

CRM Module - Detailed Sequence Diagrams

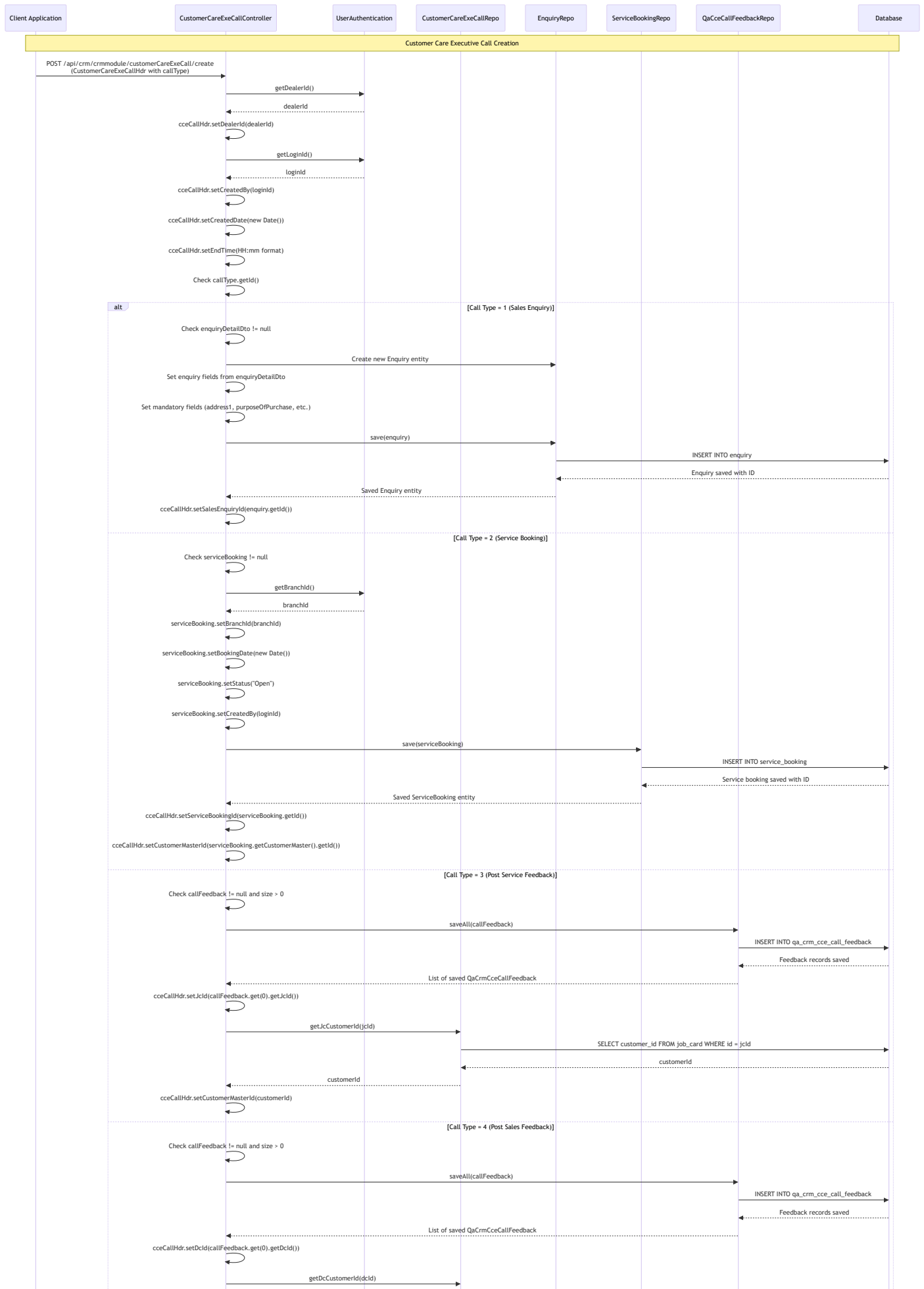
This document describes the **key technical flows** implemented in the `com.i4o.dms.kubota.crm` module:

