

Implementation Summary - Redis Caching & Product Expansion

Overview

This document summarizes the enhancements made to the e-commerce application, including Redis caching implementation and product catalog expansion.

Changes Made

1. Redis Caching Implementation

Added Files:

- `src/main/java/com/aerloki/personal/project/Personal/Project/config/RedisConfig.java`
 - Configures Redis connection and cache manager
 - Sets up JSON serialization for cached objects
 - Configures 10-minute TTL for cached data

Modified Files:

- `docker-compose.yml`
 - Added Redis 7-alpine container
 - Configured persistent volume for Redis data
 - Exposed port 6379
- `src/main/resources/application.properties`
 - Added Redis connection configuration
 - Configured cache TTL and behavior
- `src/main/java/com/aerloki/personal/project/Personal/Project/service/ProductService.java`
 - Added `@Cacheable` annotations to read methods
 - Added `@CacheEvict` annotations to write methods
 - Implemented smart cache keys for different query types

2. Product Catalog Expansion

Modified Files:

- `src/main/java/com/aerloki/personal/project/Personal/Project/config/DataInitializer.java`