Skenario Pengujian (Test Scenarios) — Wajib Dipenuhi

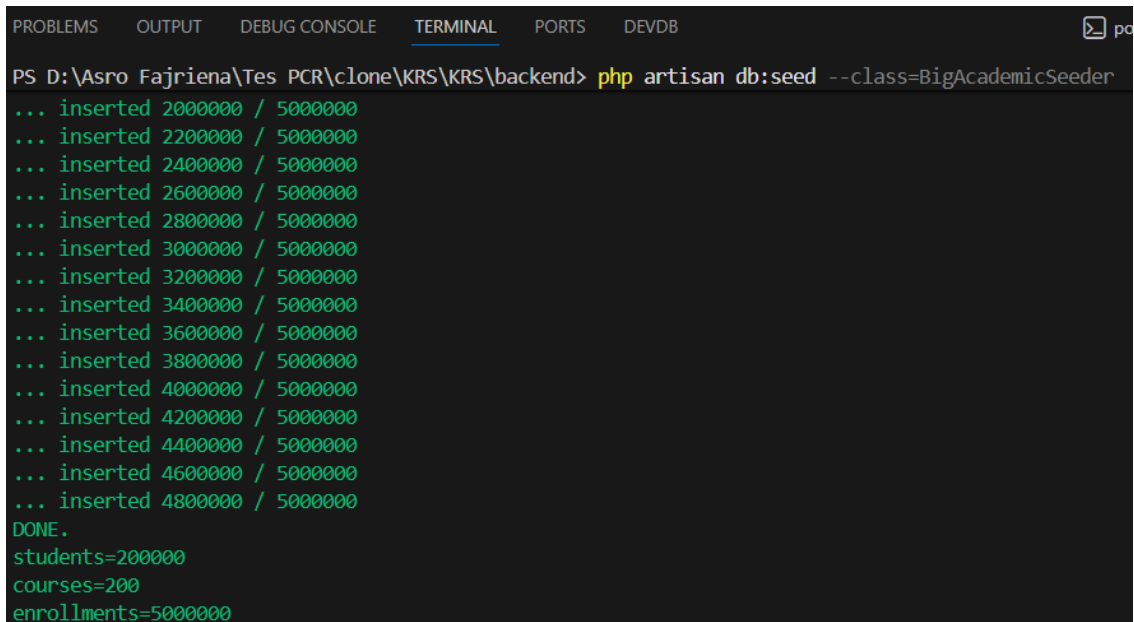1. TS-01: Setup & Seed 5 Juta Data

   Langkah:

   a. Clone repo.

   b. Jalankan migrasi DB.

   c. Jalankan seeder untuk menghasilkan 5.000.000 baris enrollments.

   d. Jalankan query count.

   Ekspektasi:

   • Seeder selesai tanpa error.

   • Jumlah data >= 5.000.000 (dibuktikan dengan COUNT(*)).

   • Aplikasi tetap bisa berjalan dan menampilkan data.

2. TS-02: Create (Insert ke 3 Tabel dalam 1 Transaksi)

   Langkah:

   a. Buka form Create KRS.

   b. Input data mahasiswa baru (nim, name, email).

   c. Input data mata kuliah baru (code, name, credits).

   d. Input data enrollment (academic_year, semester, status).

   e. Submit.

   Ekspektasi:

   • Data tersimpan ke students, courses, enrollments.

   • FK pada enrollments valid.

   • Jika terjadi error pada salah satu insert, seluruh transaksi rollback (tidak ada data setengah masuk).

   • UI menampilkan notifikasi sukses.

hasil

3. TS-03: Validasi Ketat (Frontend)

Langkah:

a. Isi NIM dengan huruf atau panjang < 8.

b. Isi course code tidak sesuai pola.

c. Kosongkan field wajib.

d. Submit.

