

ACCPAC Module - Detailed Sequence Diagrams

This document contains comprehensive and detailed sequence diagrams for all flows within the ACCPAC Module of the KUBOTA-BACKENED system. The ACCPAC module handles integration with ACCPAC accounting system, including dealer master management, purchase order details, and channel finance invoice management.

Module Overview

The ACCPAC module consists of:

- **3 Controllers:**
 - AccPacController - Dealer Master operations
 - AccpacPoDetailsController - Purchase Order Details and Outstanding Status
 - AccpacChannelFinanceController - Channel Finance Invoice operations
- **3 Repositories:**
 - AccPacDealerMasterRepository - Dealer Master data access
 - AccpacPoDetailsRepo - PO Details and Outstanding data access
 - InvoiceDetailsRepo - Invoice Details data access
- **3 Main Domain Entities:**
 - AccPacDealerMaster - Dealer master information
 - AccpacPoDetails - Dealer outstanding and PO details
 - AccpacChannelFinanceInvoice - Channel finance invoice information

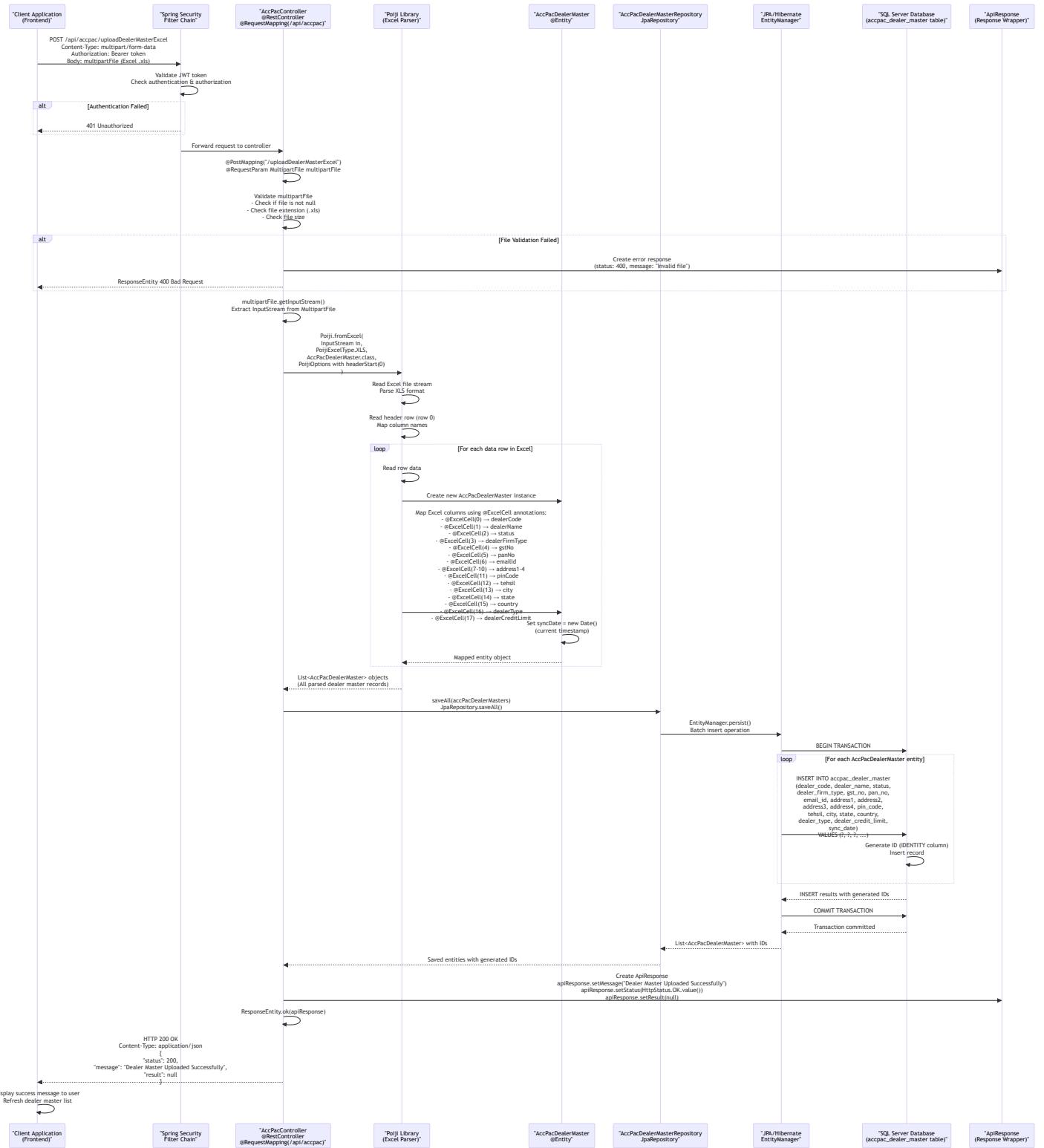
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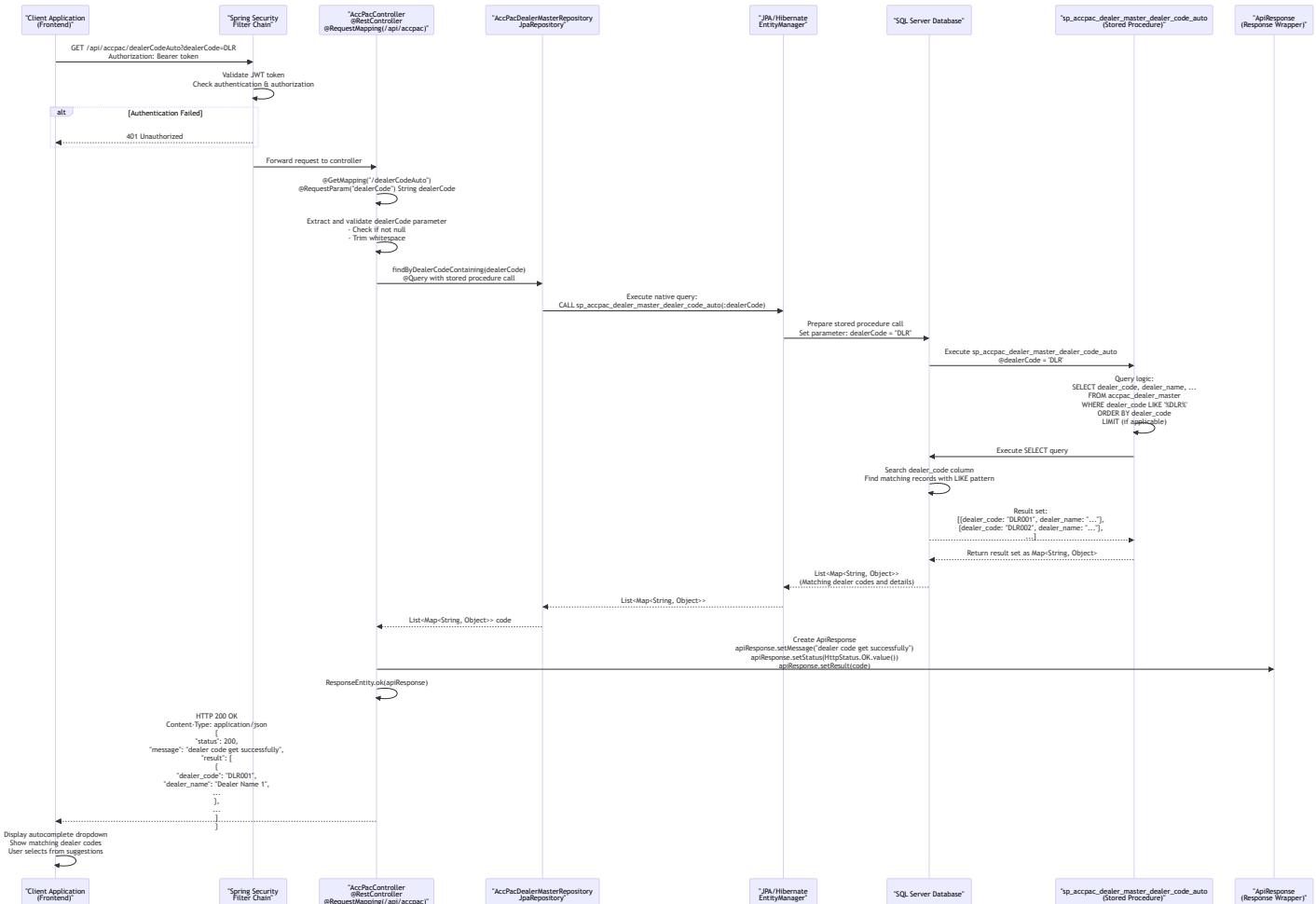
1. Upload Dealer Master Excel Flow

