

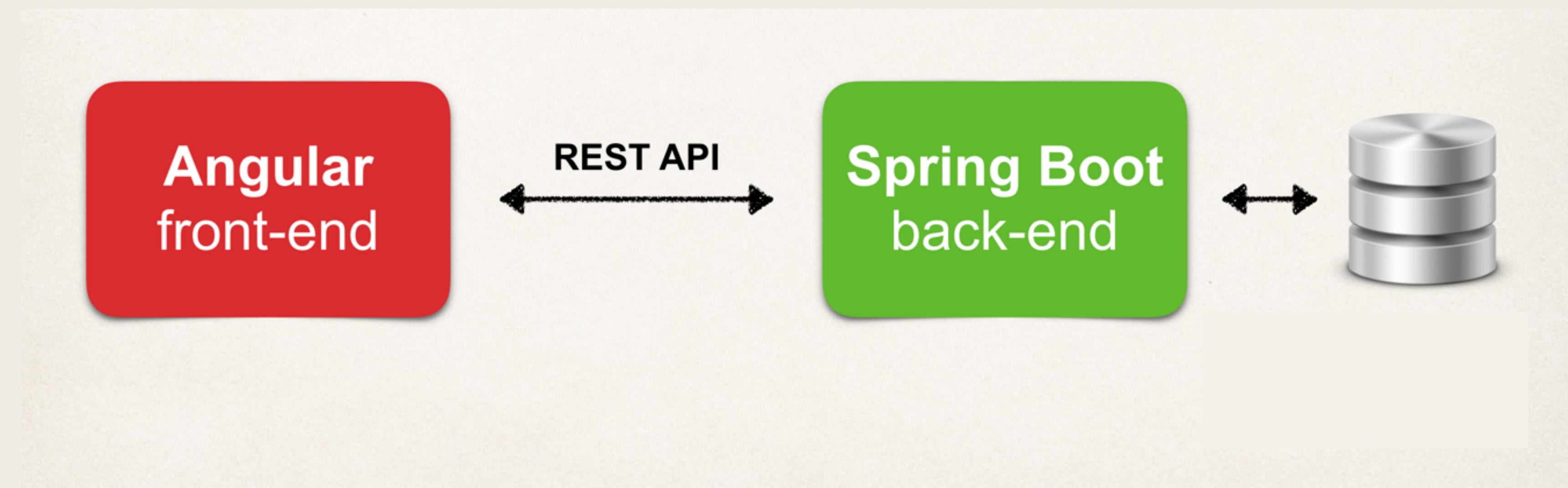
Checkout Form

Save The Order - Backend

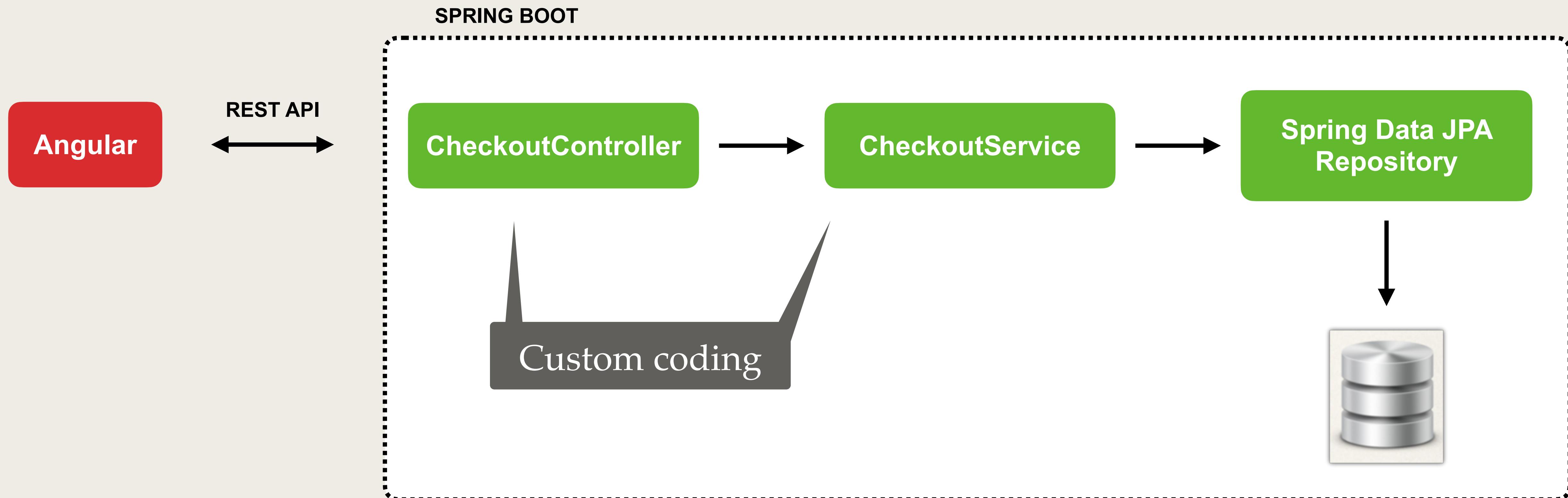


Save The Order

- We have our shopping cart full with products ... let's checkout!