Ekspektasi:

• Submit ditolak di frontend.
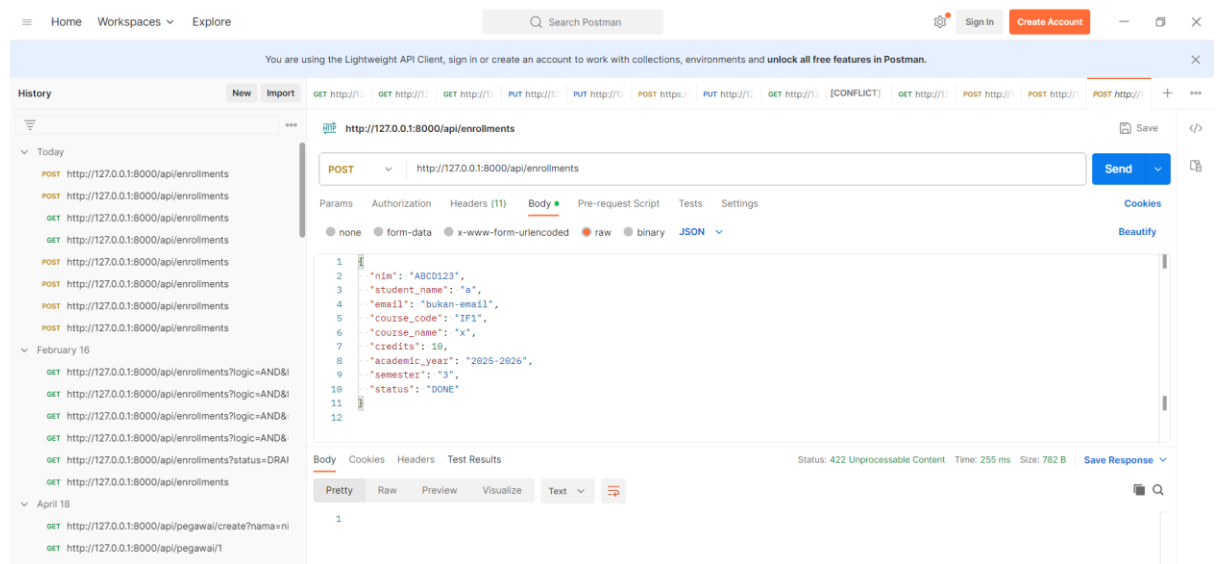
• Pesan error per field muncul dan jelas.

4. TS-04: Validasi Ketat (Backend)

Langkah:

a. Kirim request API Create dengan payload invalid (gunakan curl/postman).

b. Coba duplikasi nim atau course code.

c. Coba duplikasi enrollment unik (student, course, academic_year, semester).

Ekspektasi:

• API mengembalikan error 4xx dengan pesan jelas.
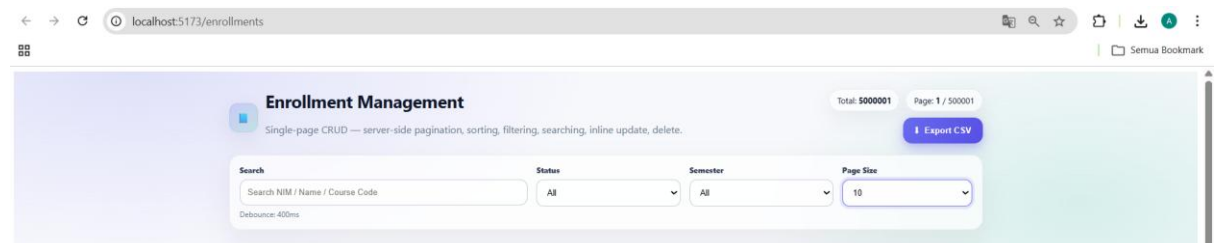
• Tidak ada data invalid masuk DB.

5. TS-05: Read - Tabel + Server-Side Pagination

Langkah:

a. Buka halaman tabel KRS.

b. Ubah page dan page size.

c. Pastikan request ke backend membawa parameter pagination.

Ekspektasi:

• Data berubah sesuai page.

• Backend hanya mengambil data sesuai page (bukan load semua).

• Total record ditampilkan (atau minimal total page).