This diagram shows the complete flow for uploading dealer master data from an Excel file, including file parsing, data mapping, and database persistence.



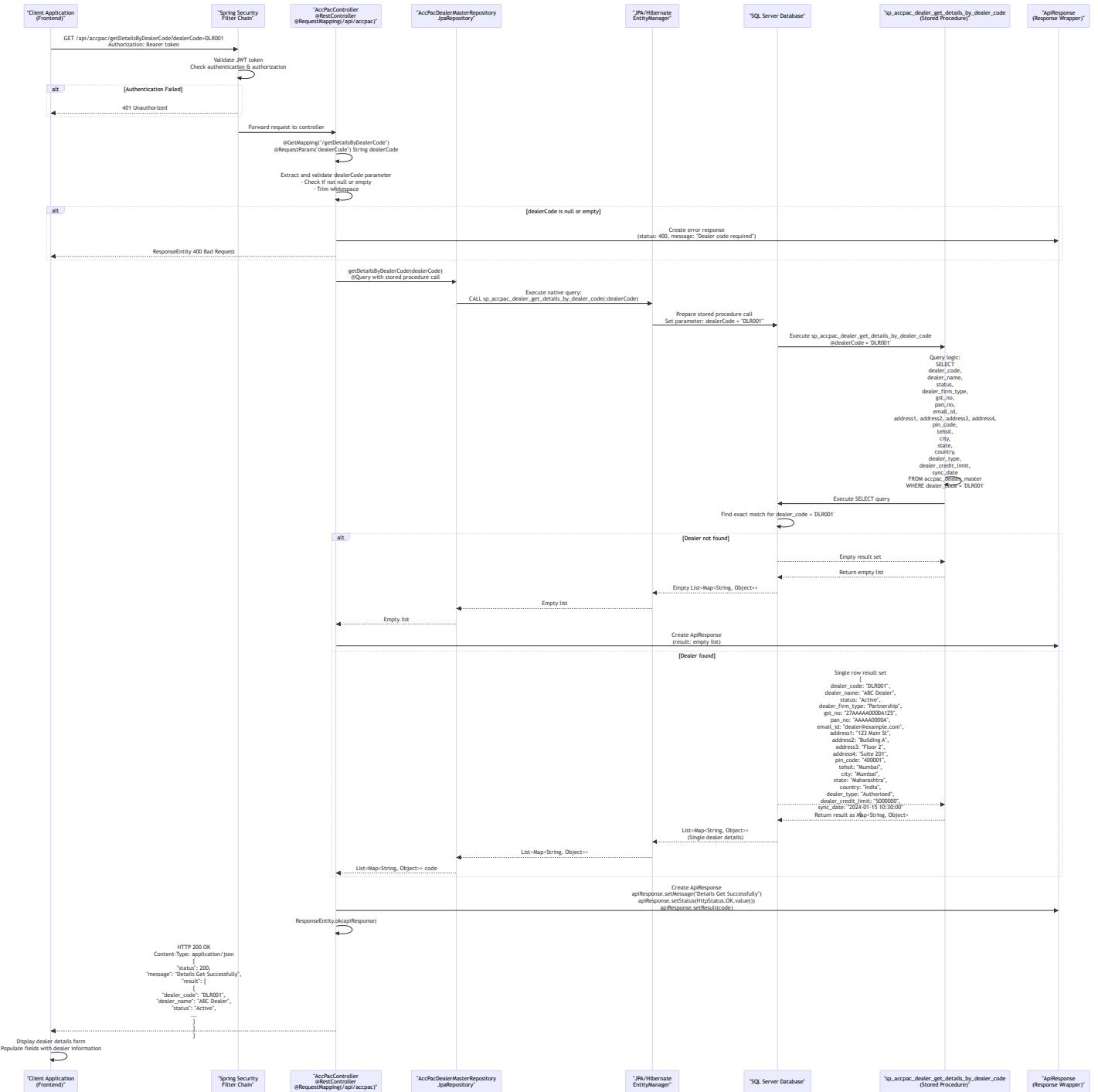
2. Dealer Code Autocomplete Flow

This diagram shows the flow for dealer code autocomplete functionality using stored procedures.