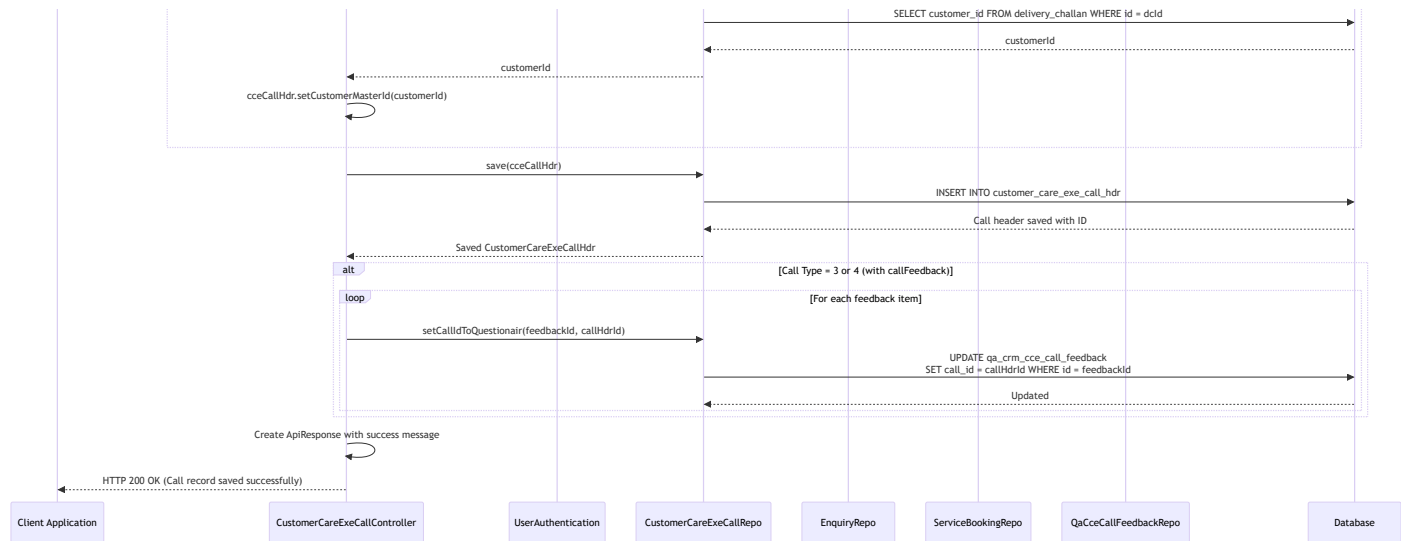
- **Customer Care Executive Call Creation** (Sales Enquiry, Service Booking, Post Service Feedback, Post Sales Feedback).
- **Direct Survey Submission** (Survey form submission with recordings and call attempts).
- **Toll-Free Call Management** (Toll-free call creation with complaint recordings).
- **Complaint Resolution** (Complaint search and resolution update).
- **Survey Summary Report Generation** (Survey reports and analytics).

All diagrams use Mermaid sequence diagrams and reflect the current implementation of the CRM module.