- Send the order to the backend and store it in the database



Application Architecture



Custom Controller and Service

- For the architecture, we will create a custom controller and service
 - CheckoutController
 - CheckoutService
- You may wonder ... why not Spring Data REST???

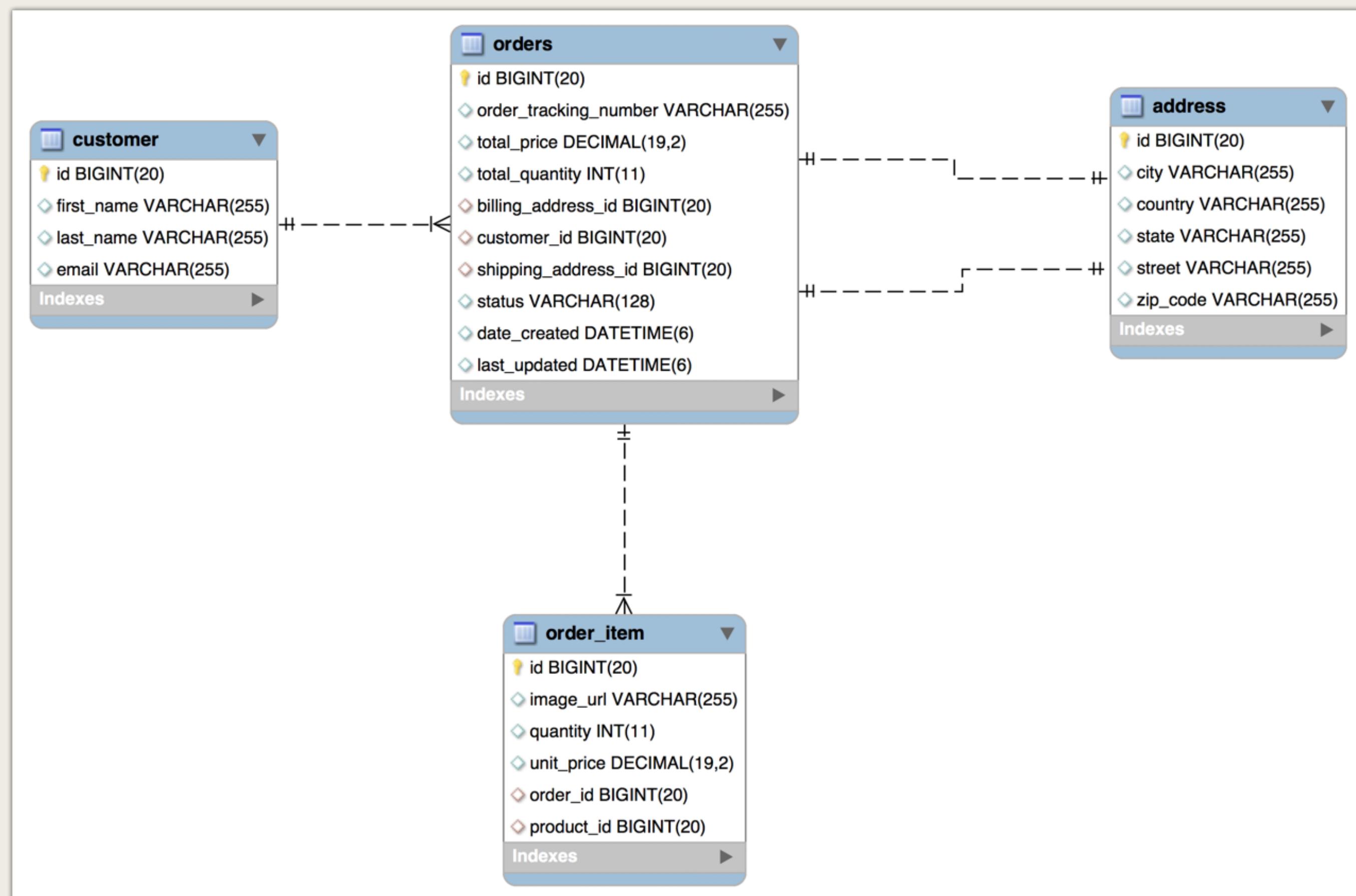
Why Not Spring Data REST???

