

Sales and Presales Module - Detailed Sequence Diagrams

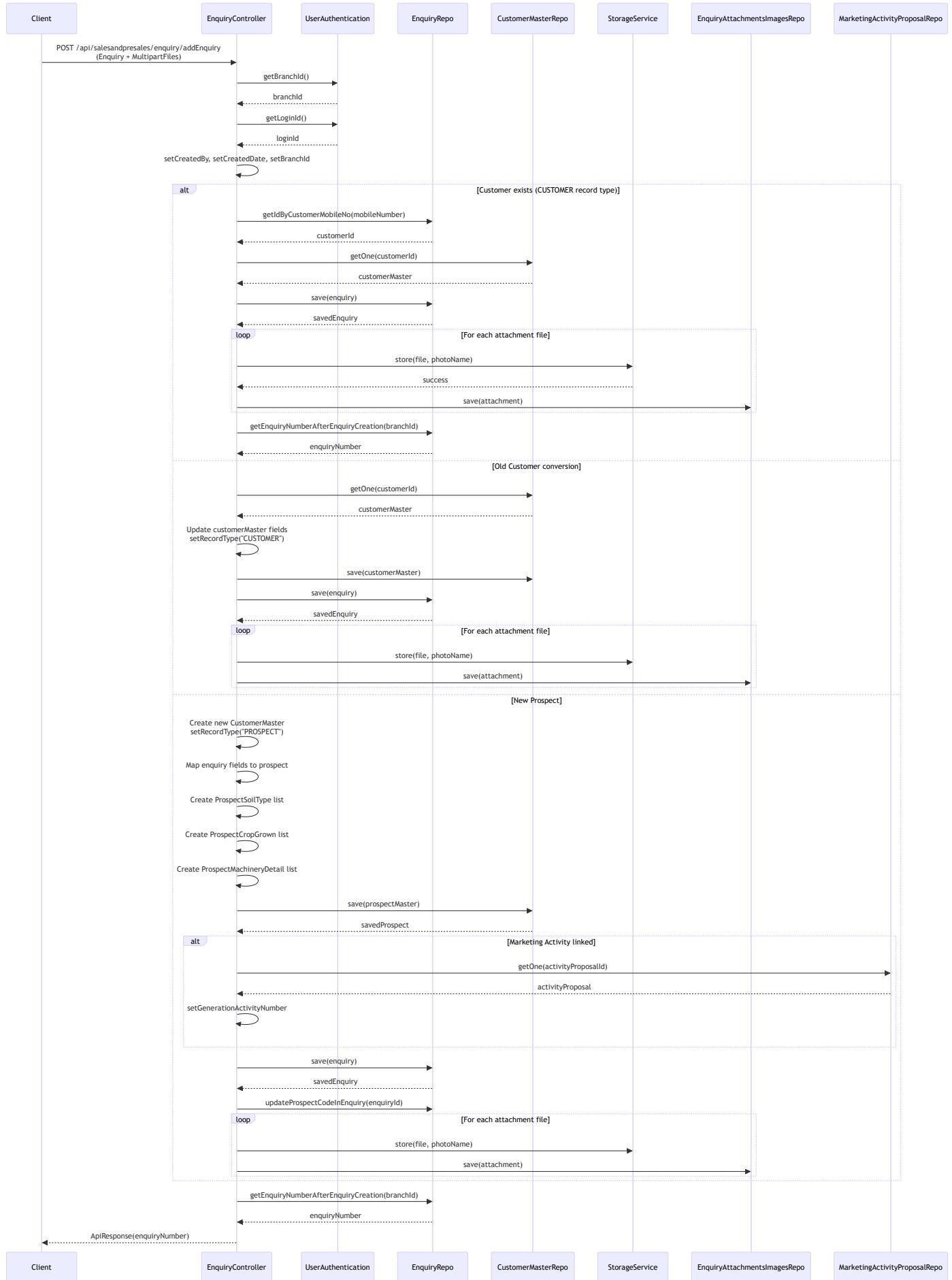
This document contains comprehensive sequence diagrams for all major flows in the Sales and Presales module of the KUBOTA DMS system.

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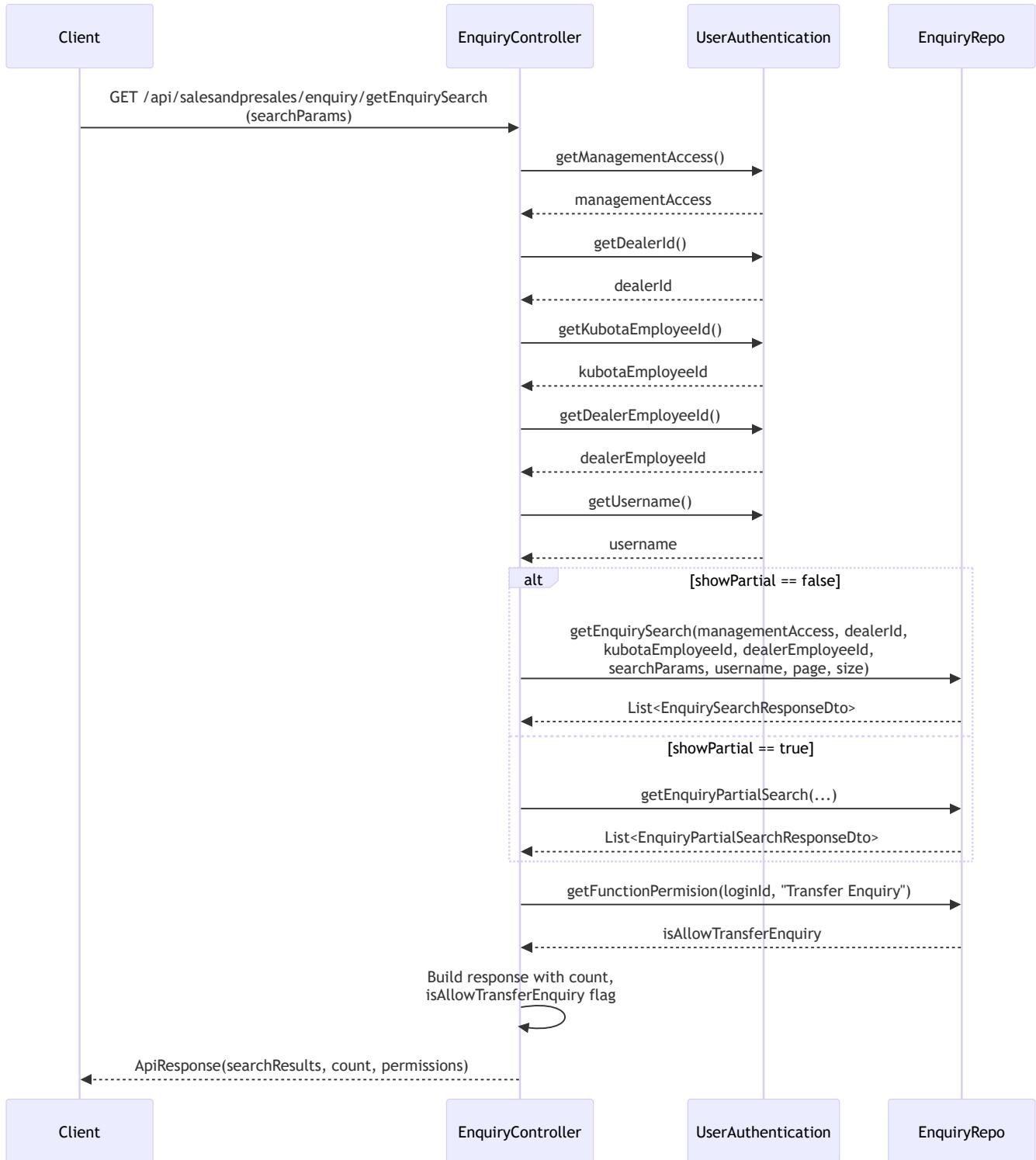
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1. Enquiry Management Flow

