

Ocado internship task

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1 Task

Create a java library that splits a basket of products. Products have assigned suppliers that can deliver them. The task is to assign products to the minimal amount of suppliers and assign the maximum amount of products to the supplier with the most products.

2 Example

List of items:

```
[  
  "Steak - (300g)" ,  
  "Carrots - (1kg)" ,  
  "Cold - Beer - (330ml)" ,  
  "AA- Battery - (4 - Pcs.)" ,  
  "Espresso - Machine" ,  
  "Garden - Chair"  
]
```

config.json:

```
{
  "Carrots-(1kg)": ["Express-Delivery", "Click&Collect"],
  "Cold-Beer-(330ml)": ["Express-Delivery"],
  "Steak-(300g)": ["Express-Delivery", "Click&Collect"],
  "AA-Battery-(4-Pcs.)": ["Express-Delivery", "Courier"],
  "Espresso-Machine": ["Courier", "Click&Collect"],
  "Garden-Chair": ["Courier"]
}
```

result:

```
{ Courier=[Garden Chair, Espresso Machine],
  Express Delivery=[Carrots (1kg), Cold Beer (330ml),
  Steak (300g), AA Battery (4 Pcs.)]}
```

3 How to set the library up

3.1 Library was created using java 17

3.2 To import the library use Gradle

Add to build.gradle:

```
repositories {
    mavenCentral()
    flatDir {
        dirs 'path/to/the/BasketSplitter-0.1.0/directory'
    }
}
dependencies {
    //your dependencies
    implementation name: 'BasketSplitter-0.1.0'
}
```

3.3 import the BasketSplitter class

```
import com.ocado.basket.BasketSplitter;
```

3.4 Create BasketSplitter

Create BasketSplitter with absolute path to .json containing products with suppliers in it:

```
BasketSplitter basketSplitter = new BasketSplitter("
    absolute/path/to/json/file");
```

3.5 Execute split method

Method split returns Map<String, List<String>> variable. To execute .split method you have to give it the list of items in the basket as an argument:

```
Map<String , List<String>> map = basketSplitter.split(
    listOfItems);
```

4 Additional info

1. Json files handling was made using Google Gson library:
com.google.code.gson : gson : 2.8.6
2. The library was build using Gradle with plugin gradle shadowJar plugin