1. Customer Care Executive Call Creation Flow

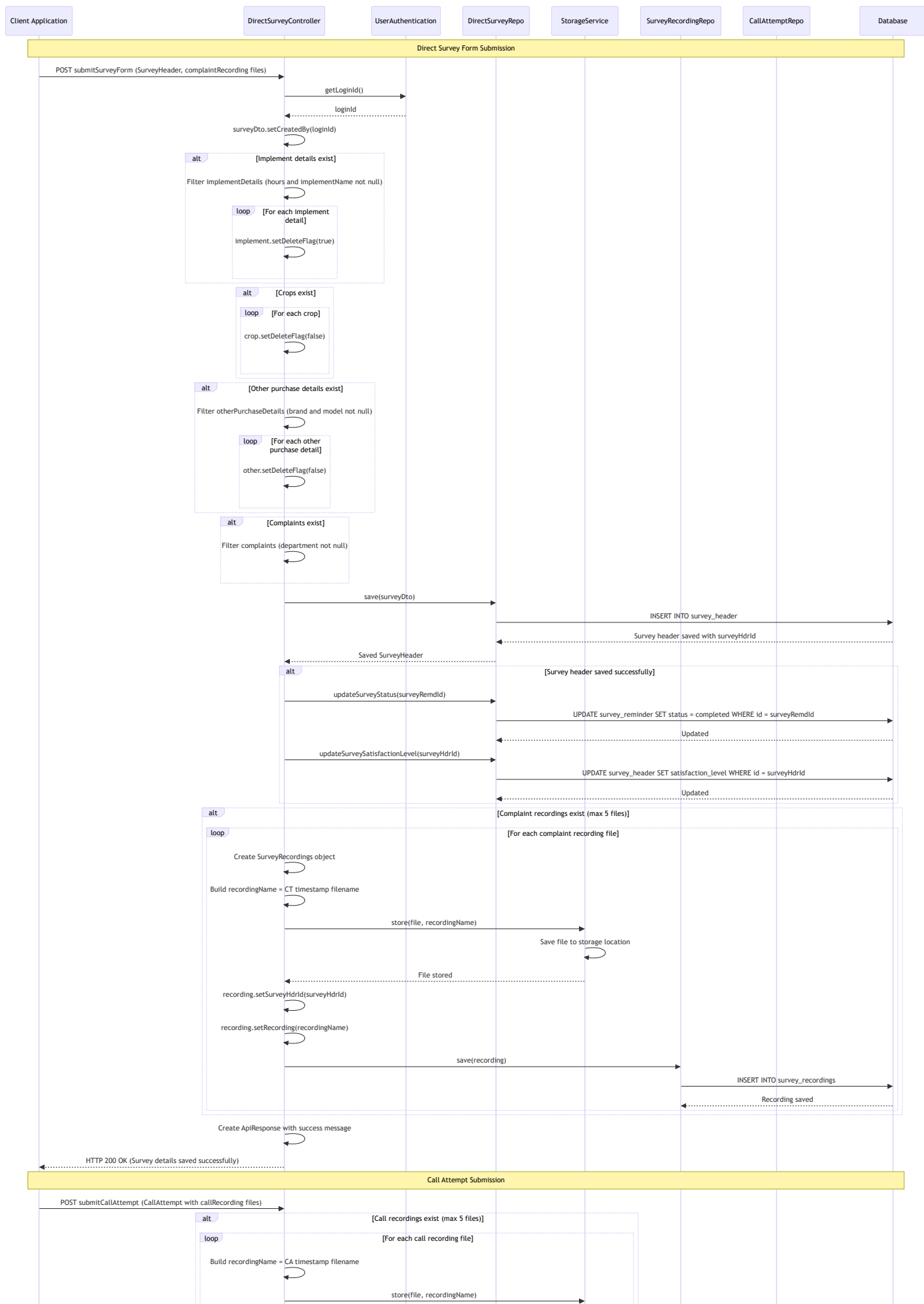
This flow shows how **Customer Care Executive (CCE) calls** are created with different call types: Sales Enquiry (Type 1), Service Booking (Type 2), Post Service Feedback (Type 3), and Post Sales Feedback (Type 4).