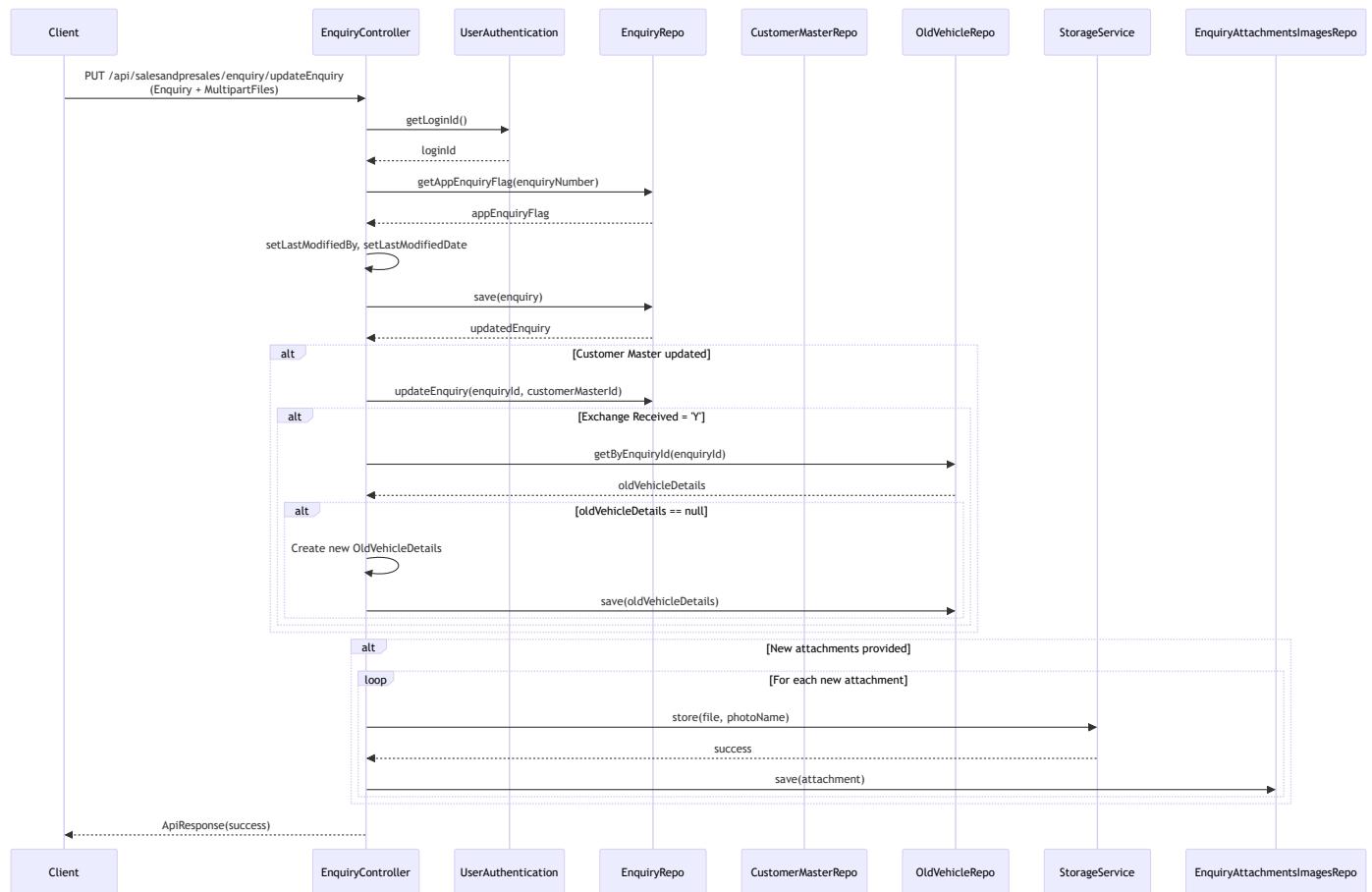
1.1 Create Enquiry Flow



1.2 Search Enquiry Flow

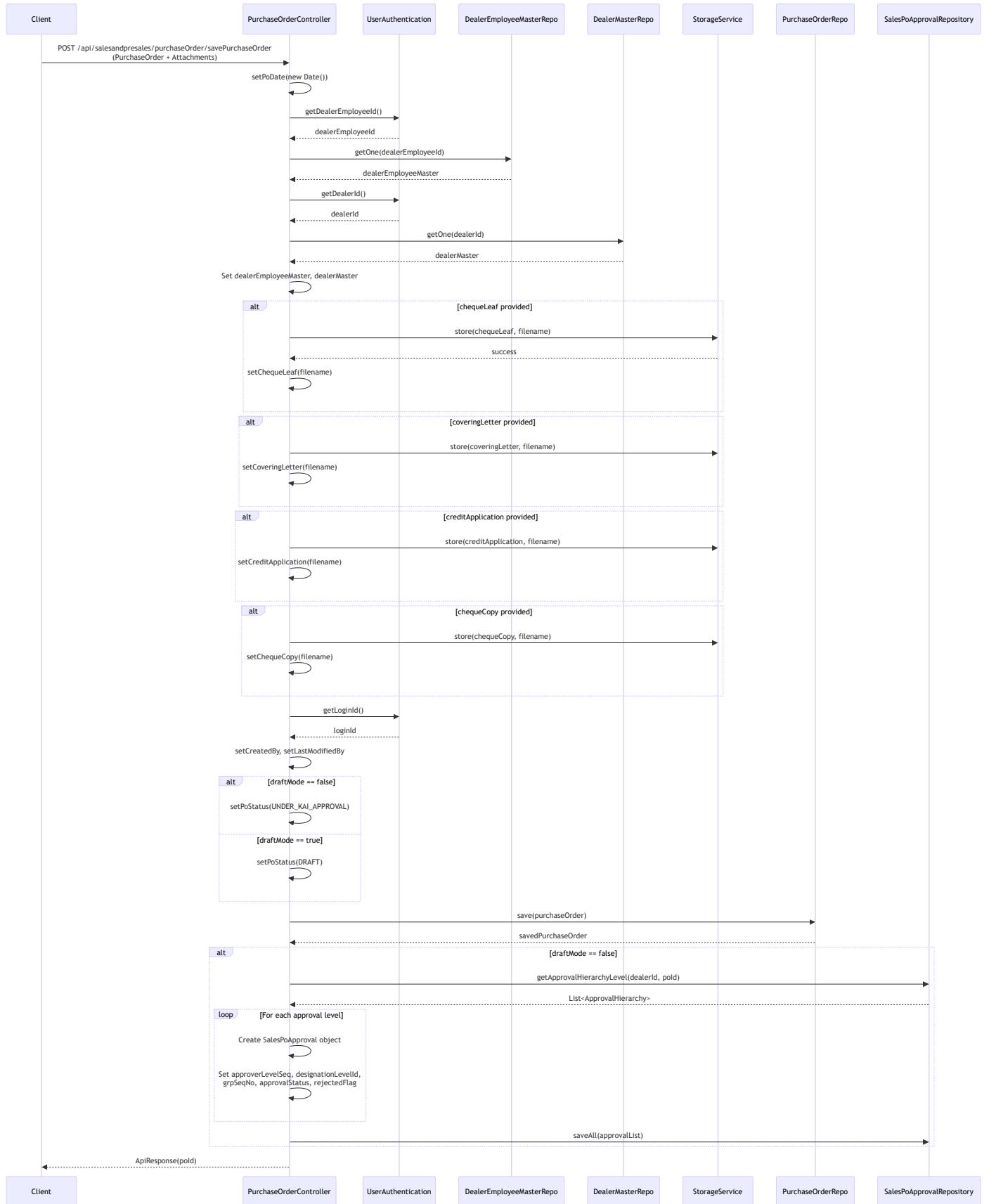


1.3 Update Enquiry Flow

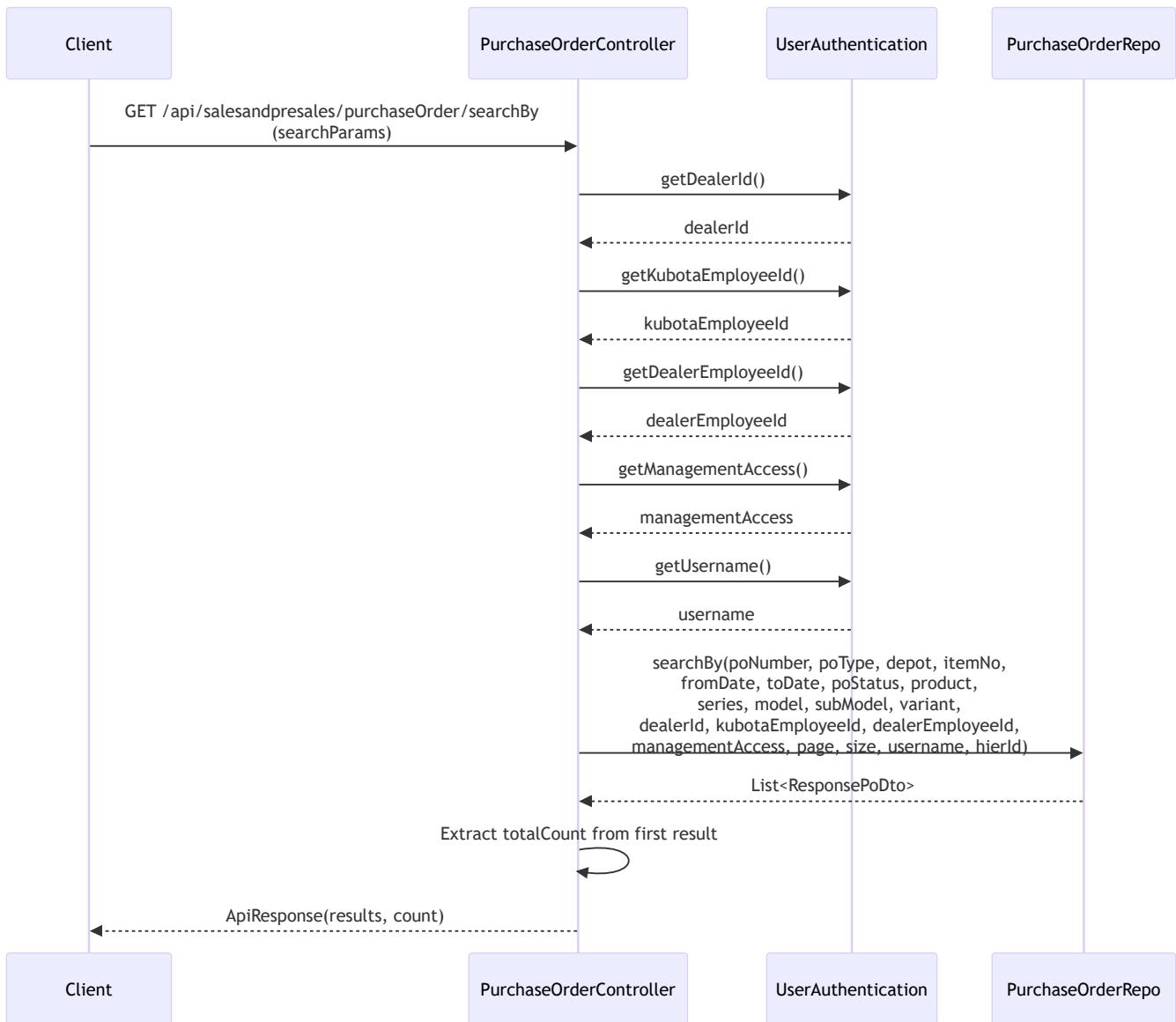


2. Purchase Order Flow

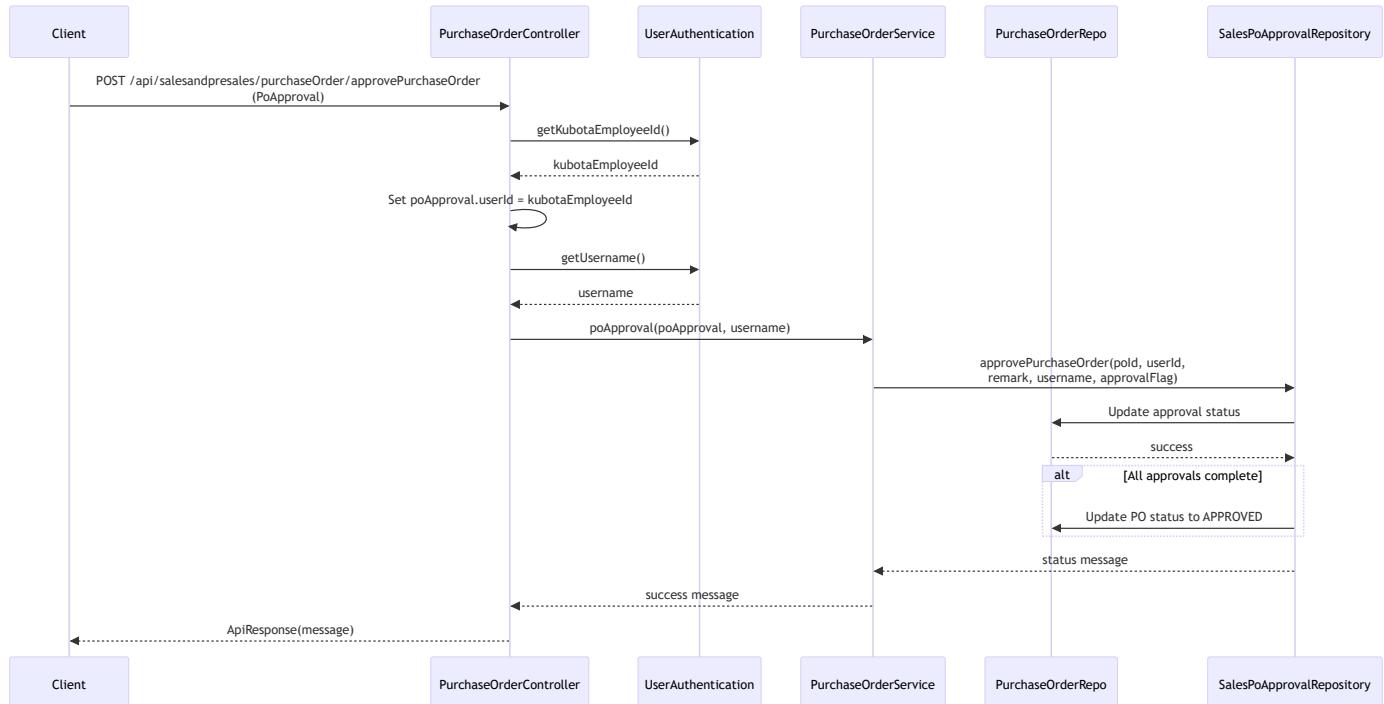
2.1 Create Purchase Order Flow



