# Codex HRMS – Developer Cheat Sheet

## Quick Safety Rules

• Only create/modify source files (no builds/tests in PRs).

• Respect .gitignore (no bin/obj/.vs or binaries).

• Keep EF package versions aligned (e.g., 8.0.6 everywhere).

## .gitignore Essentials

bin/  
obj/  
.vs/  
[Bb]uild/  
[Ll]ogs/  
\*.log  
\*.dll  
\*.exe  
\*.pdb  
\*.mdf  
\*.ldf  
node\_modules/  
dist/  
publish/  
wwwroot/\*.map

## NuGet & Restore

Restore solution packages:

dotnet restore HRMS.sln

Clear local NuGet caches (use after package/version changes):

dotnet nuget locals all --clear

## EF Core Packages

Install in HRMS.DataAccess (8.0.6):

Install-Package Microsoft.EntityFrameworkCore -Project HRMS.DataAccess -Version 8.0.6

Install-Package Microsoft.EntityFrameworkCore.SqlServer -Project HRMS.DataAccess -Version 8.0.6

Install-Package Microsoft.EntityFrameworkCore.Design -Project HRMS.DataAccess -Version 8.0.6

Install-Package Microsoft.EntityFrameworkCore.Tools -Project HRMS.DataAccess -Version 8.0.6

Install in HRMS.API (8.0.6):

Install-Package Microsoft.EntityFrameworkCore.SqlServer -Project HRMS.API -Version 8.0.6

Install-Package Microsoft.EntityFrameworkCore.Design -Project HRMS.API -Version 8.0.6

Install-Package Microsoft.EntityFrameworkCore.Tools -Project HRMS.API -Version 8.0.6

## EF Core Commands

Add migration (from solution root, Default project=HRMS.DataAccess):

Add-Migration InitialCreate -StartupProject HRMS.API -Project HRMS.DataAccess -Context AppDbContext

Apply migration:

Update-Database -StartupProject HRMS.API -Project HRMS.DataAccess -Context AppDbContext

If applying to a specific connection:

Update-Database -StartupProject HRMS.API -Project HRMS.DataAccess -Context AppDbContext -Connection "Server=(localdb)\MSSQLLocalDB;Database=HRMSDb;Trusted\_Connection=True;TrustServerCertificate=True"

## Runtime Tip (Dev)

Auto-apply migrations in HRMS.API/Program.cs:

using (var scope = app.Services.CreateScope())  
{  
 var ctx = scope.ServiceProvider.GetRequiredService<AppDbContext>();  
 ctx.Database.Migrate();  
}

## PR One-Liners (PR #0 → #7)

• PR #0: Add .gitignore (use the full rules).

• PR #1: Scaffold solution (6 projects + references).

• PR #2: Add Entities + DTOs (Department, Employee, LeaveBalance).

• PR #3: Add DbContext, repositories, EF configs, design-time factory, migration; restore & clear NuGet.

• PR #4: Add Services + validation; register DI; smoke tests.

• PR #5: Add API Controllers + Swagger + RFC 7807; ensure EF packages in API; restore & clear NuGet.

• PR #6: Scaffold MVC UI (Home + Layout + ViewStart + ViewImports).

• PR #7: Add MVC CRUD (Employees + Departments) using HttpClient to call API.