

Prompt

Develop a Spring Boot application that utilizes Apache Kafka. This application should consume messages from TOPIC_A and join its data with data from TOPIC_B utilizing the provided keys (catalog_number and country) for the join.

Your application should also perform the following validations/filtering:

- Filter *out* any messages that are *not* for country **001**
- *catalog_number* should be **5 characters in length** (e.g. 00525, 12345, 00001 are all acceptable)
- *selling_status_date* and *sales_date* should be in the format **yyyy-MM-dd'T'HH:mm:ss.SSSSSSZ**

Then, your application should produce the resulting data to TOPIC_C.

It is expected that your application will be robust enough to handle any exceptions or errors and you should assume that your application will need to be production-ready with best practices in mind. You will need to demonstrate that your application can successfully consume messages and that TOPIC_C contains the correct data given the constraints above.

Please store your source code into a public repository to share with us.

If there are any questions related to the prompt, feel free to reach out for clarification.

Topic_A Structure

```
{
  "key": {
    "catalog_number": "29525",
    "country": "001"
  },
  "value": {
    "catalog_number": "29525",
    "is_selling": true,
    "model": "29525",
    "product_id": "int7218",
    "registration_id": "int4123",
    "registration_number": "REG03814",
    "selling_status_date": "2023-06-30T18:21:31.000000Z",
    "country": "001"
  }
}
```

```
{  
  "audit": {  
    "event_name": "Registration",  
    "source_system": "RGR"  
  }  
}
```

Topic_B Structure

```
{  
  "key": {  
    "catalog_number": "29525",  
    "country": "001"  
  },  
  "value": {  
    "catalog_number": "29525",  
    "order_number": "03814",  
    "quantity": "2",  
    "sales_date": "2023-07-30T18:21:31.000000Z",  
    "country": "001"  
  },  
  "audit": {  
    "event_name": "Sales Event",  
    "source_system": "SLS"  
  }  
}
```