Actions	Academic Year	NIM	Name	Course Code	Course Name	Semester	Status
Edit Delete	2025/2026	2155301021	asro fajriena	IF101	Pemrograman Dasar	GANJIL	SUBMITTED
Edit Delete	2021/2022	0000200000	Student 200000	IF025	Course IF025	GANJIL	REJECTED
Edit Delete	2021/2022	0000199999	Student 199999	IF025	Course IF025	GANJIL	APPROVED
Edit Delete	2021/2022	0000199998	Student 199998	IF025	Course IF025	GANJIL	SUBMITTED
Edit Delete	2021/2022	0000199997	Student 199997	IF025	Course IF025	GANJIL	DRAFT
Edit Delete	2021/2022	0000199996	Student 199996	IF025	Course IF025	GANJIL	REJECTED
Edit Delete	2021/2022	0000199995	Student 199995	IF025	Course IF025	GANJIL	APPROVED
Edit Delete	2021/2022	0000199994	Student 199994	IF025	Course IF025	GANJIL	SUBMITTED
Edit Delete	2021/2022	0000199993	Student 199993	IF025	Course IF025	GANJIL	DRAFT
Edit Delete	2021/2022	0000199992	Student 199992	IF025	Course IF025	GANJIL	REJECTED

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6. TS-06: Sorting di Setiap Header Kolom (Server-Side)

Langkah:

a. Klik header kolom (mis. NIM) untuk sort ASC.

b. Klik lagi untuk sort DESC.

c. Coba kolom lain.

Ekspektasi:

• Setiap kolom bisa di-sort.

• Query sorting dilakukan di backend.

• UI menunjukkan arah sort.

Enrollments

Klik header untuk sort. Edit dilakukan via modal.

Actions	Academic Year	NIM	Name	Course Code	Course Name	Semester	Status
Edit Delete	2021/2022	0000000001	Student 1	IF001	Course IF001	GANJIL	DRAFT
Edit Delete	2021/2022	0000000002	Student 2	IF001	Course IF001	GANJIL	SUBMITTED
Edit Delete	2021/2022	0000000003	Student 3	IF001	Course IF001	GANJIL	APPROVED
Edit Delete	2021/2022	0000000004	Student 4	IF001	Course IF001	GANJIL	REJECTED
Edit Delete	2021/2022	0000000005	Student 5	IF001	Course IF001	GANJIL	DRAFT
Edit Delete	2021/2022	0000000006	Student 6	IF001	Course IF001	GANJIL	SUBMITTED
Edit Delete	2021/2022	0000000007	Student 7	IF001	Course IF001	GANJIL	APPROVED
Edit Delete	2021/2022	0000000008	Student 8	IF001	Course IF001	GANJIL	REJECTED
Edit Delete	2021/2022	0000000009	Student 9	IF001	Course IF001	GANJIL	DRAFT
Edit Delete	2021/2022	0000000010	Student 10	IF001	Course IF001	GANJIL	SUBMITTED

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7. TS-07: Quick Filter (Minimal 2)

Langkah:

   a. Aktifkan quick filter Status.

   b. Aktifkan quick filter Semester.

   c. Kombinasikan keduanya.

Ekspektasi:

• Tabel hanya menampilkan data yang sesuai filter.

• Filter dieksekusi server-side.

8. TS-08: Live Searching (Minimal 3 Kolom)

Langkah:

a. Ketik NIM (parsial) di search box.

b. Ketik nama mahasiswa (parsial).

c. Ketik kode MK (parsial).

Ekspektasi:

• Hasil berubah real-time (dengan debounce).

• Pencarian dieksekusi server-side.

• Minimal 3 kolom utama tercakup.

9. TS-09: Advanced Filter Semua Kolom (Multi Filter)

Langkah:

a. Buka panel advanced filter.

b. Set filter untuk beberapa kolom sekaligus (mis. academic_year + status + course_code).

c. Terapkan.

Ekspektasi:

• Semua kondisi filter diterapkan.

• Query di backend benar (AND default).
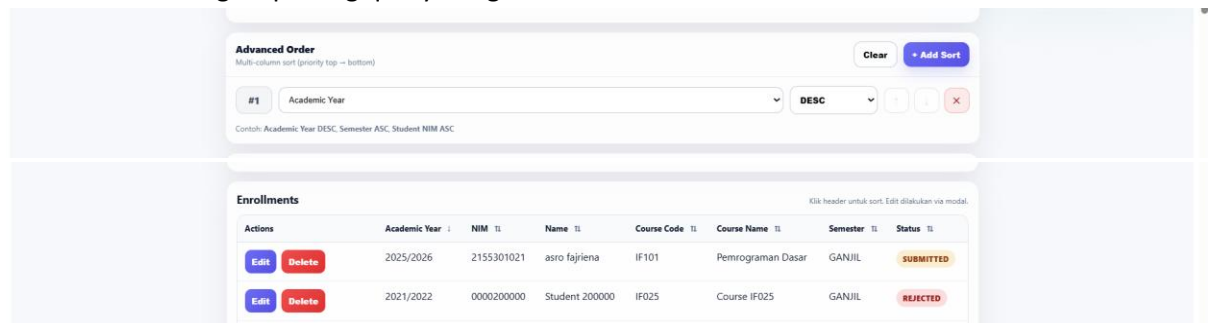
• Dapat reset/clear filter.