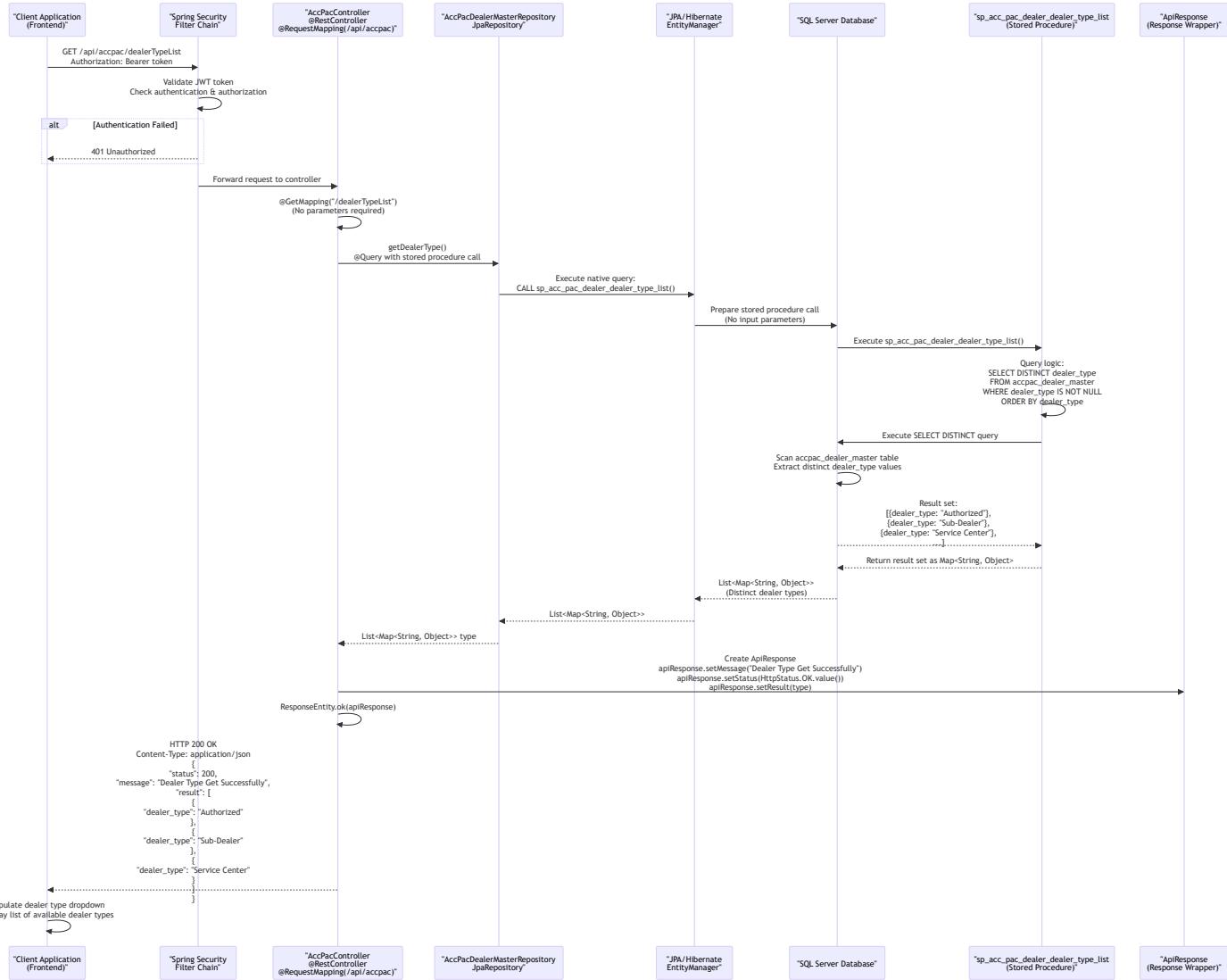
3. Get Details by Dealer Code Flow

This diagram shows the flow for retrieving complete dealer details by dealer code.