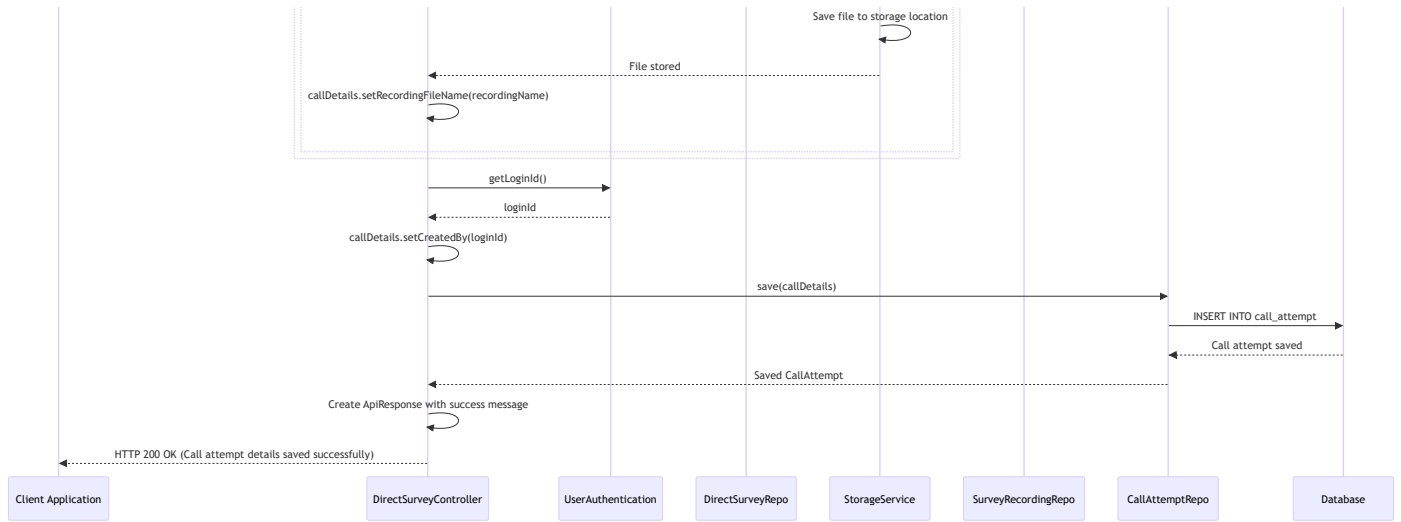




2. Direct Survey Submission Flow

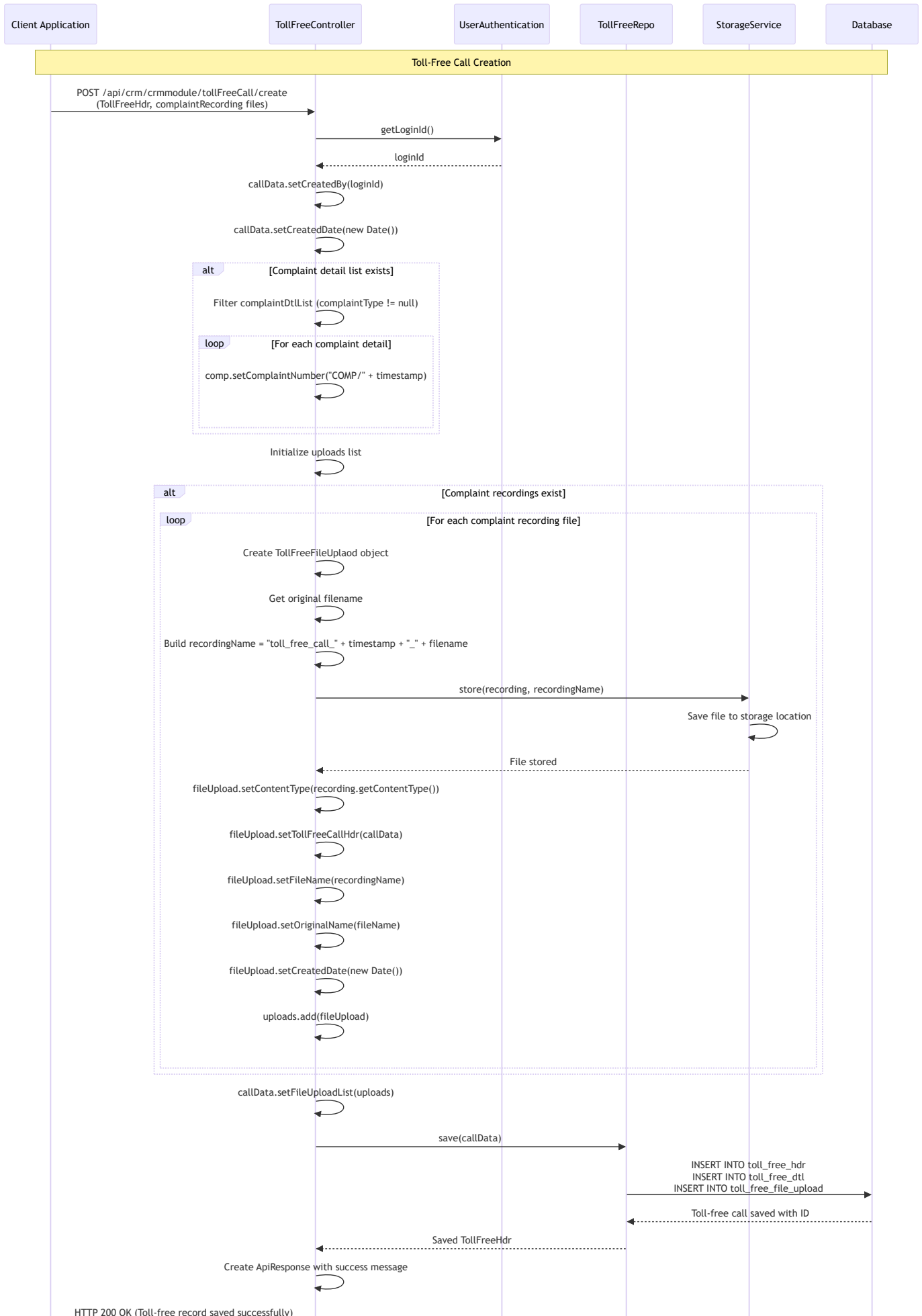
This flow shows how **direct surveys** are submitted with survey questions, answers, complaint recordings, and call attempt recordings.





