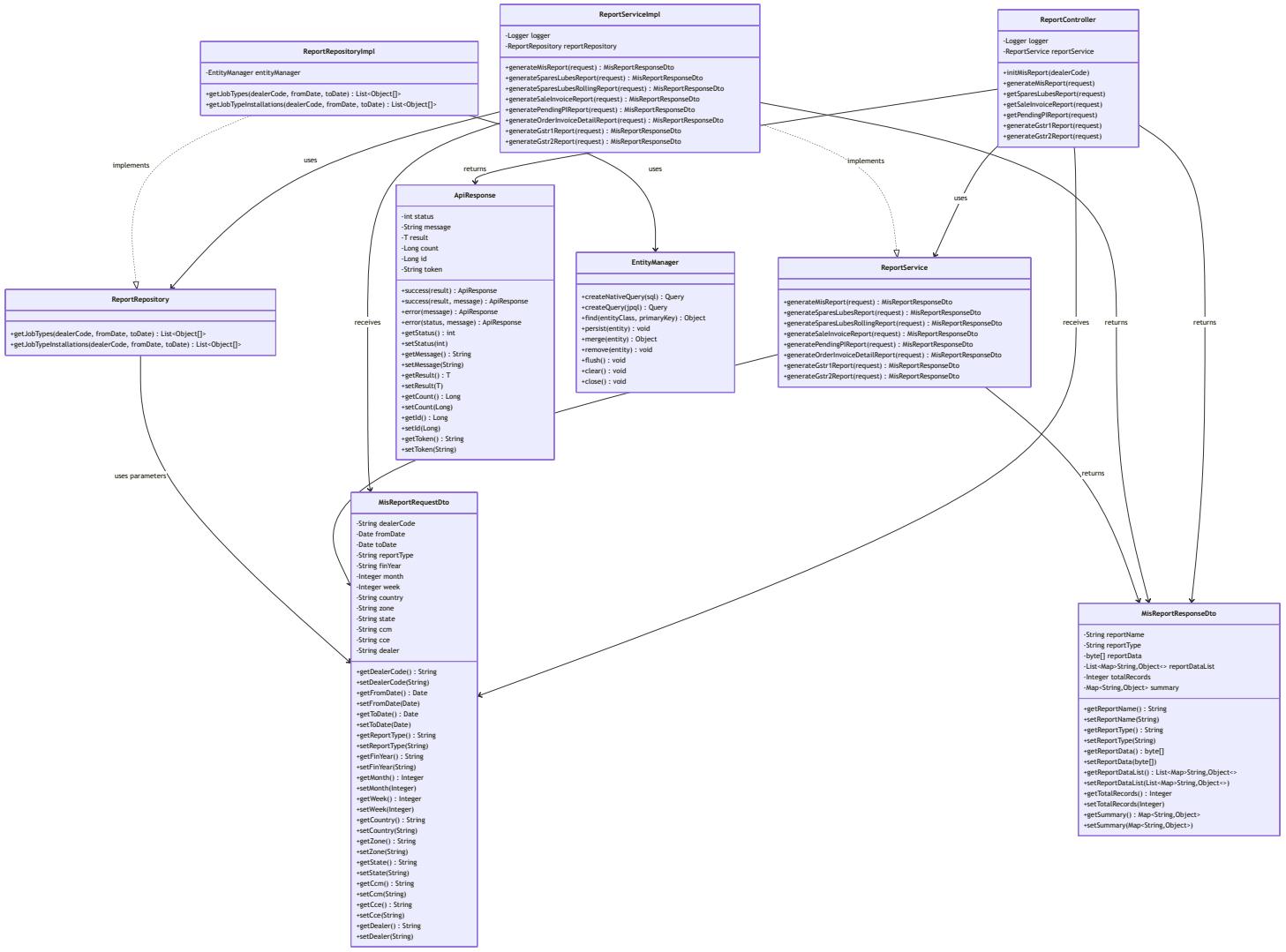


ITLDIS Report Module - UML Class Diagram



Report Module Overview

The **Report Module** is responsible for generating various business reports in the ITLDIS system. It provides a centralized reporting service that handles MIS reports, Spares & Lubes reports, Sale Invoice reports, GSTR reports, and other business intelligence reports.

Module Structure

Controller Layer

- **ReportController:** REST controller that handles HTTP requests for report generation
 - Endpoints for initializing and generating various report types
 - Supports MIS reports, Spares & Lubes reports, Sale Invoice reports, GSTR-1, GSTR-2, and Pending PI reports

Service Layer

- **ReportService:** Interface defining all report generation methods
- **ReportServiceImpl:** Implementation of report generation logic
 - Handles business logic for report generation
 - Coordinates with repository layer for data retrieval
 - Formats and structures report data

Repository Layer

- **ReportRepository:** Interface for custom query methods
- **ReportRepositoryImpl:** Implementation using native SQL queries
 - Executes stored procedures for report data
 - Uses EntityManager for database operations
 - Returns raw data arrays for processing

DTO Layer

- **MisReportRequestDto:** Request DTO containing report parameters
 - Includes dealer code, date ranges, filters (country, zone, state, CCM, CCE)
 - Supports various report types and time periods (financial year, month, week)
- **MisReportResponseDto:** Response DTO containing report results
 - Includes report name, type (PDF/XLS), report data (byte array or list)
 - Contains summary information and total record counts

Report Types Supported

1. **MIS Report:** Management Information System report with job types and installations
2. **Spares & Lubes Report:** Inventory and sales report for spare parts and lubricants
3. **Spares & Lubes Rolling Report:** Rolling period analysis report
4. **Sale Invoice Report:** Sales invoice details and summaries
5. **Pending PI Confirmation Report:** Pending Proforma Invoice confirmation status

6. **Order Invoice Detail Report:** Detailed order and invoice information
7. **GSTR-1 Report:** GST return report for outward supplies
8. **GSTR-2 Report:** GST return report for inward supplies

External Dependencies

- **ApiResponse:** Utility class for standardized API responses
- **EntityManager:** JPA EntityManager for database operations
- **Logger:** SLF4J logger for logging operations

Key Features

- Centralized report generation service
- Support for multiple report formats (PDF, XLS)
- Flexible filtering and date range selection
- Integration with stored procedures for complex queries
- Standardized request/response DTOs
- Error handling and logging