2.2 Search Purchase Order Flow

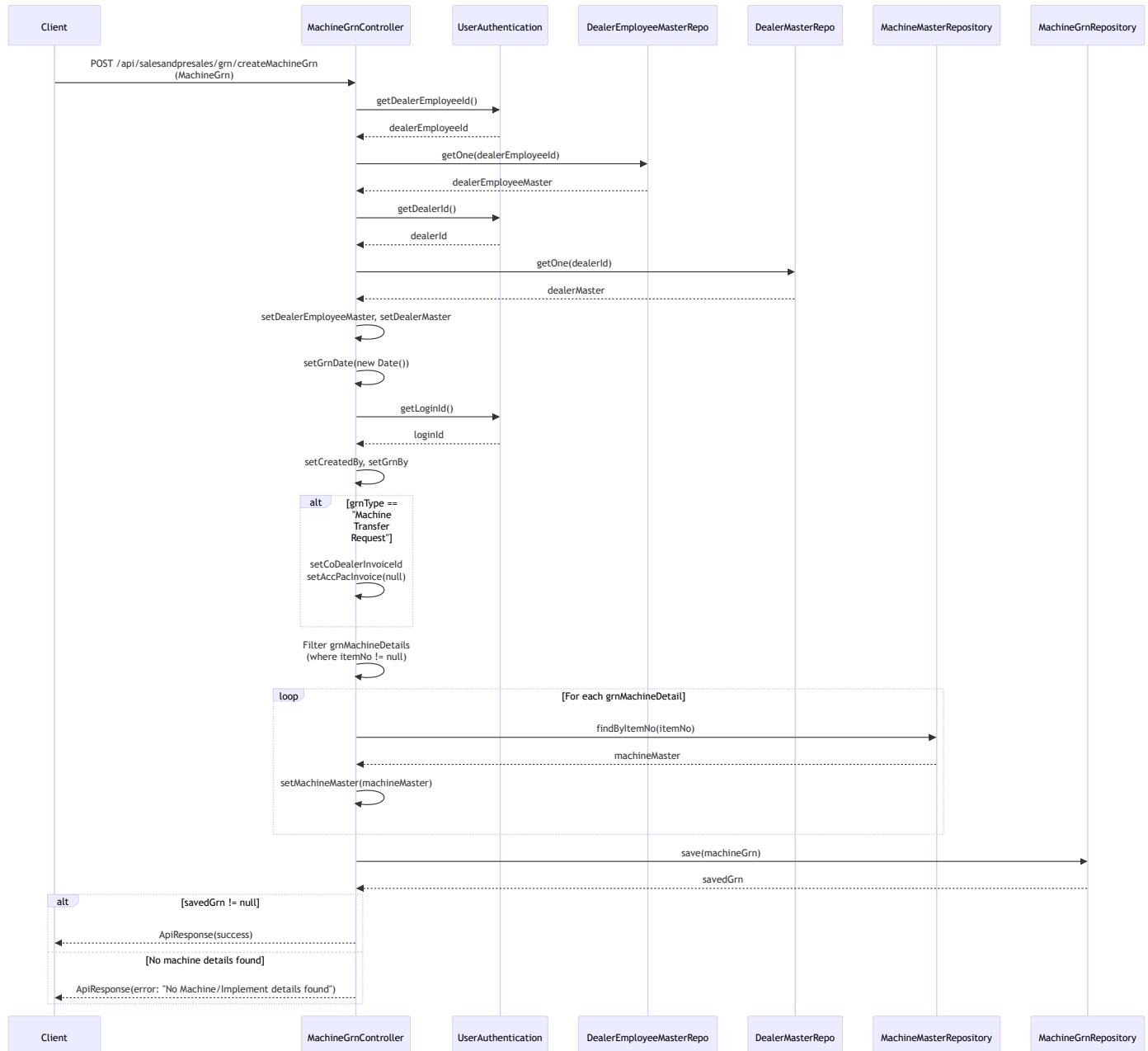


2.3 Approve Purchase Order Flow

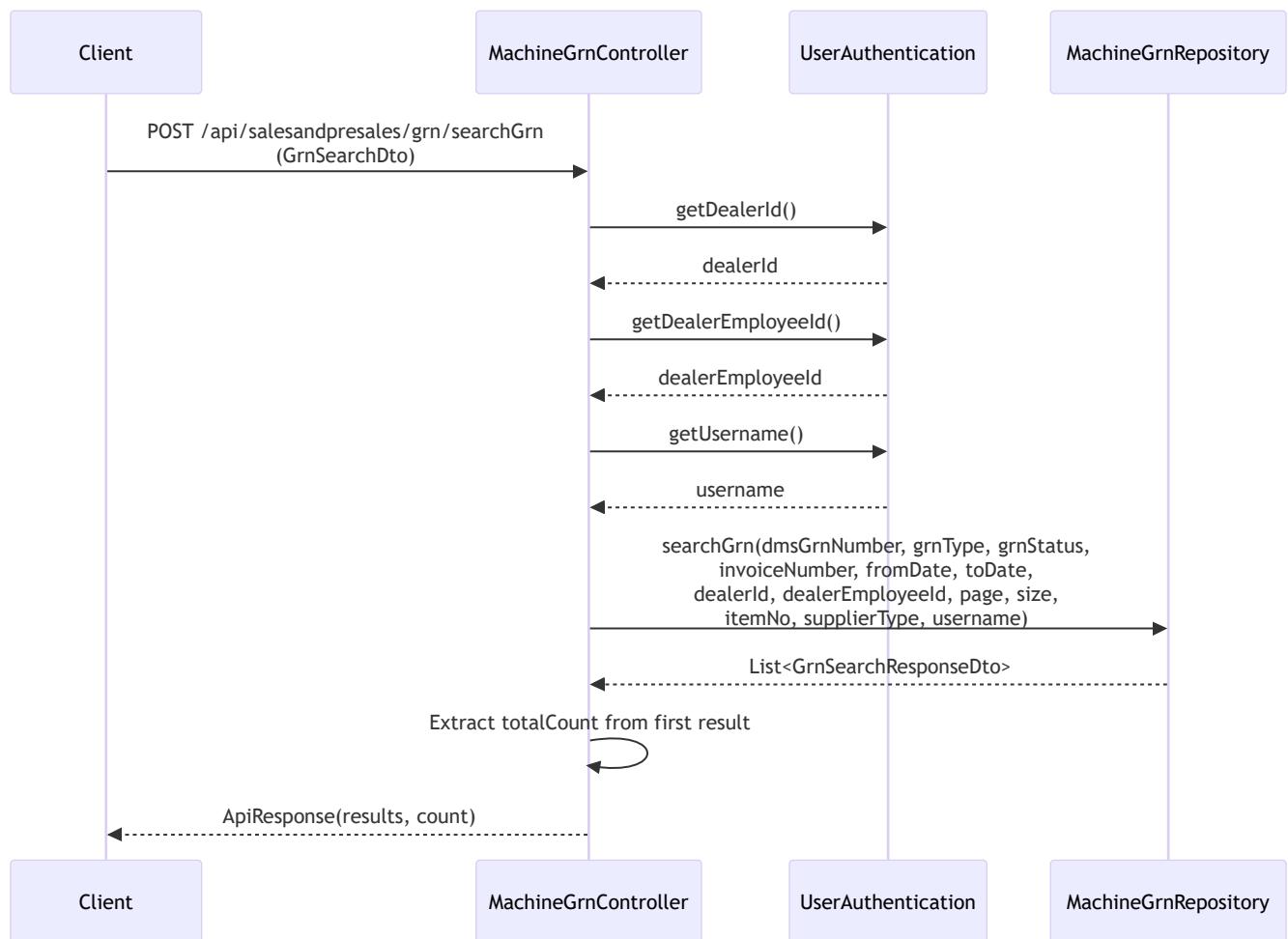


3. GRN (Goods Receipt Note) Flow

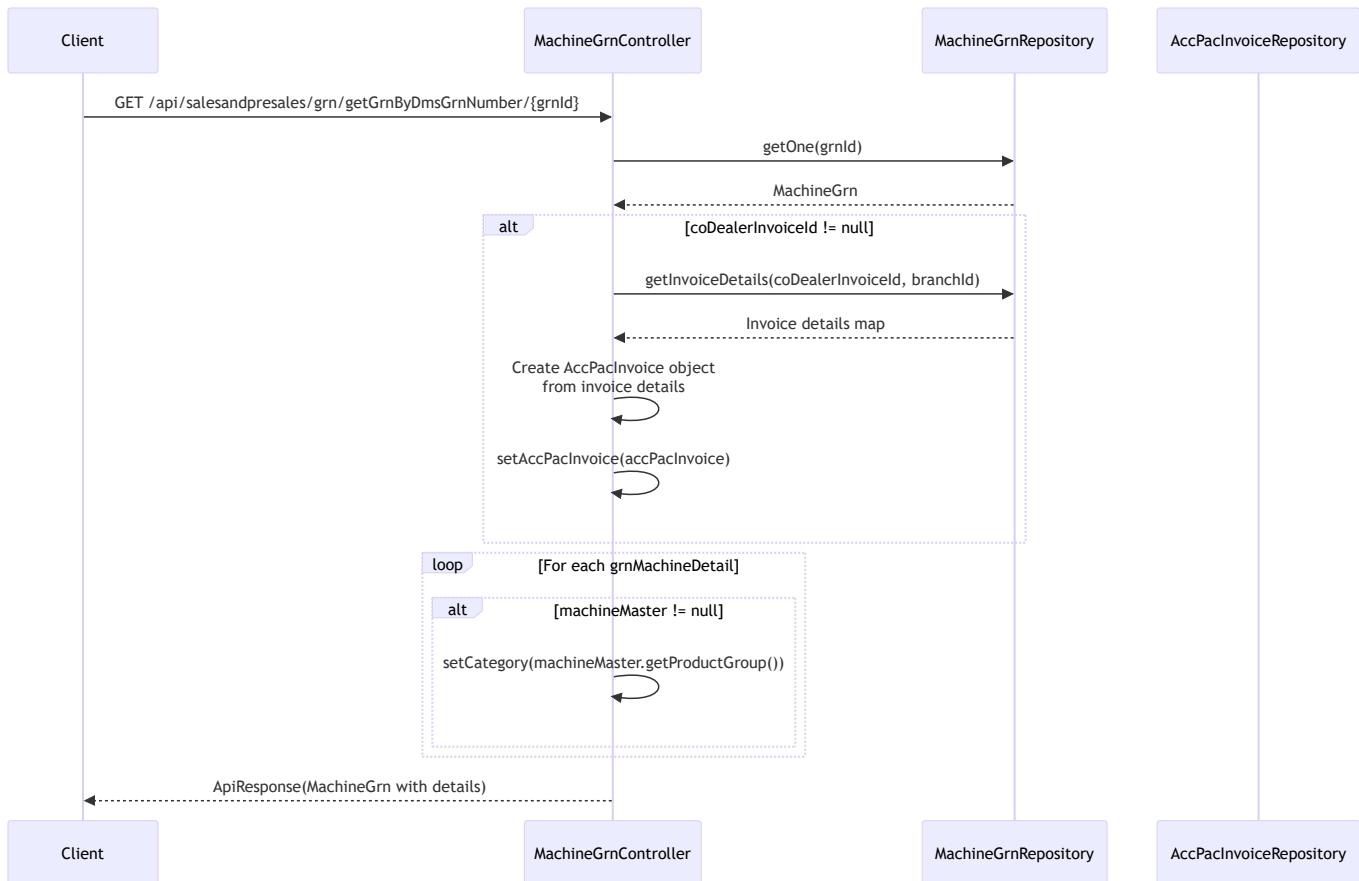
3.1 Create GRN Flow



3.2 Search GRN Flow

