

Laporan Pengembangan Sistem Informasi
Drainase Pintar untuk Mitigasi Banjir di Ketintang



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Pengujian PHP Unit (Whitebox Testing)

1. Register

```
PASS Tests\Feature\RegisterTest
✓ user can register with valid data
✓ registration fails when required fields are missing
✓ registration fails when email is not unique
✓ registration fails when role is invalid

Tests: 4 passed (12 assertions)
Duration: 0.90s
```

2. Login

```
PASS Tests\Feature>LoginTest
✓ user can login with valid credentials
✓ login fails with invalid password
✓ login fails with unregistered email
✓ logged in user can logout

Tests: 4 passed (9 assertions)
Duration: 1.31s
```

3. Membuat Laporan (Role Masyarakat)

```
PASS Tests\Feature\ReportTest
✓ authenticated user can create a report
✓ report creation fails when required fields are missing
✓ newly created report has default pending status
✓ user cannot view other users report

Tests: 4 passed (8 assertions)
Duration: 0.63s
```

4. Mengubah Status Laporan (Role Pemerintah)

```
PASS Tests\Feature\ReportStatusTest
✓ government user can update report status

Tests: 1 passed (2 assertions)
Duration: 0.66s
```

5. Fitur Pantau Banjir (Persebaran Titik Lokasi)

- Pengguna dengan role masyarakat hanya dapat melihat laporan banjir yang telah selesai diproses oleh pemerintah.

```
PASS Tests\Feature\FloodMonitoringMasyarakatTest
✓ masyarakat can only see completed flood reports on map

Tests: 1 passed (2 assertions)
Duration: 0.86s
```

- Pengguna dengan role pemerintah dapat melihat seluruh laporan banjir, tanpa dibatasi status.

```
PASS Tests\Feature\FloodMonitoringPemerintahTest
✓ government can see all flood report locations on map

Tests: 1 passed (2 assertions)
Duration: 1.32s
```

- Data marker yang ditampilkan pada peta sesuai dengan hak akses masing-masing role.
6. Membuat obrolan chat (role Masyarakat) dan membalas pesan dari Masyarakat (role pemerintah)

```
PASS Tests\Feature\ConversationTest
✓ masyarakat can send message to government
✓ government can reply message from masyarakat

Tests: 2 passed (3 assertions)
Duration: 0.48s
```