov Models"

"Setting up environment"  
(not req. in prior)

Example:- Four steps





\* Code can be divided into:-

- (A) Import Libraries
- ↓
- (B) Read and format GPS info
- ↓
- (C) Valhalla Request
- ↓
- (D) Read and format Valhalla Response
- ↓
- (E) Raw and map matching routes  
- Draw a map
- ↓
- (F) Raw and map matching routes  
- Calculate distance



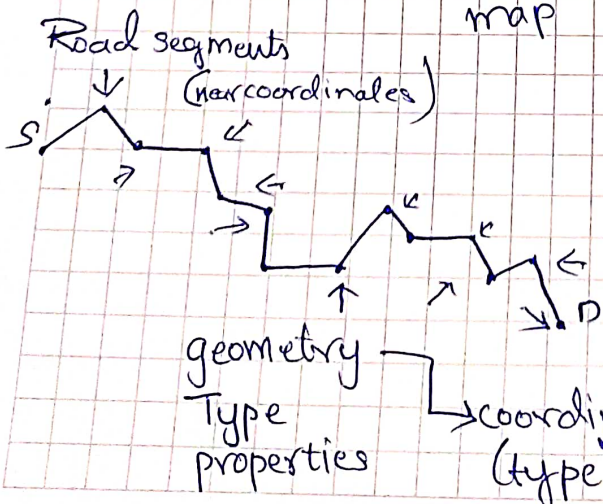
"Decode"

\* ~~Valhalla~~ \*  
\* ~~Hahaha~~ \*  
\* Map matching \*

Valhalla Meili

geojson :- coordinates

↓  
map



OSM  
↳ openstreet map

→ Valhalla  
→ gdf  
↳ geo data frames.

df → data frame

→ Search radius:  
↳ distance between points and road networks.  
→ maps ✓

geo.json  
gf matched

(Docker run → pbf files)

(probability)