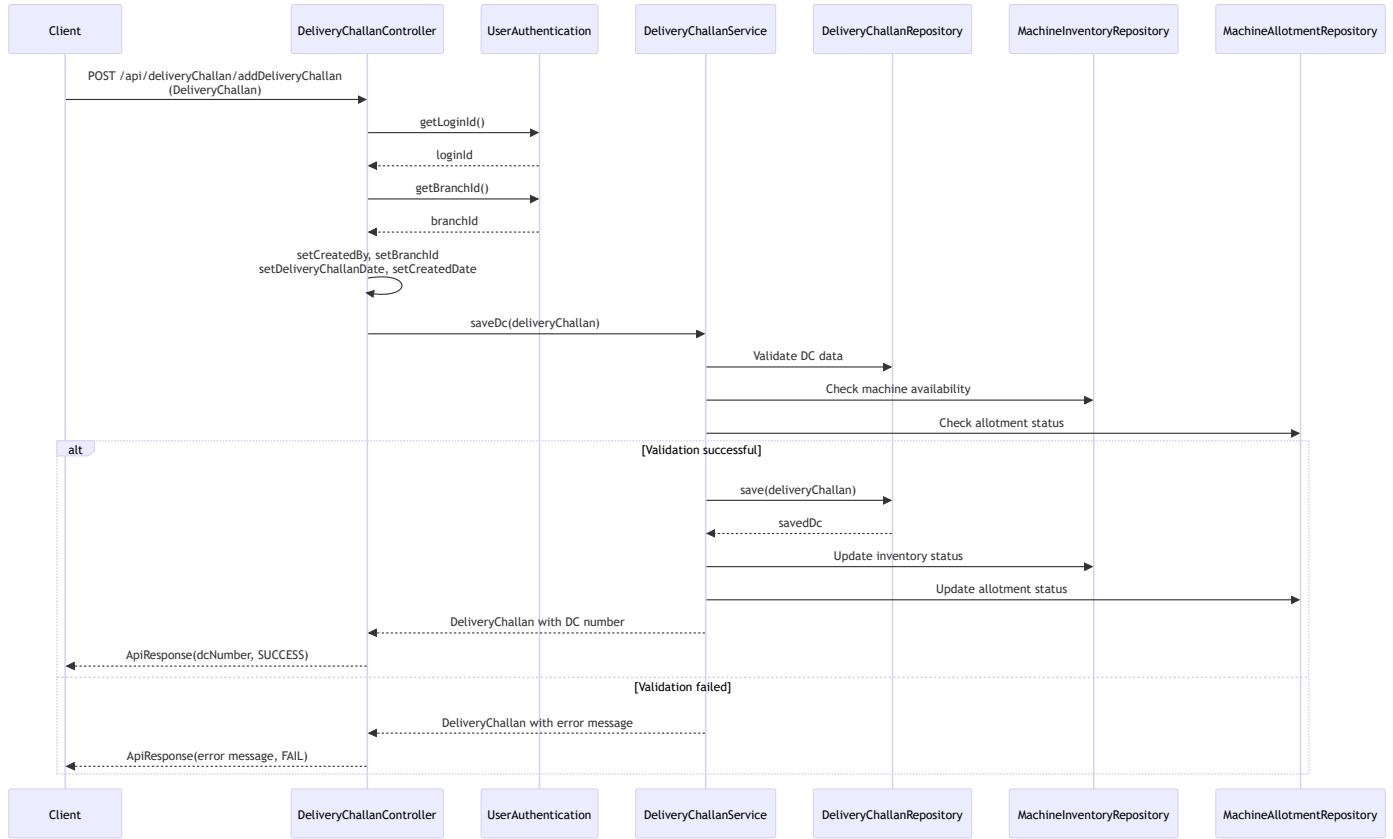


3.3 Get GRN Details Flow

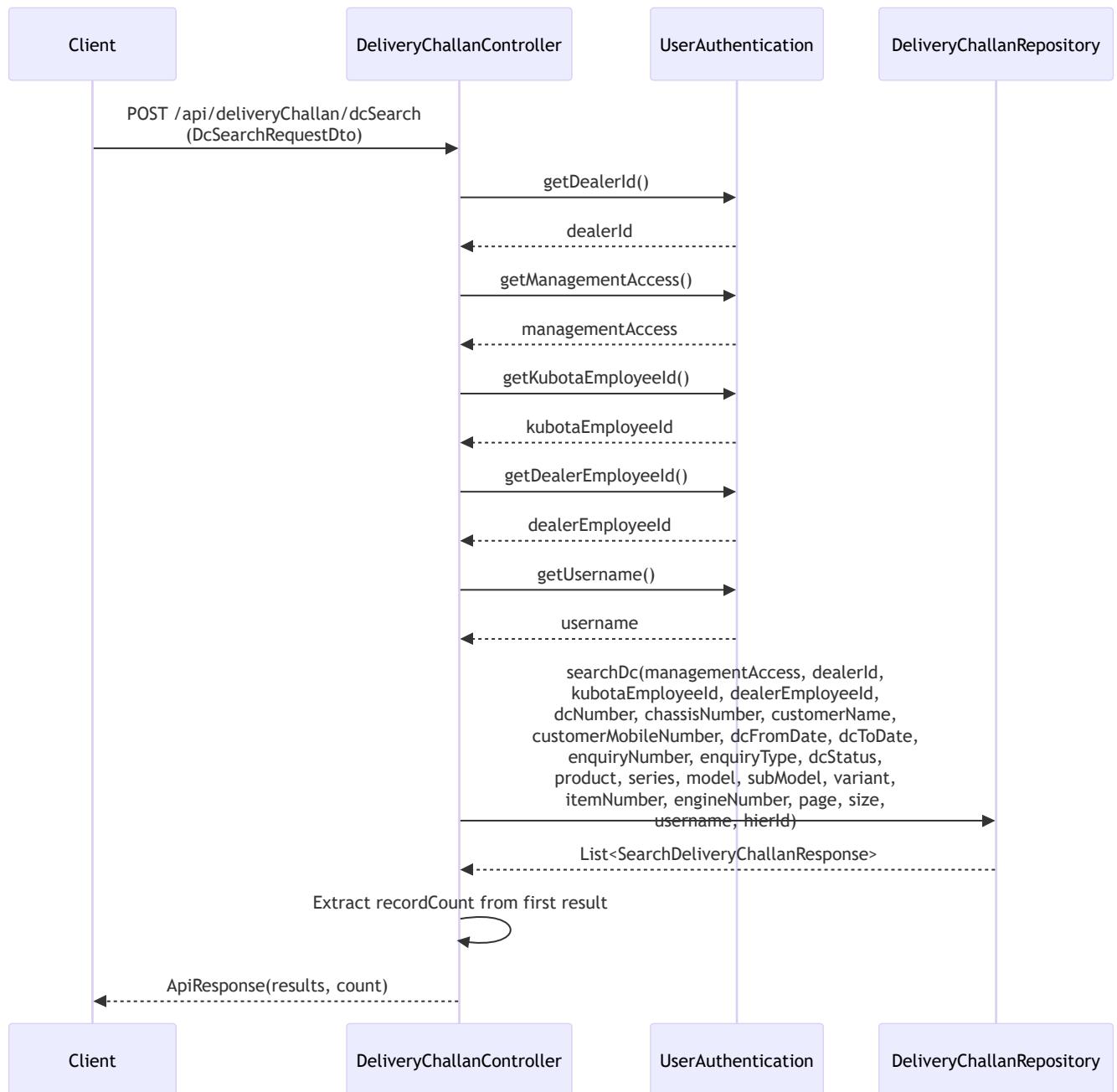


4. Delivery Challan Flow

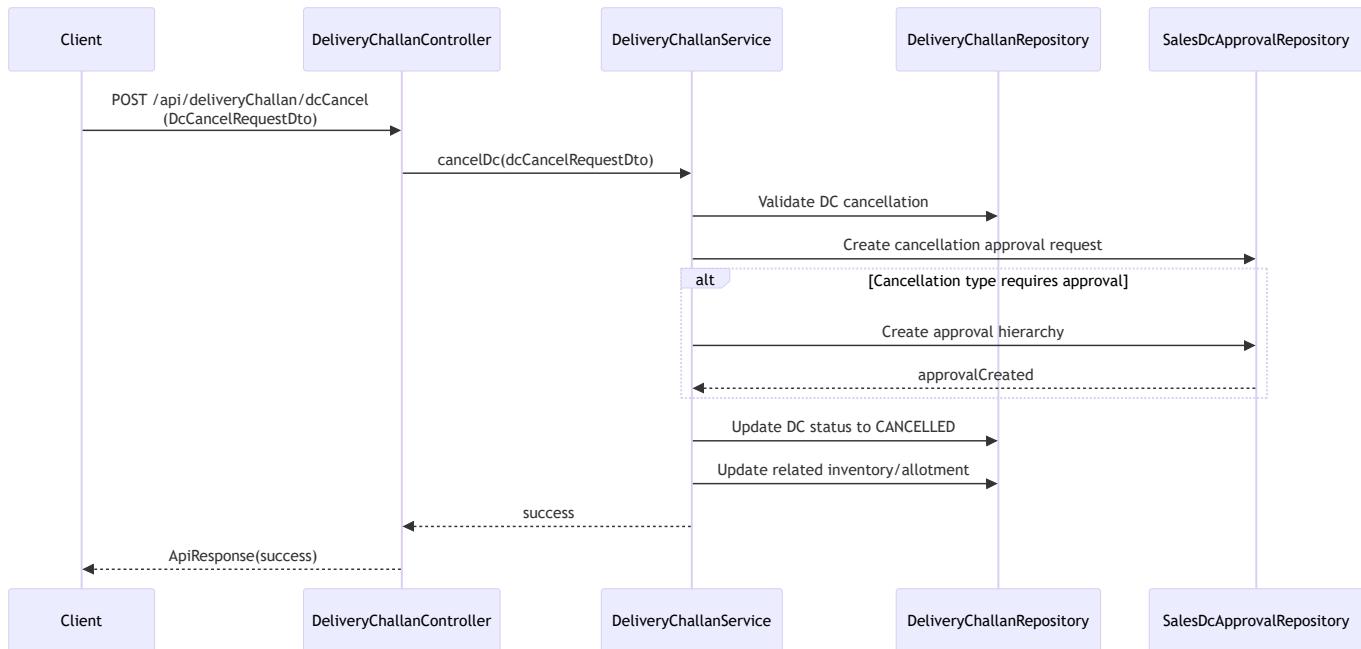
4.1 Create Delivery Challan Flow



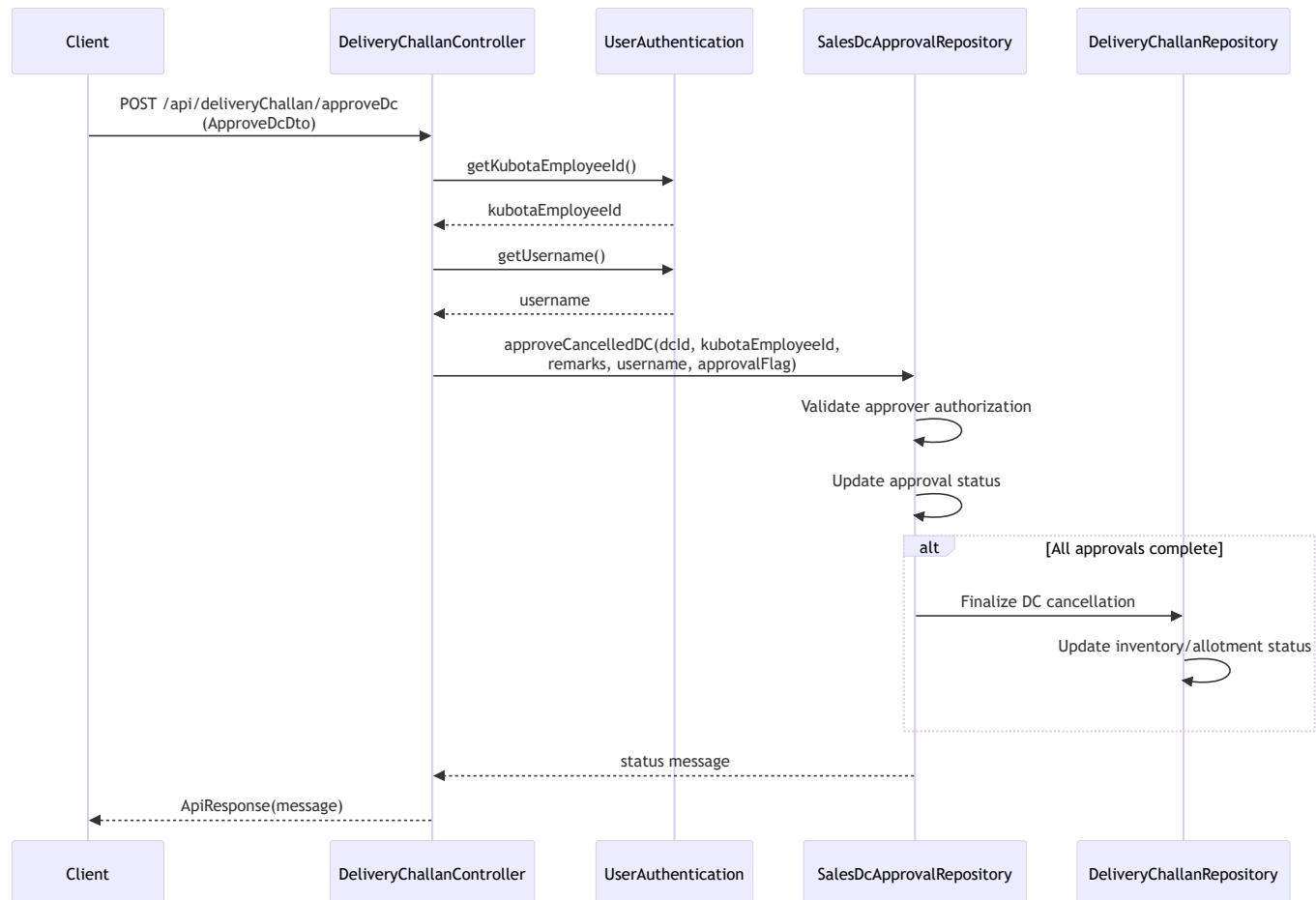
4.2 Search Delivery Challan Flow