3. Toll-Free Call Creation Flow

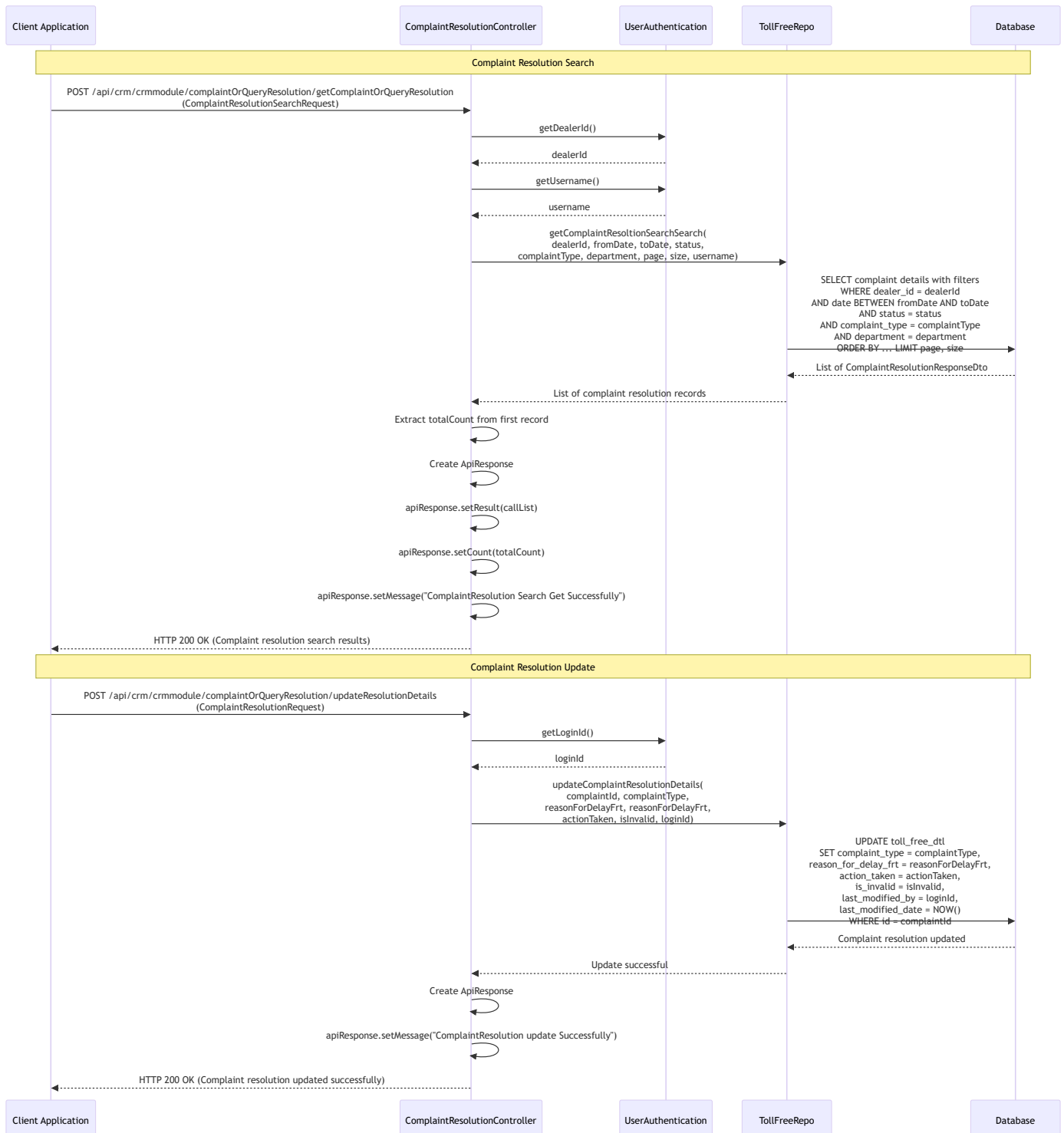
This flow shows how **toll-free calls** are created with complaint details and complaint recording files.





