Homework in Angular

Airline Ltd. wants to build a system for finding flights that will use its customers on the national flight website.

The company has several requirements:

You can search for flights according to the following parameters separately or combine them together:

- It will be possible to search for flights by a specific origin+destination.
- You can search for flights on dates from a specific date to a specific date including.
- You can select the number of connections made or a direct flight.
- You can search for flights in a certain price range from minimum to maximum or give a maximum threshold that cannot be exceeded.
- It will be possible to sort the flights by the length of the flight.
- It will be possible to sort the flights by the number of stations (connections).
- End to end tests are optional and will be an advantage.

Technical stuff:

- You need to build a system in angular 9 that will meet customer needs. The structure of the system in terms of UI / UX is at your discretion, but you are expected to think about user convenience.
- For design, we recommend using an angular material library, but not required.
- The flight is defined as an object that has an origin and destination and additional characteristics that you think are needed for compliance.
- A flight from X to Z, can consist of a flight to X to Y and a flight from Y to Z, or is defined as a direct flight from X to Z.
- It is mandatory to attach to the task test files that test the entire system (use of JEST or karma of your choice). Both components and services should be checked.

- All flights are stored in a predetermined array that is in service, in the most efficient data structure in your opinion. This service will also be responsible for the algorithmic search.
- please be noted that the connection field is a general field and not from the DB

The task will be examined according to the following criteria:

- Meeting customer needs, and user convenience.
- Code readings.
- Quality and coverage of the tests.

Descriptions from customer:

The user should start with some initial flight including origin and destination. But keep in mind that 'connections' are not allowed.

Then the developer should write tests that verify the functionality of the site.

Let's say we define an example flight of 3 flights:

```
flight1:{
        origin:{
            country: Israel,
            date: 01/01/2020 00:00
        },
        destination:{
            country: UK,
            date: 01/01/2020 04:00
        }
}
```

flight2:{

origin:{

country: Israel,

date: 01/01/2020 00:00

},

destination:{

country: ITALY,

date: 01/01/2020 02:00

}

}

flight3:{

origin:{

country: ITALY,

date: 01/01/2020 02:15

},

destination:{

country: ITALY,

date: 01/01/2020 03:00

}

}

Now we want to show the user all the flight between ISRAEL and the UK between 01/01/2020 00:00 and date: 01/01/2020 04:00:

This means that we expect the developer does not pull on predefined 'connections', for example [[ISRAEL, ITALY, UK], [ISRAEL, UK]],

but to implement a search algorithm based on the inputted constraints (origin,destination,depart time, arrival time)

This should be done without predefining the DB with the 'flight connections' field.

Are you talking about e2e tests or integration tests on the backend?

e2e is nice to have, but the focus should be on testing every component and every service that the developer used in his implementation.

All the functionalities of the project need to be implemented on the client-side.