4.3 Cancel Delivery Challan Flow

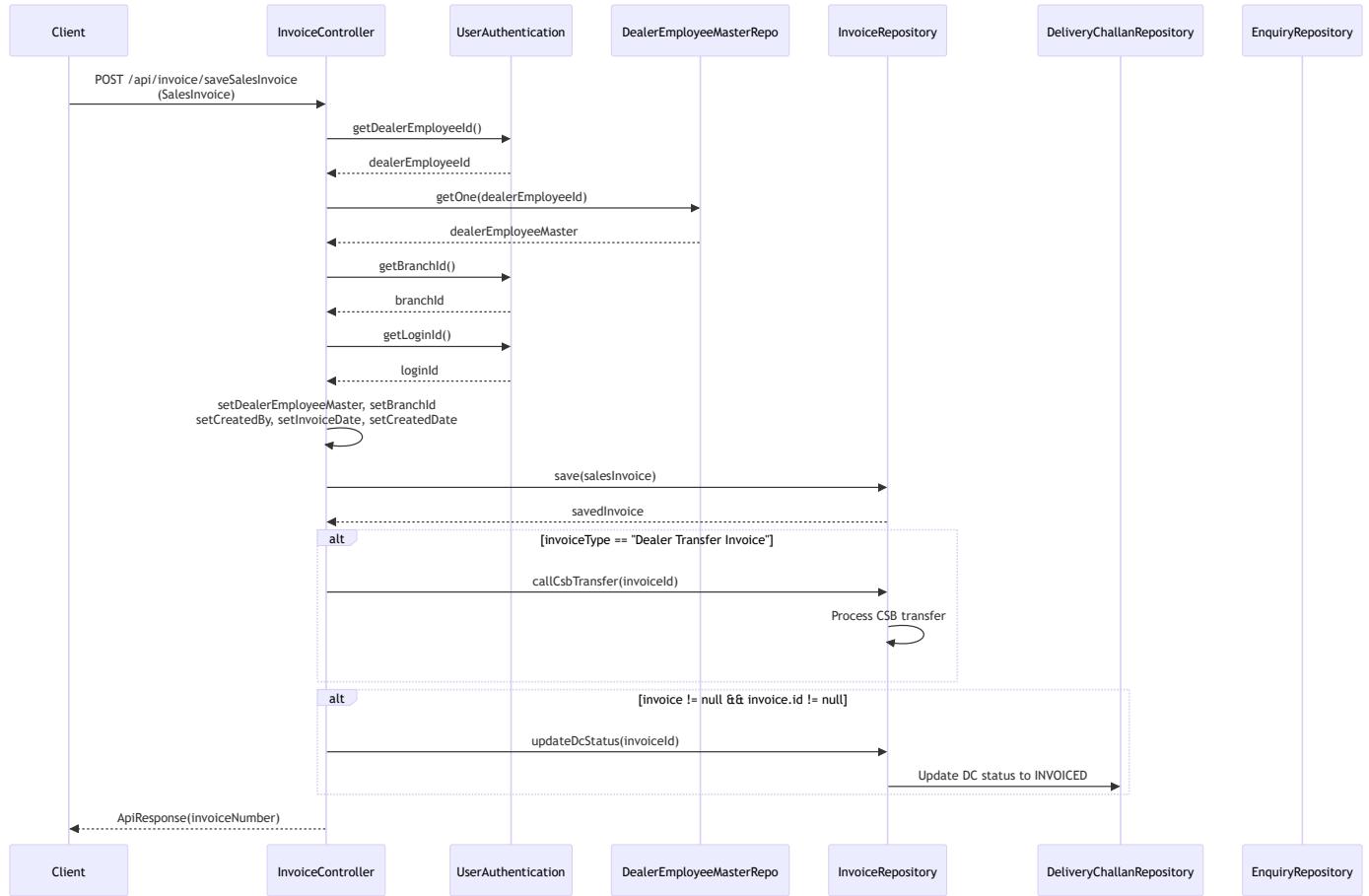


4.4 Approve DC Cancellation Flow

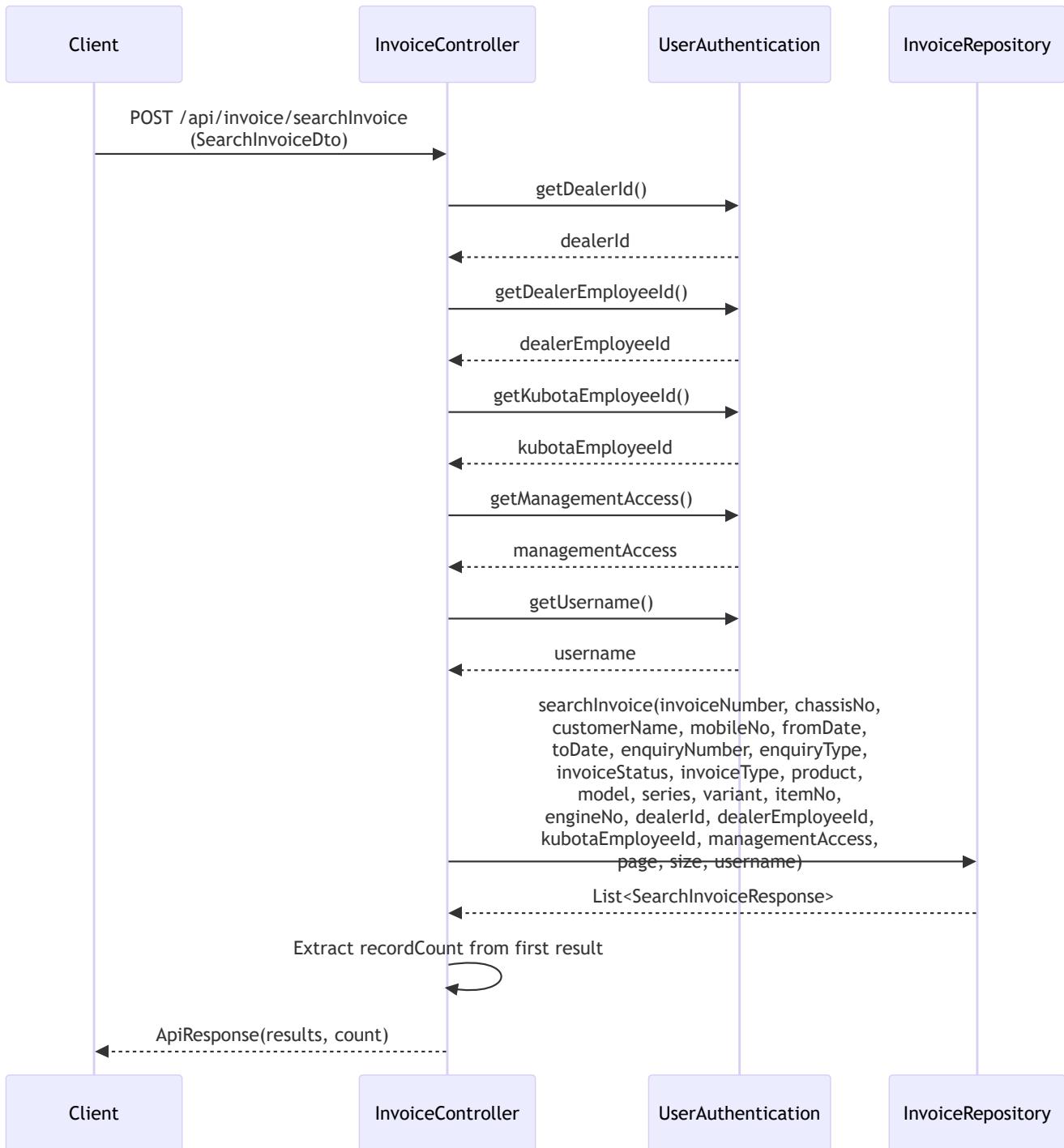


5. Sales Invoice Flow

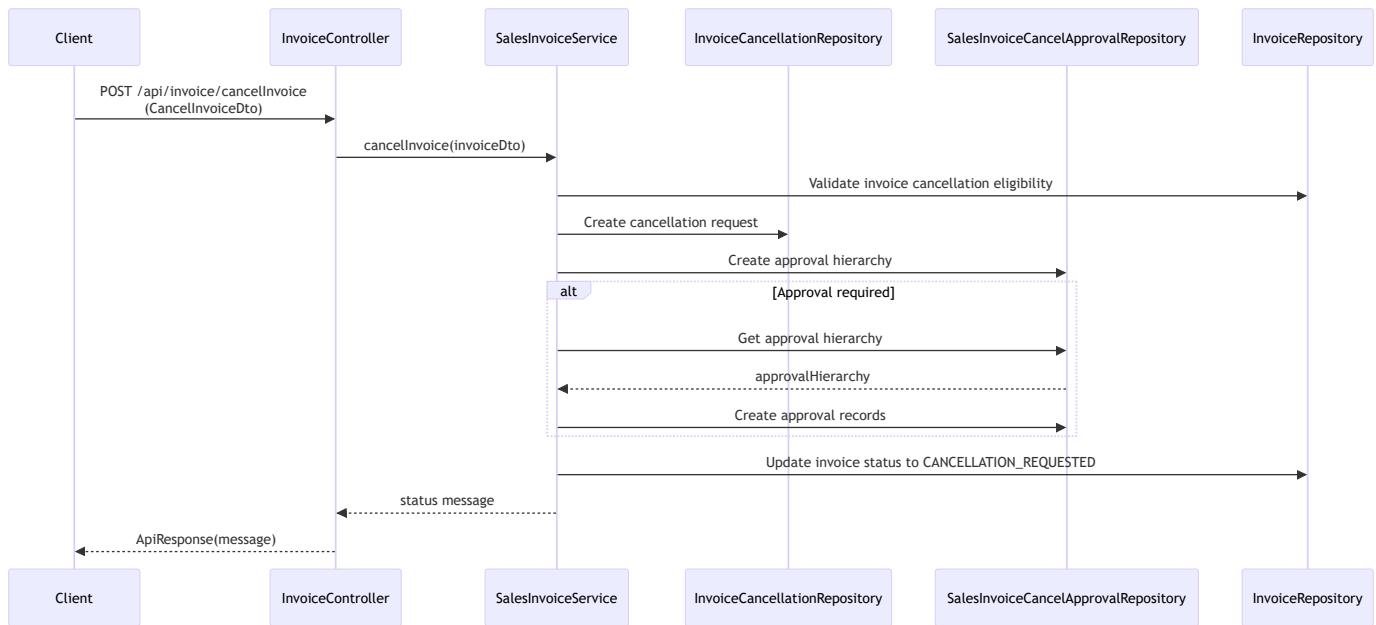
5.1 Create Sales Invoice Flow



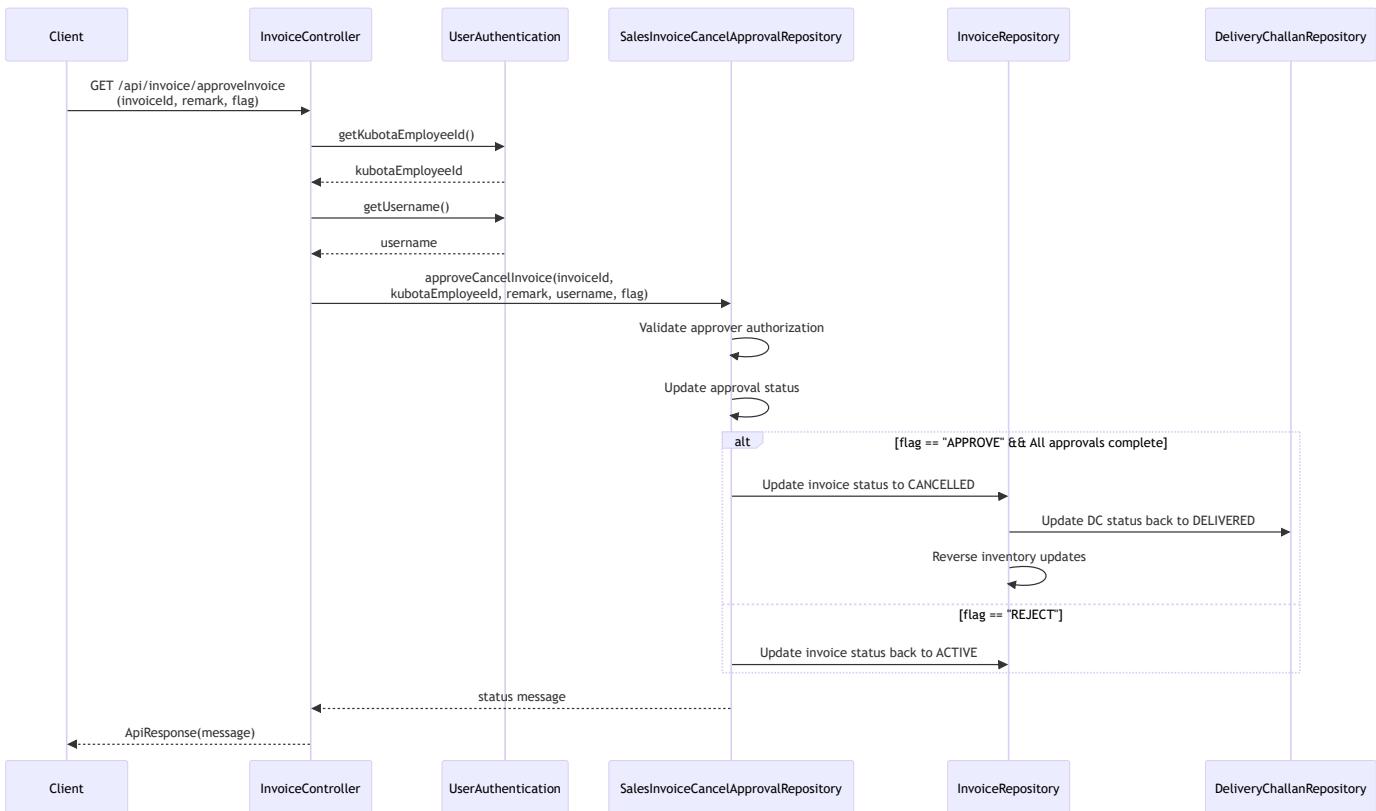
