

Description for APIs

1. Get All Addresses

Get All Addresses saved as a list
/readBook

Request

Method	URL
GET	/readBook

Response

Status	Response
200	An array containing the List of Addresses Example response:- <pre>[{ "address": "koramangala", "id": 10, "lon": 77.6113, "lat": 12.9344, "first_name": "Forum", "last_name": "mall" }]</pre>

2. Post Address

Add a single Address to database
/book

Request

Method	URL
POST	/book

Request Body

Type	Params	Values
Mandatory	first_name	string
Mandatory	last_name	string
Mandatory	address	string
Mandatory	lat	float
Mandatory	lon	float

Response

Status	Response
200	<p>A JSON containing all fields of the address given along with generated id</p> <p>Example response:-</p> <pre>{ "address": "koramangala", "id": 10, "lon": 77.6113, "lat": 12.9344, "first_name": "Forum", "last_name": "mall" }</pre>

3. Get a Single Address with ID

Get a Single Address saved in a list with id
/book/{id}

Request

Method	URL
GET	/book/{id}

Response

Status	Response
200	<p>An array containing the Address with specific id</p> <p>Example response for id = 10:-</p> <pre>[{ "address": "koramangala", "id": 10, "lon": 77.6113, "lat": 12.9344, "first_name": "Forum", "last_name": "mall" }]</pre>

4. Update a Single Address with ID

Update a single Address to database with ID

/book/{id}

Request

Method	URL
PUT	/book/{id}

Request Body

Type	Params	Values
Mandatory	id	int
Mandatory	address	string
Mandatory	lat	float
Mandatory	lon	float

Response

Status	Response
200	<p>A JSON Containing the updated fields of the address along with given ID</p> <p>Example response:-</p> <pre>{ "address": "koramangala -4th Block", "id": 10, "lon": 77.6113, "lat": 12.9344, "first_name": "Forum", "last_name": "mall" }</pre>

5. Delete A Single Address with ID

Delete a Single Address saved in a list with id
/book/{id}

Request

Method	URL
GET	/book/{id}

Response

Status	Response
204	Address with specific id is deleted with all the fields. Successful Response

6.Fetch list of addresses within the given distance(km) from the given coordinates(lat, lon)

Formula to calculate distance between two lat, lon in km :

$$(2 * \text{earth_radius_in_km} * \pi / 360) * \sqrt{(\text{lat1} - \text{lat2})^2 + (\text{lon1} - \text{lon2})^2}$$

Fetches all the Entries of related coordinates with all the fields from the database with relative distance.

/getNearbyAddresses

Request

Method	URL
GET	/getNearbyAddresses

Request Body

Type	Params	Values
Mandatory	distance	string
Mandatory	lat	float
Mandatory	lon	float

Response

Status	Response
200	<p>A JSON Containing the Updated fields of the address given along with given ID</p> <p>Example response for specific coordinates and near- by distance:</p> <pre>{ "lat" : 12.9694 "lon" : 77.5149 "distance " : 10 }</pre>

For this Coordinates entered by user and distance it fetches all the entries nearby 10 km in the database.

response:

```
[
  {
    "id": 11,
    "first_name": "GM ",
    "last_name": "hospital",
    "address": "NagarBhavi",
    "lat": 12.9613,
    "lon": 77.5117,
    "distance": 0.9684108209826007
  },
  {
    "id": 13,
    "first_name": "Nammora ",
    "last_name": "Thindi",
    "address": "NagarBhavi",
    "lat": 12.9606,
    "lon": 77.5124,
    "distance": 1.0172287471521353
  }
]
```