- Spring Data REST is great for basic CRUD
 - We are currently using it for product catalog
- Not the best for processing the order using custom business logic
 - Generate custom tracking number
 - Save order in database
 - *Other custom business logic ...*

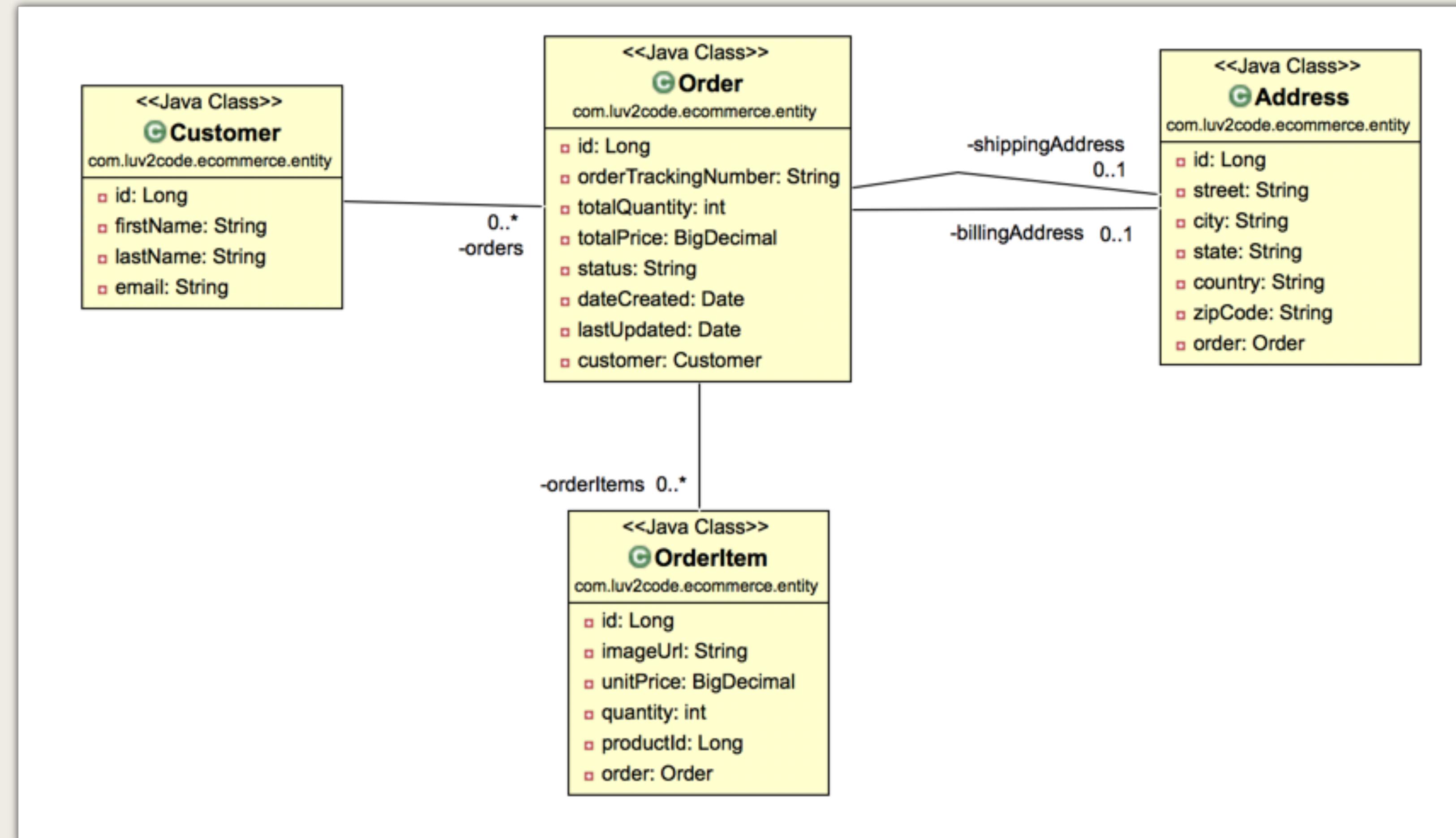
Spring Data REST
is very limited in terms of customization

