

First exercise:

Prerequisites:

Use Jackson library for string/bytes to Json deserialization

Scala 2.11/2.12

Write a recursive method "jsonToMap" which converts any json input to a scala Map while retaining the structure (Do not use Jackson library read to a Map that's not what we are looking for)

A nested json it will end up with a Map-of-Maps.

```
def jsonToMap(json:InputStream):Map[String, Any]
```

Input json example:

```
{
  "id" : 10001,
  "name": "Alex Smith",
  "payments" : [
    {
      "timestamp": "ISO_DATE",
      "amount" : 100.59
    },
    {
      "timestamp": "ISO_DATE",
      "amount" : 12.99
    }
  ],
  "address": {
    "first": "12 Watergarden",
    "second": "Kings Cross",
    "postcode" : "W1 5AX",
    "country" : "UK",
    "cooridantes" : {
      "lat" : 51,
      "lon" : 0
    }
  }
}
```

Exercise 2:

Create a REST application with a single endpoint :

POST /api/convert

Body:

```
{
  "fromCurrency": "GBP",
  "toCurrency" : "EUR",
```

```
"amount" : 102.6  
}
```

The return should be an object with the exchange rate between the "fromCurrency" to "toCurrency" and the amount converted to the second currency.

```
{  
  "exchange" : 1.11,  
  "amount" : 113.886,  
  "original" : 102.6  
}
```

The exchange rates should be dynamic and loaded from <https://exchangeratesapi.io/api/latest> on demand