

SHOHOJ SHOP CLOTHING LTD.

মেইনটেন্যান্স ডেভেলপার ওরিয়েন্টেশন

PHP / SQL Server Team-এর জন্য Python/Django Quick Map

Project Reference: HRPAY-BMD-20260911-01

UAT Version: v0.39.4-dev Consolidated

Company Address: 23/8 Khilji Road, Block B, Mohammadpur, Dhaka 1207

১. লক্ষ্য

এই সংক্ষিপ্ত guide-এর উদ্দেশ্য Python/Django unfamiliar maintenance developer-দের codebase দ্রুত বুঝতে সাহায্য করা। System intentionally simple, conventional Django pattern অনুসরণ করে।

২. Folder Map

Path	Purpose
backend/config/	Global settings, URLs, WSGI/ASGI
backend/apps/accounts/	Users, roles, login security
backend/apps/organization/	Company/branch/department/designation/shift
backend/apps/employees/	Employee master
backend/apps/attendance/	Attendance, devices, punch ingest
backend/apps/leave/	Leave policy/balance/request
backend/apps/workflow/	Applications, approvals, notifications
backend/apps/payroll/	Salary, OT, bonus, deduction, payroll
backend/apps/loans/	Loan/advance/recovery ledger
backend/apps/exits/	Clearance/final settlement
backend/apps/audit/	Audit trail
backend/apps/reports/	Payslip and exports
backend/templates/	HTML UI

৩. PHP Comparison

Django	PHP/Laravel-style mental model
URLconf	routes/web.php
View function	Controller method
Model	Eloquent/ORM model
Form	Request validation + form model
Service	Service class/business logic
Template	Blade/template
Management command	Artisan/CLI command
Migration	Schema migration

৪. Database Rules

- PostgreSQL is the current approved database.
- Schema change: models.py → reviewed migration → drift check → fresh UAT migrate.
UAT/production setup script ad-hoc makemigrations চালাবে না।
- Do not edit payroll financial rows manually in production.
- Use database backup before migrations or bulk imports.
- Use pgAdmin for inspection; do not use it as a replacement for business workflow.

৫. Safe Change Workflow

1. Create a branch/copy of source.
2. Change one module at a time.

3. Run syntax/check and migration drift check; reviewed source-এর migration snapshot 00-FREEZE-MIGRATIONS script দিয়ে freeze করুন।
4. Run automated tests.
5. Use sample UAT data.
6. Record change in CHANGELOG.
7. Backup staging DB.
8. Deploy to staging/local UAT.
9. Get functional approval before production.

৬. Useful Commands

`python manage.py check`

`python manage.py makemigrations --check --dry-run` # drift check only after frozen migrations exist

`python manage.py migrate --check` # no unapplied migration allowed

`python manage.py test tests`

`python manage.py first_run_status`

`python manage.py verify_runtime`

`python manage.py backup_database`

৭. Trial Caveats

- P0/P1/P2 source-level static verification ও Python compile cross-check হয়েছে; frozen migrations, Django/PostgreSQL regression, backup/restore এবং physical FO-M1 proof Local UAT server-এ নিতে হবে।
- FO-M1 CSV/USB raw punch ingest এবং daily attendance reconciliation source-level-এ আছে; actual machine protocol/direct connector এবং end-to-end punch proof physical FO-M1 দিয়ে verify করতে হবে।
- UAT demo accounts must never be used in production.