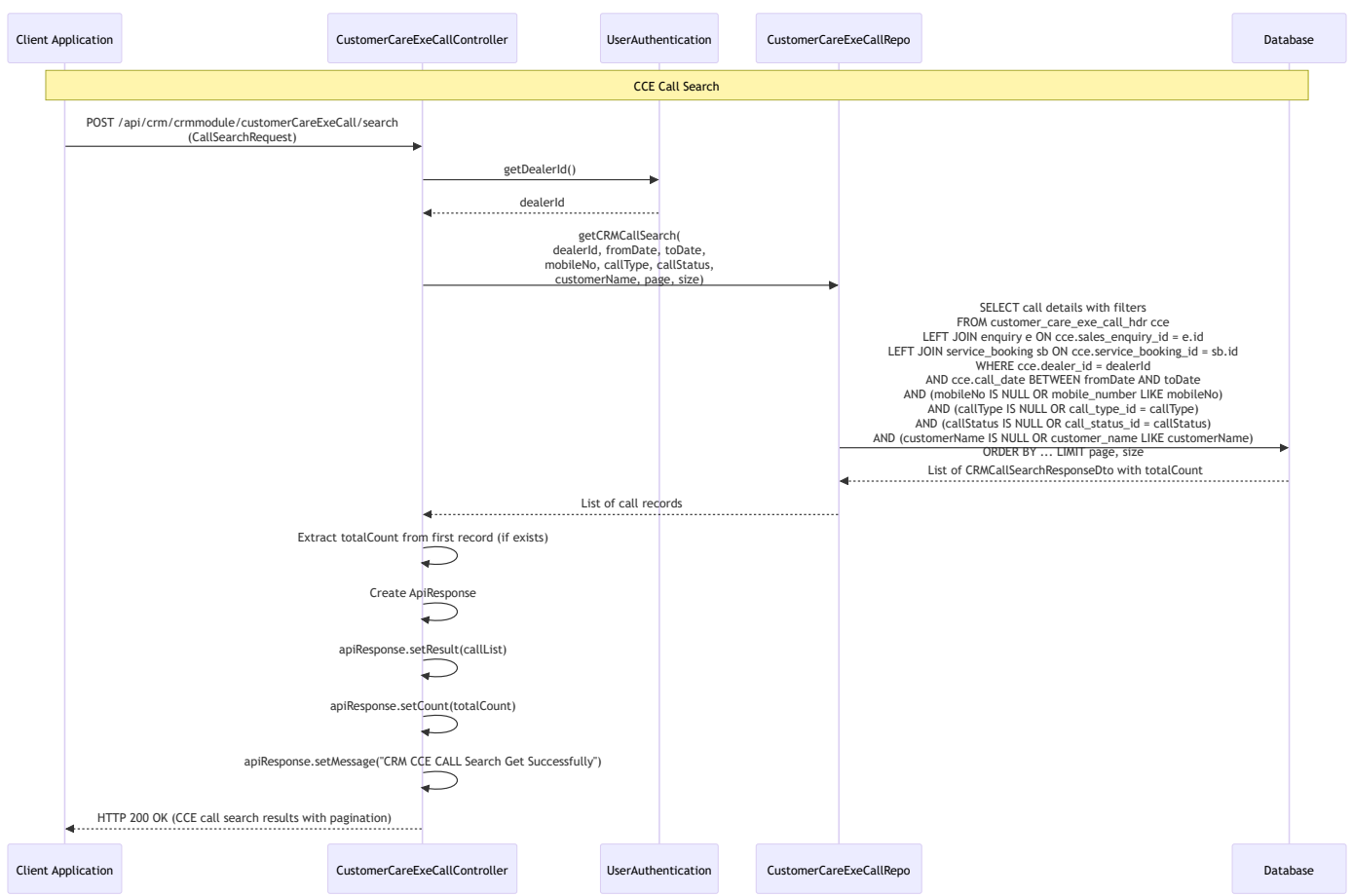
4. Complaint Resolution Search and Update Flow

This flow shows how **complaint resolution** searches are performed and how resolution details are updated.