5.2 Search Invoice Flow



5.3 Cancel Invoice Flow

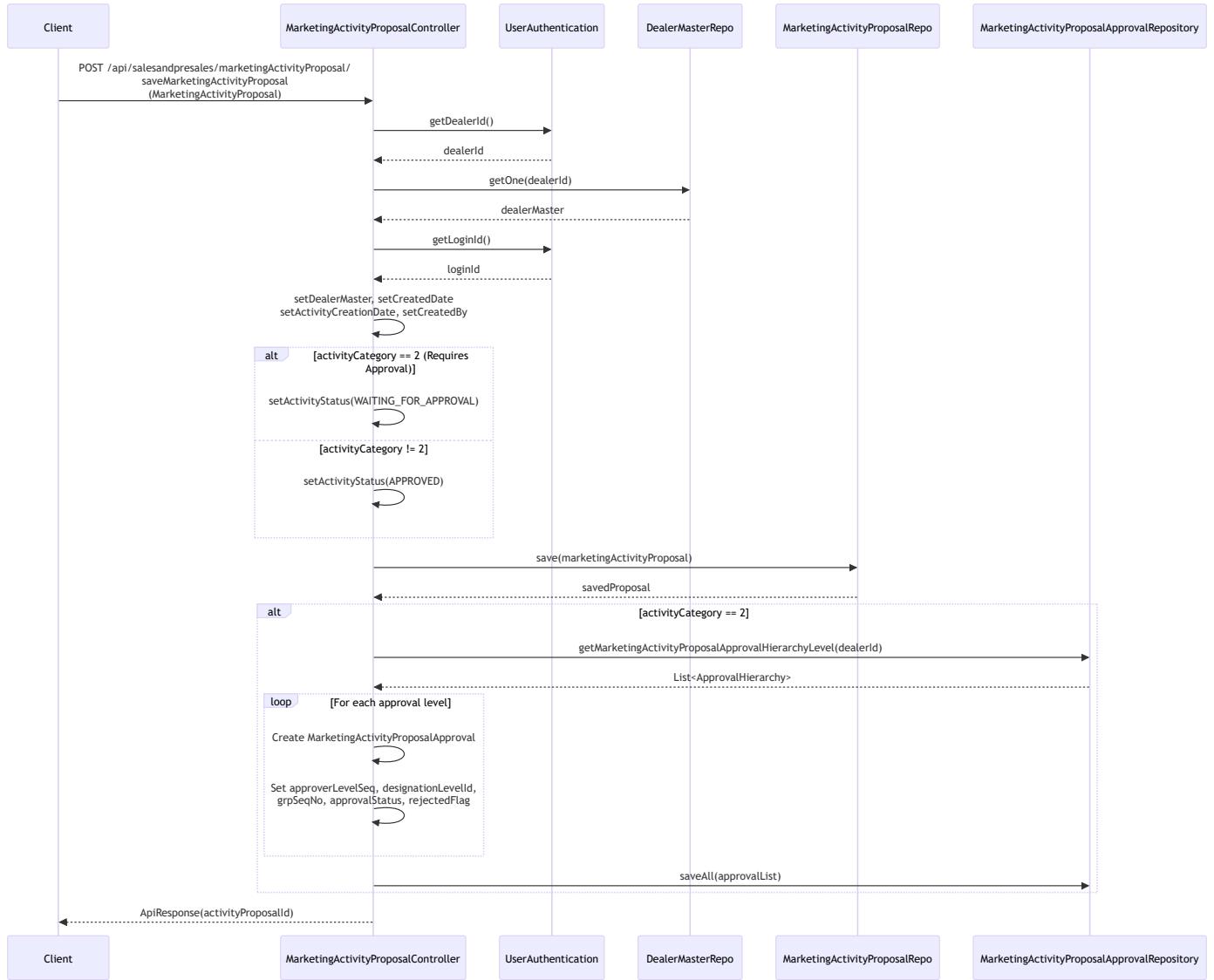


5.4 Approve Invoice Cancellation Flow

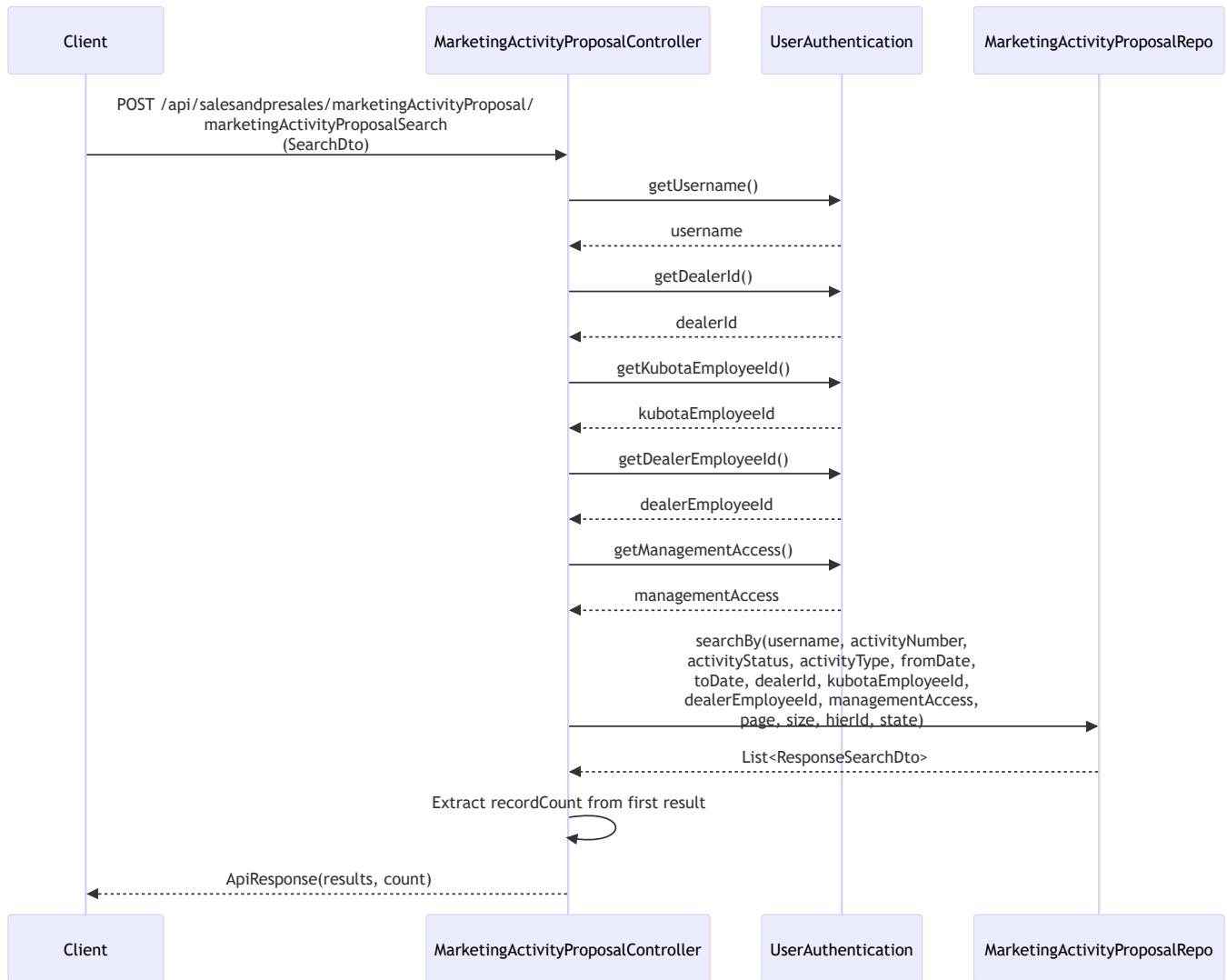


6. Marketing Activity Proposal Flow

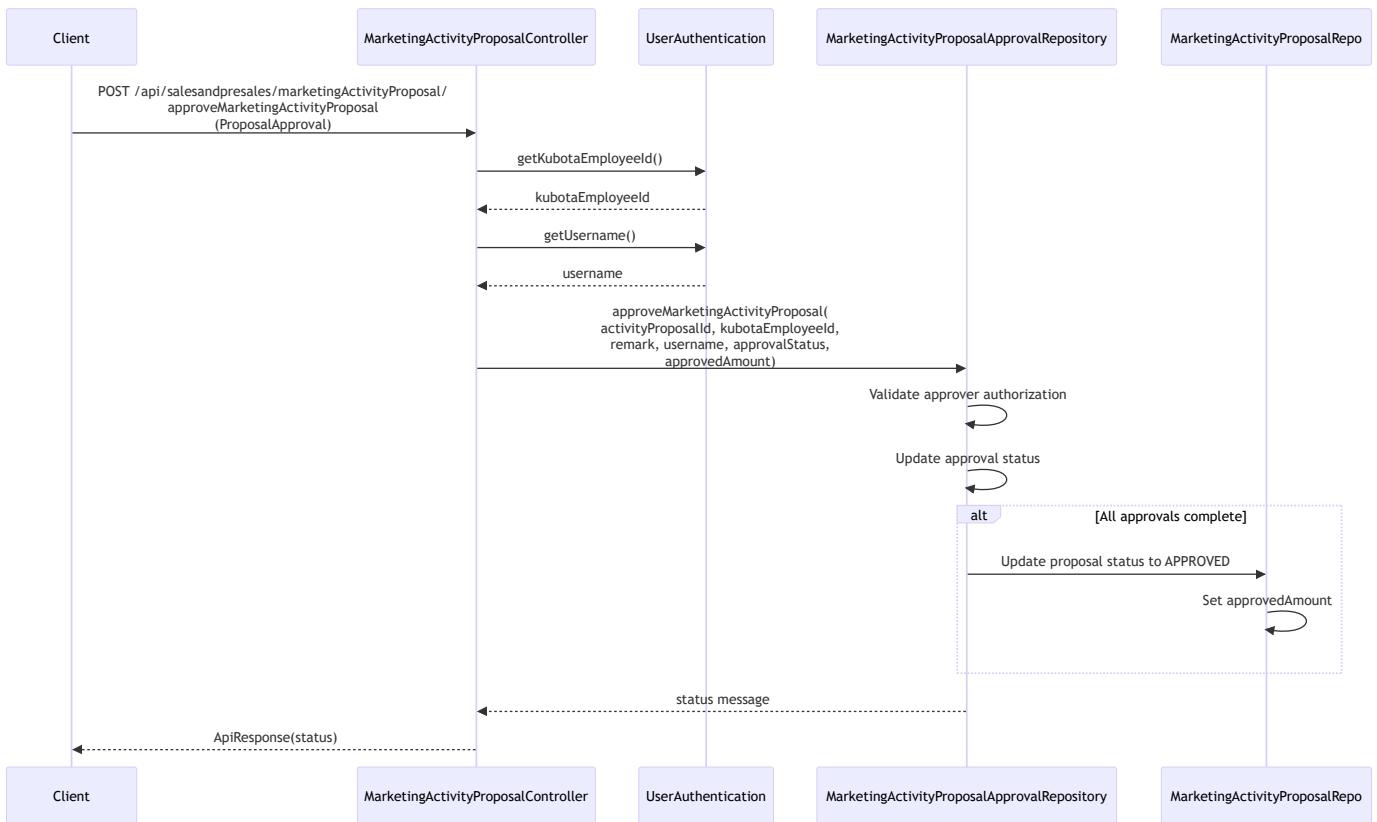
6.1 Create Marketing Activity Proposal Flow