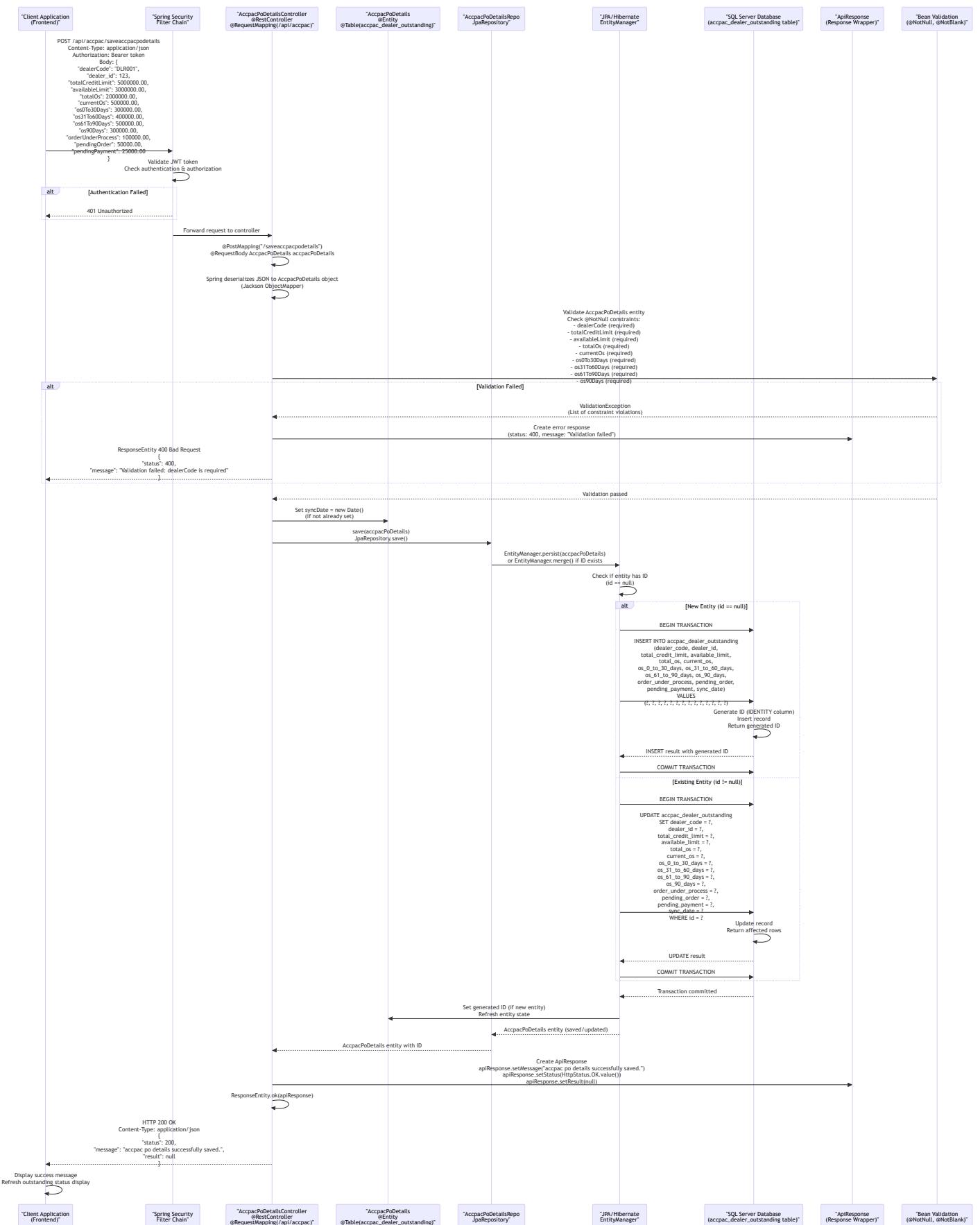
4. Get Dealer Type List Flow

This diagram shows the flow for retrieving the list of distinct dealer types.