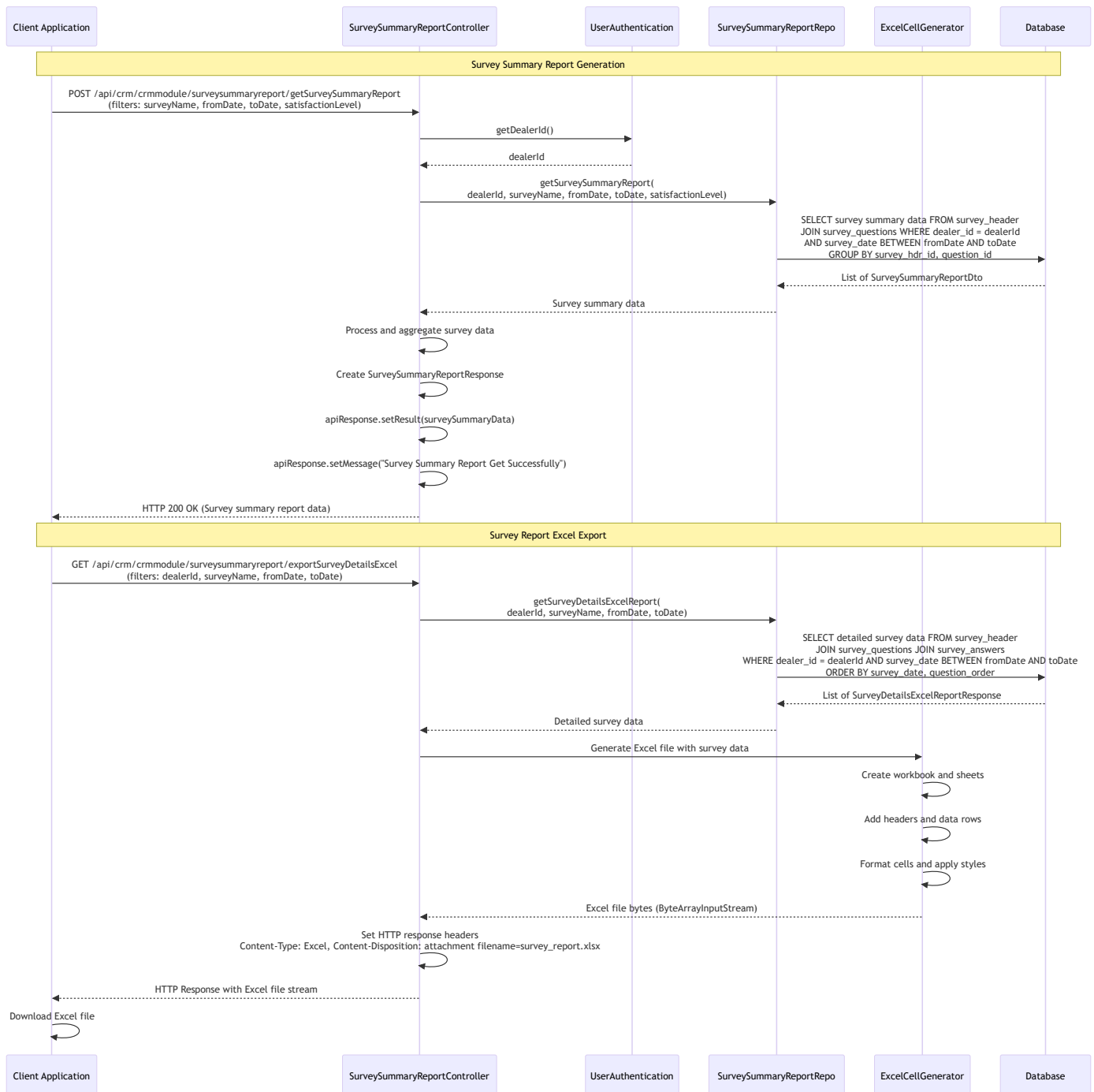
5. CCE Call Search Flow

This flow shows how **CCE calls** are searched with various filters including call type, call status, mobile number, customer name, and date range.



6. Survey Summary Report Generation Flow

This flow shows how **survey summary reports** are generated with various filters and exported to Excel format.



Summary

The **CRM module** provides comprehensive **Customer Relationship Management** functionality for the KUBOTA DMS:

- **Customer Care Executive Calls:**
 - Supports 4 call types: Sales Enquiry, Service Booking, Post Service Feedback, Post Sales Feedback

- Automatically creates related entities (Enquiry, ServiceBooking) based on call type
- Links call feedback questionnaires to job cards or delivery challans
- Provides search functionality with multiple filters (date range, call type, status, customer details)
- **Direct Surveys:**
 - Survey form submission with questions, answers, and sub-answers
 - Complaint recording file uploads (up to 5 files)
 - Call attempt tracking with recording file uploads
 - Survey status and satisfaction level management
 - Machine details, crops grown, and implement tracking
- **Toll-Free Calls:**
 - Toll-free call creation with complaint details
 - Complaint recording file uploads
 - Complaint number auto-generation
 - Integration with dealer and TSM (Territory Sales Manager) details
 - Call history tracking by customer and VIN
- **Complaint Resolution:**
 - Complaint search with filters (date range, status, complaint type, department)
 - Resolution details update (action taken, reason for delay, invalid flag)
 - Pagination support for large result sets
- **Reports and Analytics:**
 - Survey summary reports with satisfaction level filtering
 - Survey details Excel export
 - Customer satisfaction score reports
 - Monthly failure code summary reports
 - Toll-free call reports

The CRM module integrates with multiple other modules (Sales, Service, Warranty) to provide a unified customer interaction and feedback management system, enabling dealers and headquarters to track customer satisfaction, complaints, and service quality effectively.