

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.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
  }
]
```

3. 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>

4. 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>

5. 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>

6. 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