For custom business logic and processing,
create a custom controller and service

Database Diagram

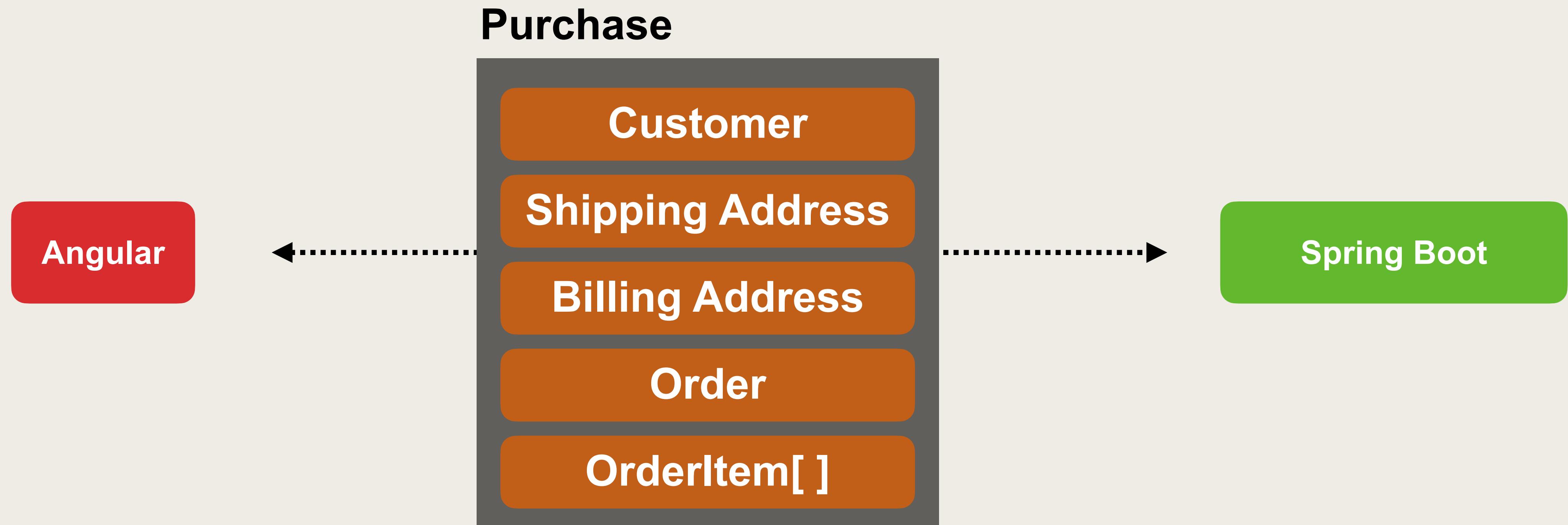


Class Diagram - Entity Classes



Data Transfer Object

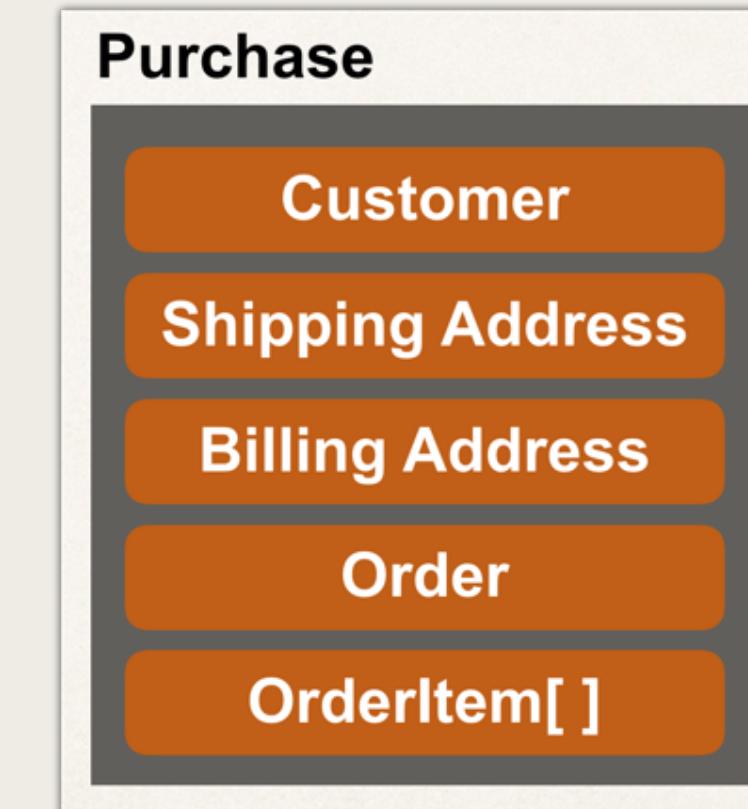
- Data transfer between Angular front-end and Spring Boot back-end



