

Implement a web application for hotel reservation management with the following specifications:

- the user specifies a radius in kilometers to find all the nearby hotels
- the application lists and displays all hotels found
- the user can select a specific hotel and see all available rooms alongside their prices
- after this, the user can book one, or more of the available rooms
- the application allows the user to cancel their reservation or change the booked room at least two hours before the check-in
- user can leave a feedback (services, cleanliness, etc)

Specifications:

- the application has stored all hotels with their coordinates, rooms, and the price for each room in a database. The data is read from a given json file(see the json example below)
- a hotel can have: single room , double room, suite room or matrimonial room which vary by price
- for a user to receive all the nearby hotels the following position calculation must be implemented:

Position calculation:

1. calculate the current user position (latitude , longitude) - here you can use any method like: APIs, libraries, etc
2. convert the user position (lat, long) in meters (
https://en.wikipedia.org/wiki/Geographic_coordinate_system)
3. convert all the hotels position (lat, long) that are stored in the application, in meters (
https://en.wikipedia.org/wiki/Geographic_coordinate_system)
4. calculate the distance between the user's position and every hotel's position (use the distance between 2 points formula)
5. check if the position is within the specified radius
6. if yes, then the hotel is in specified radius

Ex hotels.json:

```
[
  {
    "id": 1,
    "name": "Hotel Ramada",
    "latitude": 46.764654252624204,
    "longitude": 23.598674125224626,
    "rooms": [
      {
        "roomNumber": 210,
        "type": 2,
        "price": 200,
        "isAvailable": true
      },
      {
        "roomNumber": 125,
        "type": 1,
        "price": 350,
        "isAvailable": true
      },
      {
        "roomNumber": 87,
        "type": 1,
        "price": 300,
        "isAvailable": false
      }
    ]
  },
  {
    "id": 2,
    "name": "Grand Hotel Italia",
    "latitude": 46.7522792440665,
    "longitude": 23.605990381045697,
    "rooms": [
      {
        "roomNumber": 41,
        "type": 3,
        "price": 240,
        "isAvailable": true
      }
    ]
  },
  {
    "id": 3,
    "name": "Hampton by Hilton",
    "latitude": 46.77539900854998,
    "longitude": 23.60182699638966,
```

```
"rooms": [  
  {  
    "roomNumber": 32,  
    "type": 2,  
    "price": 410,  
    "isAvailable": false  
  },  
  {  
    "roomNumber": 21,  
    "type": 2,  
    "price": 350,  
    "isAvailable": true  
  },  
  {  
    "roomNumber": 64,  
    "type": 3,  
    "price": 300,  
    "isAvailable": true  
  }  
]  
}
```