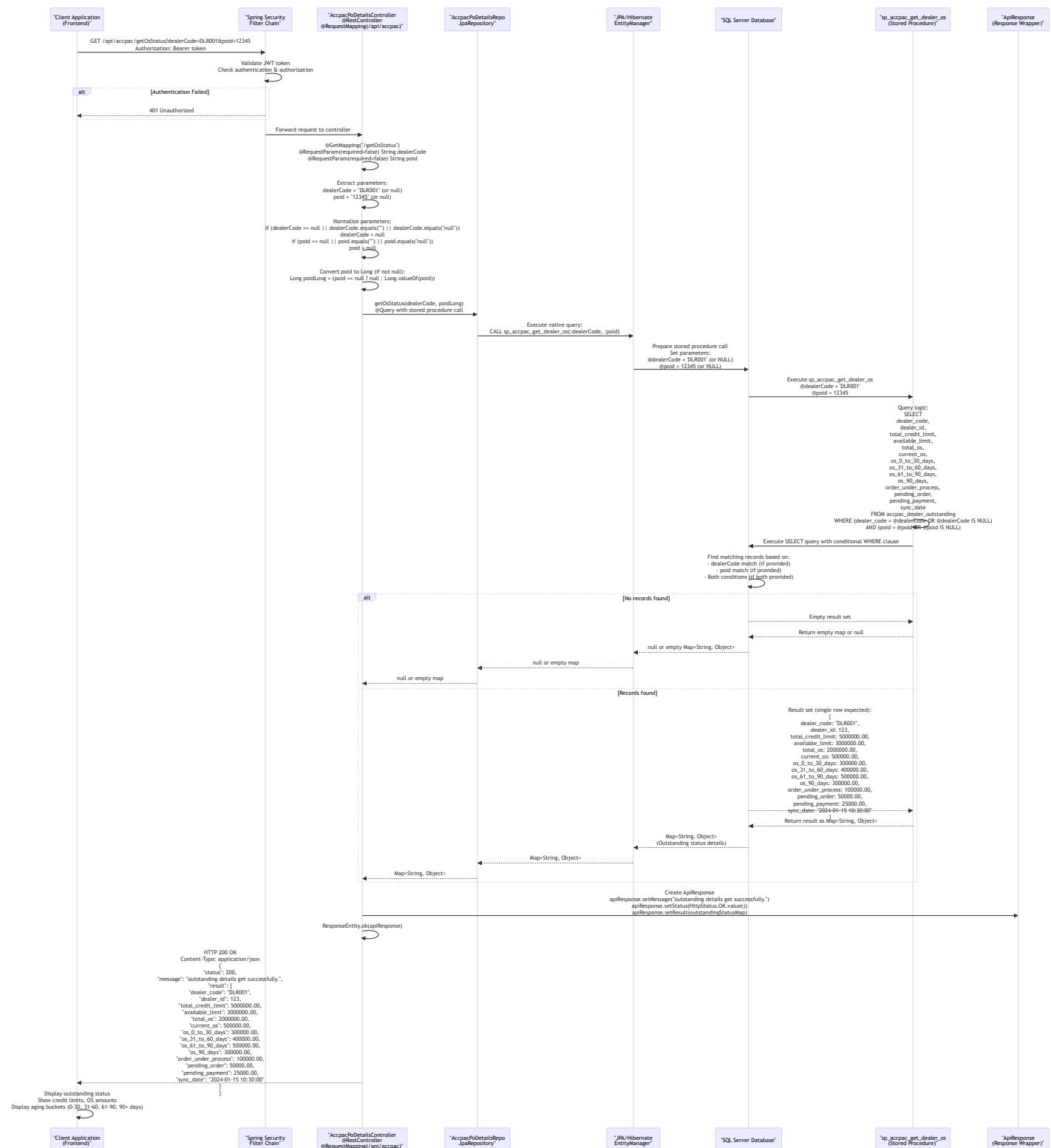
5. Save ACCPAC PO Details Flow

This diagram shows the complete flow for saving ACCPAC purchase order details (dealer outstanding information).