REST API

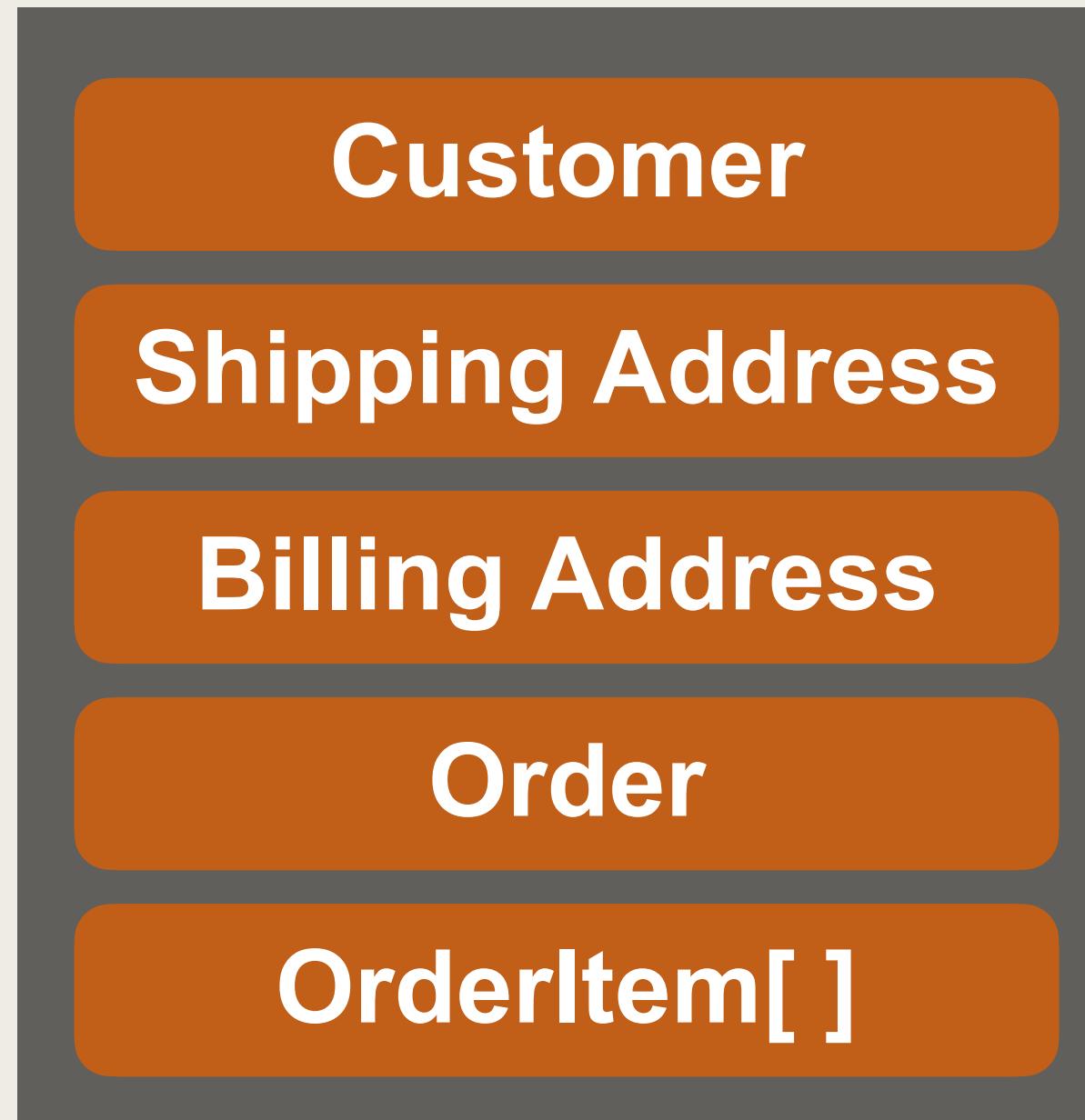
- Support the POST method for checkout purchase
- Request body contains JSON for Purchase data transfer object

HTTP Method		Action
POST	/api/checkout/purchase	New purchase order



Sample JSON

Purchase



```
{  
  "customer":{  
    "firstName":"Nancy",  
    "lastName":"Smith",  
    "email":"nancy.smith@luv2code.com"  
  },  
  "shippingAddress":{  
    ...  
  },  
  "billingAddress":{  
    ...  
  },  
  "order":{  
    "totalPrice":36.98,  
    "totalQuantity":2  
  },  
  "orderItems": [  
    {  
      "imageUrl":"assets/images/products/coffeemugs/coffeemug-luv2code-1000.png",  
      "quantity":1,  
      "unitPrice":18.99,  
      "productId":26  
    },  
    {  
      "imageUrl":"assets/images/products/mousepads/mousepad-luv2code-1000.png",  
      "quantity":1,  
      "unitPrice":17.99,  
      "productId":51  
    }  
  ]  
}
```

Development Process - Spring Boot

Step-By-Step

1. Run database script
2. Create entities
3. Create data transfer objects
4. Create repository
5. Create service
6. Create controller

Let's Write Some Code!