10. TS-10: Advanced Query (AND/OR)

Langkah:

a.   Buat filter group A dan B.

b.   Terapkan kombinasi AND.

c.   Terapkan kombinasi OR.

Ekspektasi:

• Hasil sesuai logika AND/OR yang didokumentasikan.

• Backend menangani parsing query dengan aman.

11. TS-11: Update

Langkah:

a.   Pilih salah satu enrollment.

b.   Ubah status atau semester/tahun.

c.   Simpan.

Ekspektasi:

• Data berubah di DB.

• Validasi tetap berlaku.

• UI memperbarui baris data.

Before:

After:

12. TS-12: Delete

Langkah:

a.   Hapus salah satu enrollment.

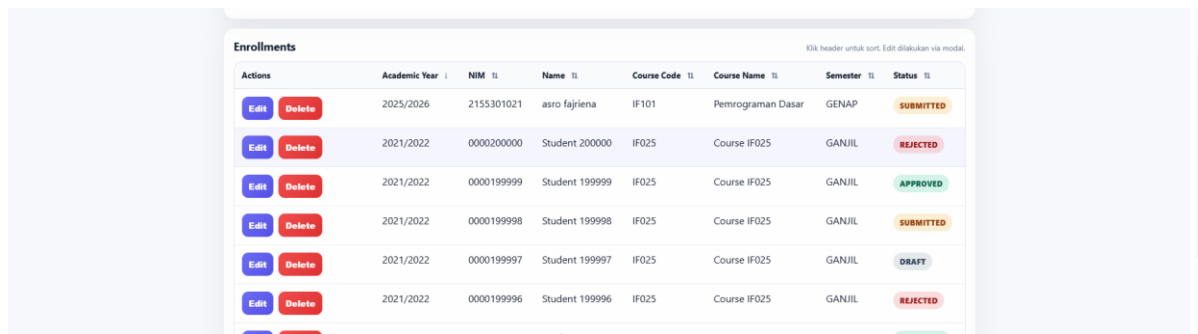b.   Refresh data.

Ekspektasi:

• Enrollment tidak tampil lagi (atau soft delete, sesuai dokumentasi).

• Tidak merusak data student/course (kecuali kandidat memilih cascading dengan alasan
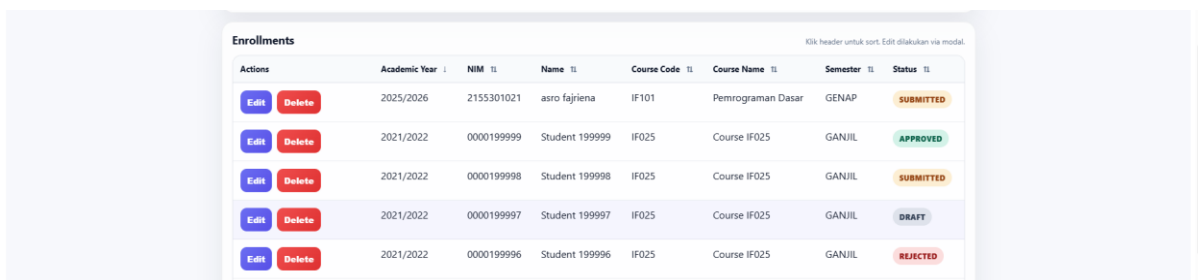
jelas).

Before:

After:

13. TS-13: Export 5 Juta Data (CSV/Excel)

Langkah:

a. Tanpa filter, klik Export.

b. Tunggu file siap/terunduh.

c. Verifikasi file berisi seluruh data (jumlah baris besar).

```
0000006955,"Student 6955",student6955@example.com,IF001,"Course IF001",2,GANJIL,2021/2022,APPROVED
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