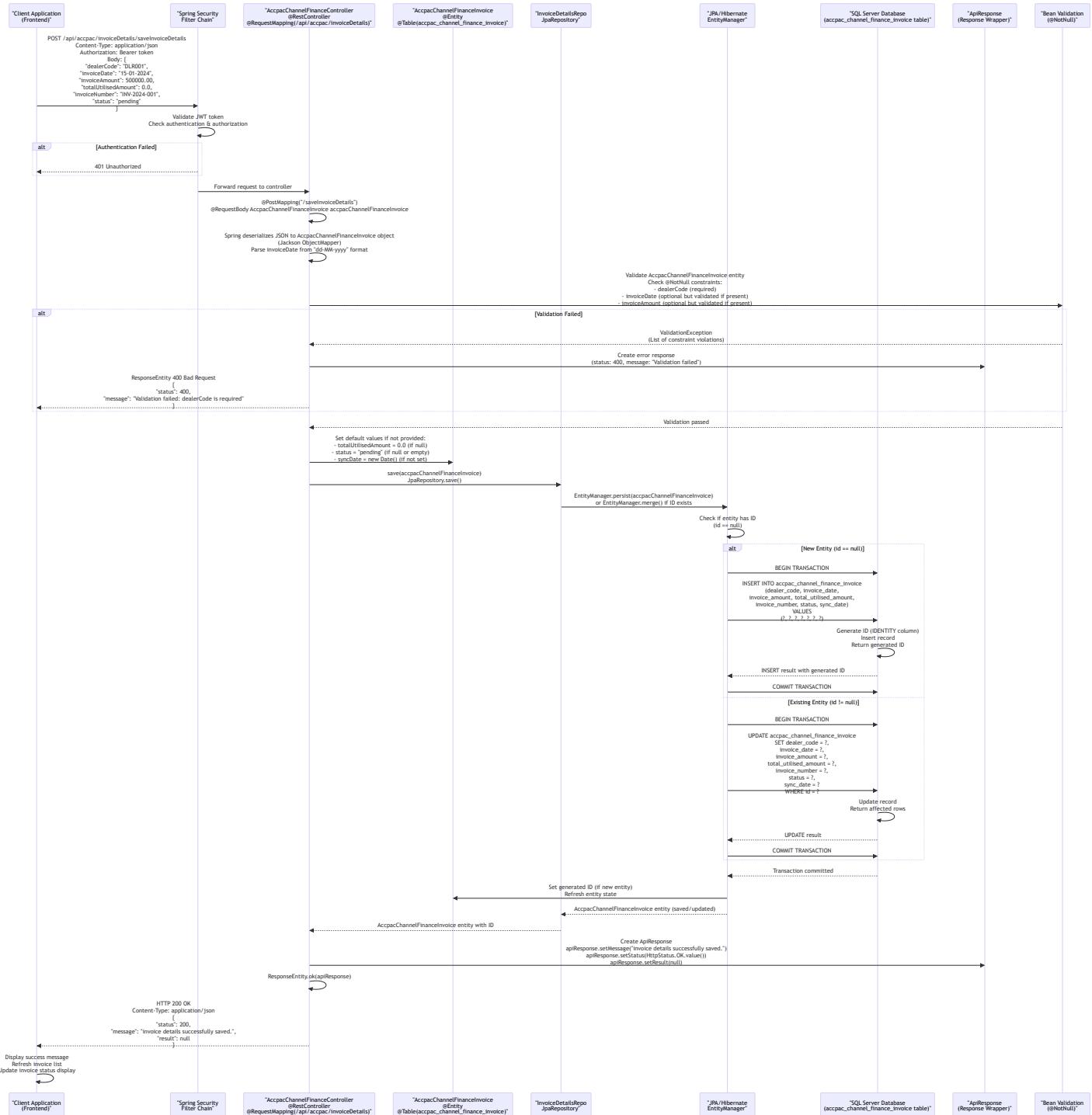
6. Get Outstanding Status Flow

This diagram shows the flow for retrieving outstanding status for a dealer or purchase order using stored procedures.



7. Save Invoice Details Flow

This diagram shows the complete flow for saving channel finance invoice details.



Summary

The ACCPAC Module provides comprehensive integration with the ACCPAC accounting system through the following functionalities:

1. Dealer Master Management (AccPacController)

- **Upload Dealer Master Excel:** Bulk import dealer master data from Excel files using Poiji library
- **Dealer Code Autocomplete:** Search and autocomplete dealer codes using stored procedures
- **Get Details by Dealer Code:** Retrieve complete dealer information by dealer code
- **Get Dealer Type List:** Fetch distinct dealer types for dropdowns

2. Purchase Order Details Management (AccpacPoDetailsController)

- **Save ACCPAC PO Details:** Persist dealer outstanding information including credit limits, OS amounts, and aging buckets
- **Get Outstanding Status:** Retrieve outstanding status for dealers or purchase orders using stored procedures with optional filtering

3. Channel Finance Invoice Management (AccpacChannelFinanceController)

- **Save Invoice Details:** Store channel finance invoice information with default status and utilization tracking

Technical Architecture

- **Framework:** Spring Boot 2.3.3.RELEASE with Spring Data JPA
- **Database:** Microsoft SQL Server with stored procedures for complex queries