6.2 Search Marketing Activity Proposal Flow

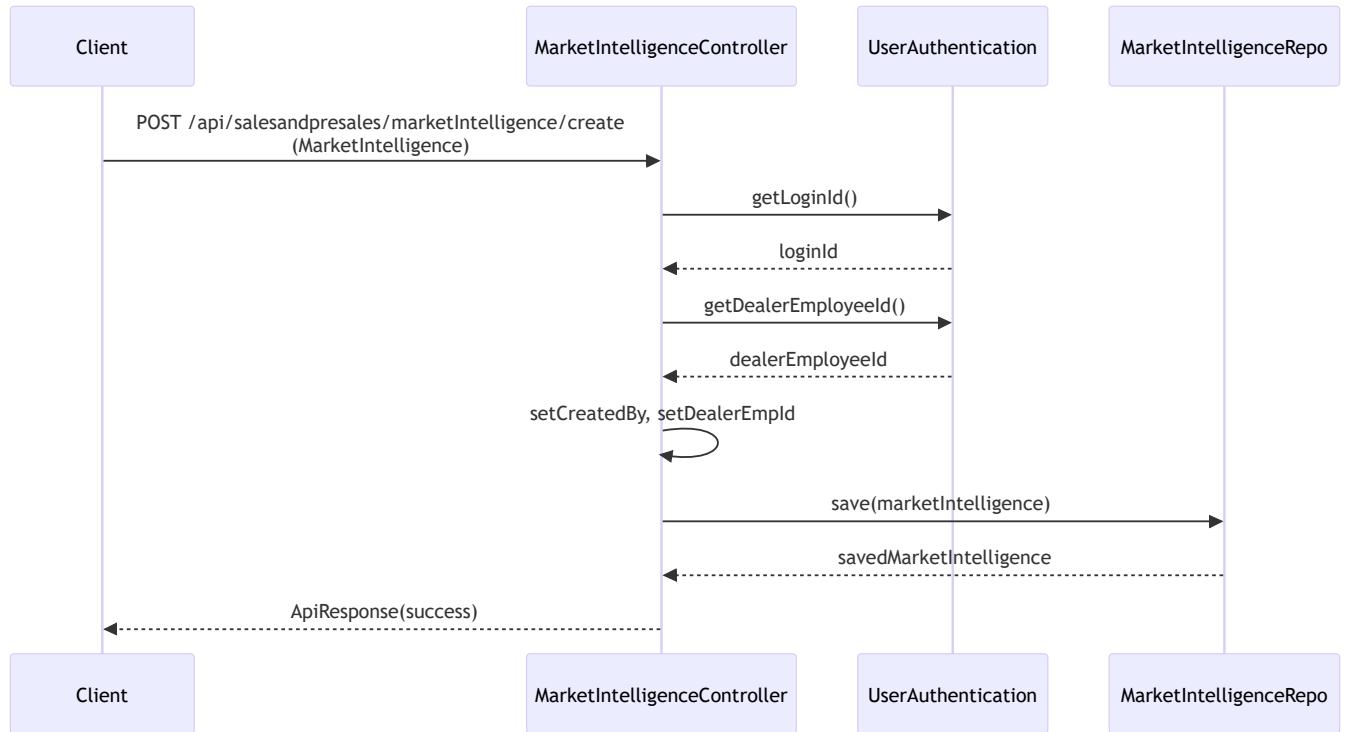


6.3 Approve Marketing Activity Proposal Flow

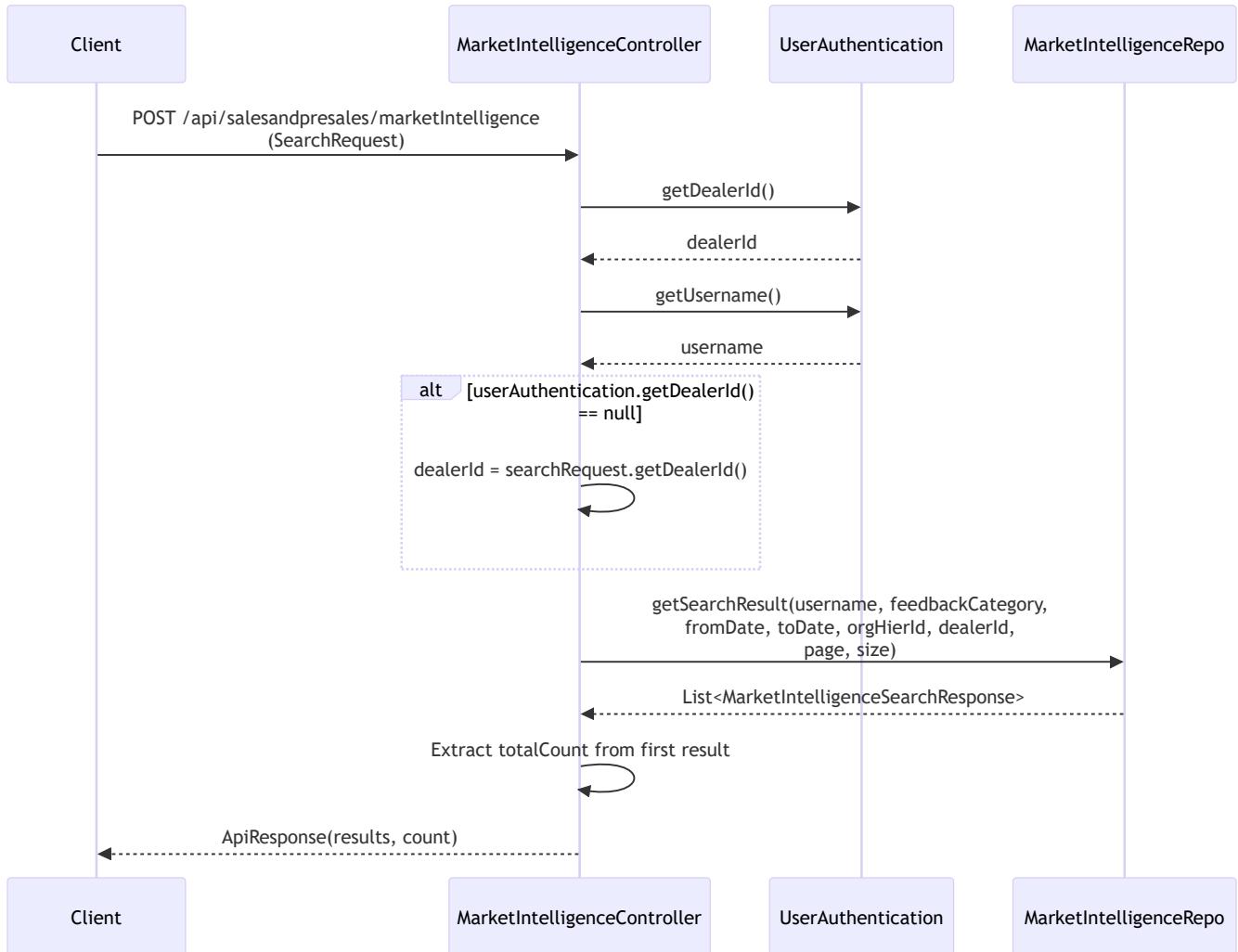


7. Market Intelligence Flow

7.1 Create Market Intelligence Flow

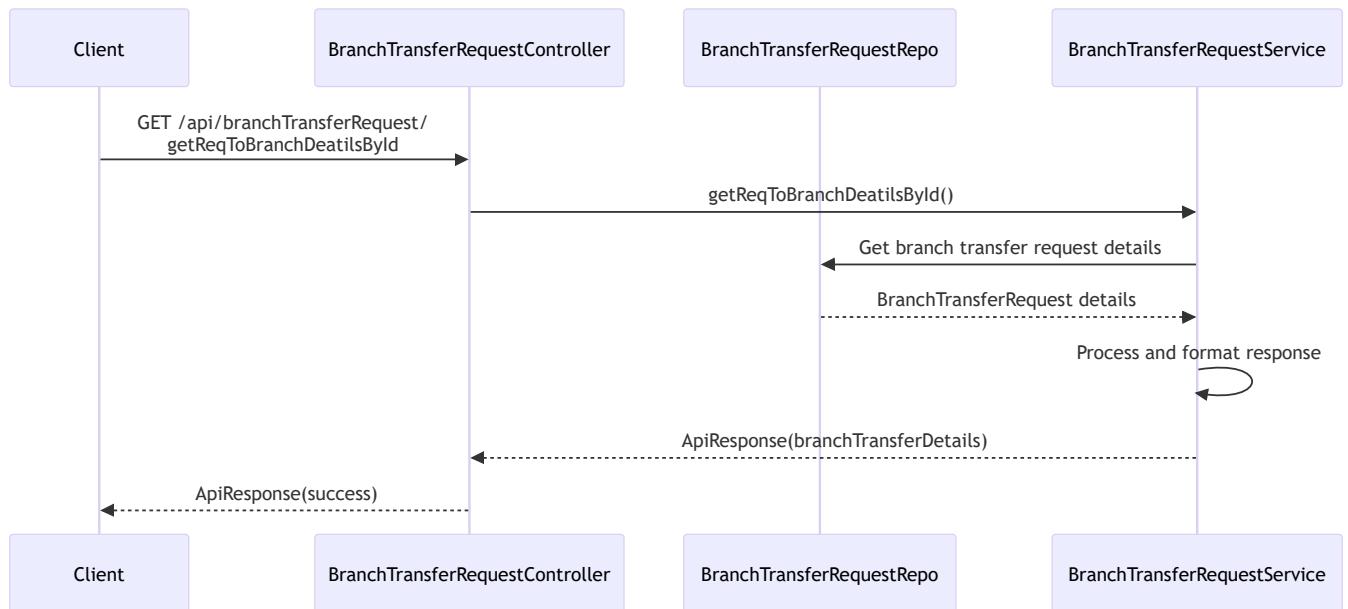


7.2 Search Market Intelligence Flow



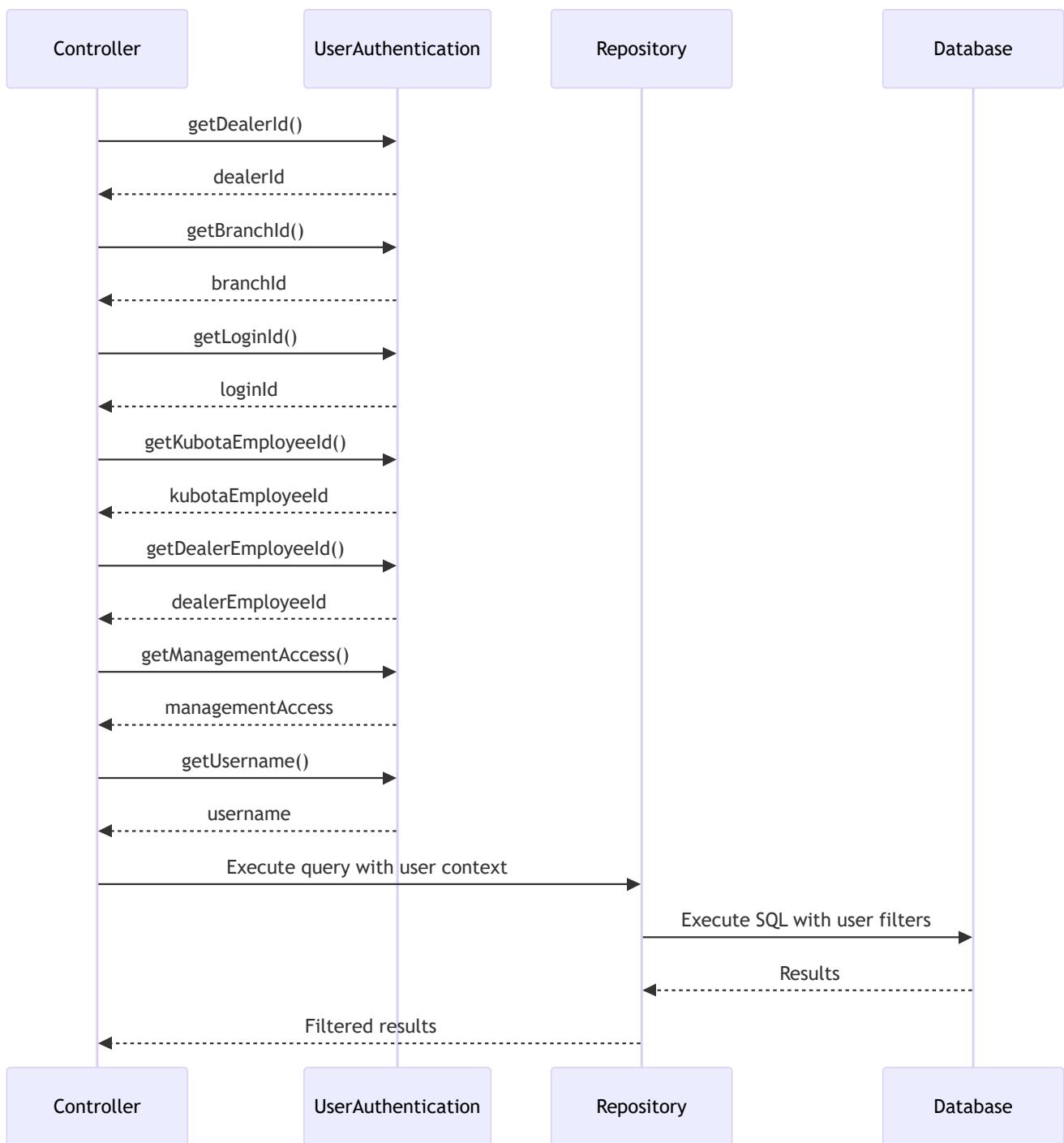
8. Branch Transfer Flow

8.1 Branch Transfer Request Flow

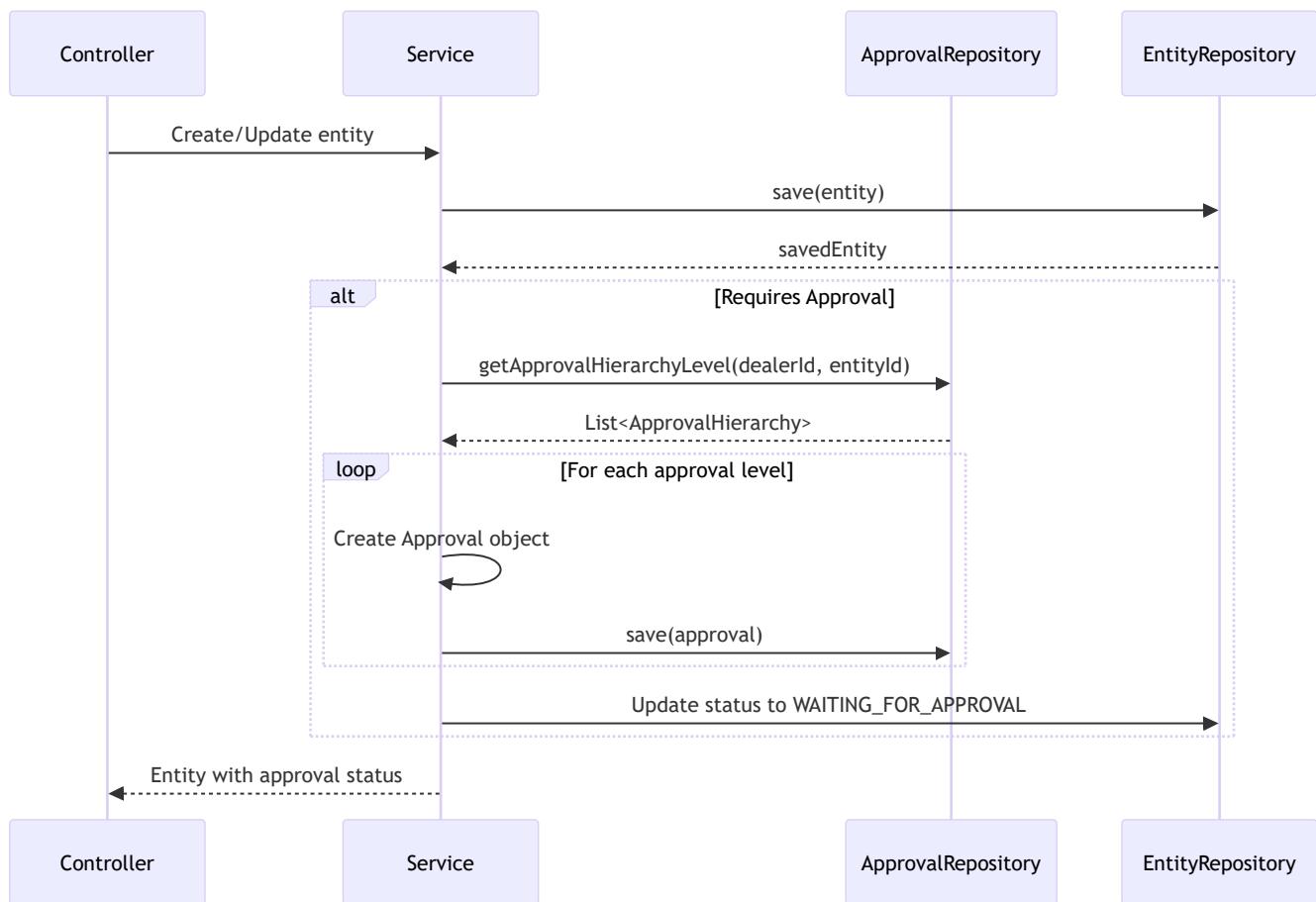


Common Patterns Across All Flows

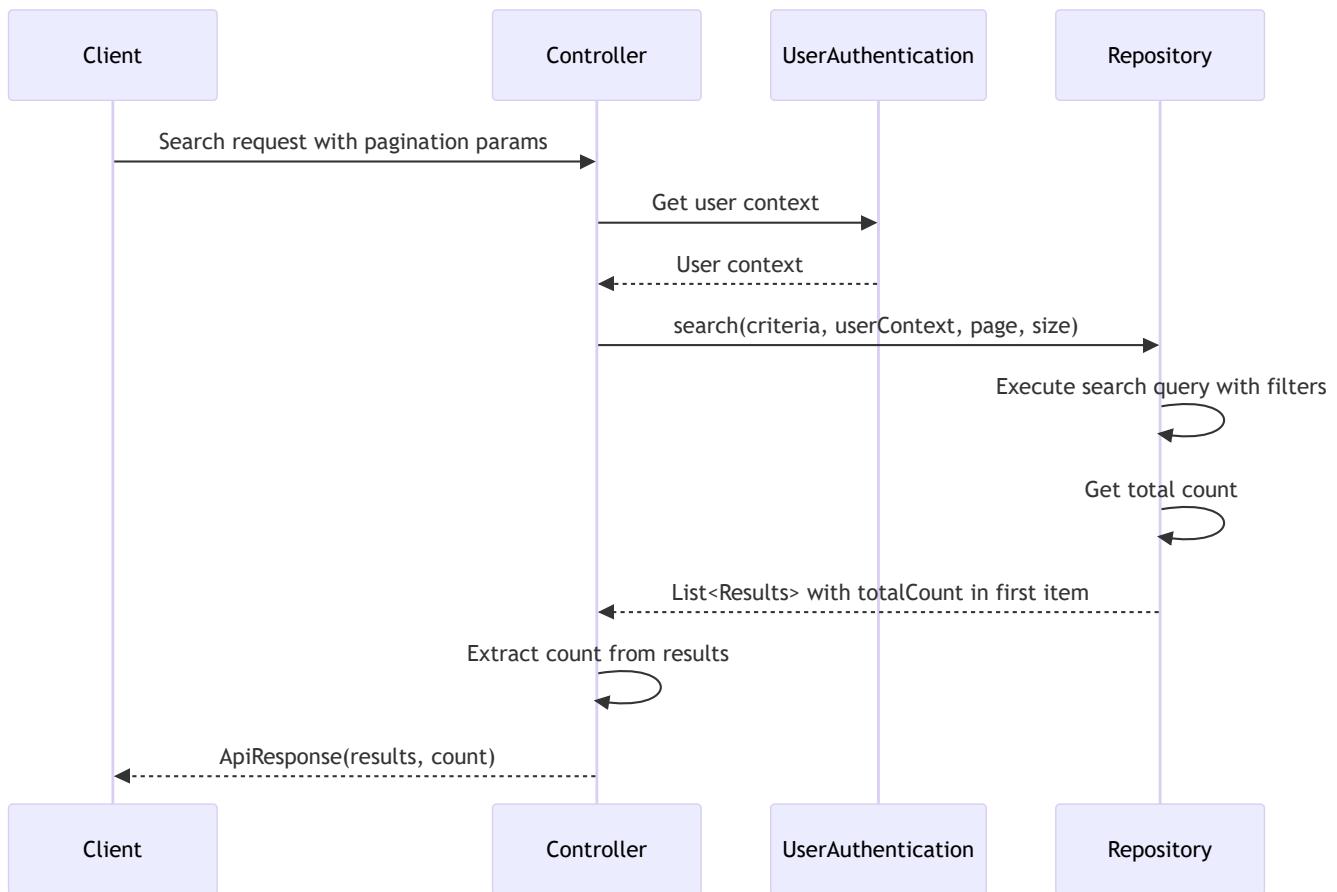
Authentication and Authorization Pattern



Approval Workflow Pattern



Search Pattern with Pagination



Notes

- User Authentication:** All flows use `UserAuthentication` service to get user context (`dealerId`, `branchId`, `loginId`, etc.)
- Approval Workflows:** Purchase Orders, Marketing Activity Proposals, Invoice Cancellations, and DC Cancellations follow similar approval patterns with hierarchy-based approvals.
- File Storage:** Enquiry attachments and Purchase Order documents are stored using `StorageService`.
- Inventory Management:** GRN, Delivery Challan, and Invoice operations update machine inventory status.
- Search Operations:** All search operations support pagination and user-based filtering for data security.
- Status Management:** Entities transition through various statuses (`DRAFT`, `WAITING_FOR_APPROVAL`, `APPROVED`, `CANCELLED`, etc.)
- Transaction Management:** Critical operations use `@Transactional` to ensure data consistency.