MOTEEFE'S CODING CHALLENGE

Moteefe is an international company providing Print-On-Demand services. We guarantee printing on various types of merchandising. Our suppliers are spread across the globe and therefore the delivery of products depends on the region where they are shipped.

Your task is to implement a REST API which gives out a number of days for delivery, the amounts of shipments and their details based on the list of items in the basket and the region where those items are supposed to be delivered.

There might be more shipments as not all suppliers provide all products.

Please, consider that this solution must receive parameters such as shipping region and items which are supposed to be ordered.

Your solution should be a REST API and does not require a frontend. Feel free to use any technology and language you feel comfortable with.

Use this pattern as "database" for your project, it's in a CSV format. If you want to use a database instead of a csv, feel free to, it's your decision.

```
product_name,supplier,delivery_times,in_stock
black_mug,Shirts4U,'{ "eu": 1, "us": 6, "uk": 2}',3
blue_t-shirt,Best Tshirts,'{ "eu": 1, "us": 5, "uk": 2}',10
white_mug,Shirts Unlimited,'{ "eu": 1, "us": 8, "uk": 2}',3
black_mug,Shirts Unlimited,'{ "eu": 1, "us": 7, "uk": 2}',4
pink_t-shirt,Shirts4U,'{ "eu": 1, "us": 6, "uk": 2}',8
pink_t-shirt,Best Tshirts,'{ "eu": 1, "us": 3, "uk": 2}',2
```

The outcome should be an object which should look like this:

```
{
      delivery_date: '2020-03-10',
      shipments: [
      {
```

```
            supplier: "Shirts4U",
            delivery_date: '2020-03-09'
            items: [
                  {
                  title: "tshirt",
                  count: 10
                  },
                  {
                  title: "hoodie",
                  count: 5
                  },
            ]
      },
      {
            supplier: "BesT-Shirts",
            delivery_date: '2020-03-10'
            items: [
                  {
                  title: "mug",
                  count: 2
                  }
            ]
      }
      ]
}
```

Where

`delivery_date` is the date of delivery relative to current date *(if today date is 2020-02-01 and days for delivery is 2, then `delivery_date` is 2020-02-03)*

`shipments` is a list of items that will be shipped by our suppliers, based on the availability in stock. Each shipment should contain name of the `supplier`,

`delivery_date` relative to the current date and list of items with their `title` and `count`.

Acceptance criteria

These are the rules upon which our system works:

The number of delivery days is the **biggest** number of delivery days from all items in the basket.

Scenario 1

Having a list of items containing product A with delivery time 3 days and product B with delivery time 1 day.

Then the delivery time is 3.

Scenario 2

Having product A from two suppliers A and B.

When supplier A delivers product A in 3 days and supplier B delivers product A in 2 days.

Then delivery time for that product is **2 days**.

Scenario 3

Having a t-shirt and hoodie in the basket.

When the t-shirt can be shipped from supplier A and B.

And hoodie can be shipped from supplier B and C.

Then deliver the t-shirt and hoodie from supplier B. *edge case: It's faster to deliver it separately.*

Scenario 4

Having 10 T-shirts in the basket and two suppliers A and B.

When there are only 6 T-shirts from supplier A and 7 T-shirts of supplier B on stock.

Then there would be two shipments one from supplier A with 6 T-shirts and second from supplier B.

edge case: split it into 3

You are responsible to analyse and decide the best way to implement this feature (if it’s using an API, console application or any other approach), it’s your call.

Use all your coding skills and practices to provide readable, object oriented and reusable solutions. Please take it seriously - treat it as a production ready piece of code that you would be deploying in real life.

Think about tests and add a README, leaving notes and annotations if appropriate.

Consider style and format: clean, clear, concise code is what we are after.

Happy hacking :-)