- **Security:** Spring Security with JWT token authentication
- **Data Access:** JPA/Hibernate with custom repositories and native queries
- **Excel Processing:** Poiji library for Excel file parsing
- **Validation:** Bean Validation (JSR-303) with @NotNull constraints
- **Response Format:** Standardized ApiResponse wrapper for all API responses
- **Date Handling:** Jackson JSON serialization with custom date formats

Key Features

1. **Stored Procedures:** Used for complex queries and business logic (dealer code search, outstanding calculations)
2. **Batch Operations:** Bulk insert support for Excel uploads
3. **Flexible Filtering:** Optional parameters for outstanding status queries
4. **Default Values:** Automatic setting of syncDate and default status values
5. **Error Handling:** Validation and error responses for invalid inputs
6. **Transaction Management:** Automatic transaction handling by Spring Data JPA

Database Tables

- `accpac_dealer_master` : Dealer master information
- `accpac_dealer_outstanding` : Dealer outstanding and PO details
- `accpac_channel_finance_invoice` : Channel finance invoice details

Stored Procedures

- `sp_accpac_dealer_master_dealer_code_auto` : Dealer code autocomplete search
- `sp_accpac_dealer_get_details_by_dealer_code` : Get dealer details by code
- `sp_acc_pac_dealer_dealer_type_list` : Get distinct dealer types
- `sp_accpac_get_dealer_os` : Get outstanding status for dealer/PO

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Module Path: com.i4o.dms.kubota.accpac