

Design and create algorithm for finding the optimal routes for delivery agents to deliver parcels from a store to consumers.

Requirements and constraints:

- There are 100 orders which are to be delivered by 10 delivery agents
- There is one store location from where all orders will be delivered and after finishing the deliveries, the agents will come back to the store
- You are given 100 random addresses where parcels are to be delivered
- Map an optimal route for each delivery person for doing the deliveries and in what order they will do the deliveries
- It is not required that all delivery agents will deliver the same number of orders
- Each delivery agent can pick multiple orders in one trip. Each agent will deliver at least one order.

Assumptions:

- All 100 orders are ready at the same time
- All delivery agents go at the same speed
- Consider straight line distance between any two coordinates

Problem:

Design optimal routes for all 10 delivery agents so that all packages are delivered and delivery agents return to the store in shortest amount of time

- Input

Store location

Latitude - 28.9428, Longitude - 77.2276

Addresses to deliver

<https://zorang-recrutment.s3.ap-south-1.amazonaws.com/addresses.json>

- Output

Return array of location id each agent will deliver

Consider agents at index 0-9

Each subarray will contain addresses id that agent will deliver and in order they deliver.

[[1,2,3,9...], [33, 45, 56],, [99], [100, 23]]

Submit your code in any programming language and explain about your approach in simple words.