**Project Title**

Public Property Management Portal for Local Self-Government Units in Bosnia and Herzegovina

**Description**

The Property Management Portal is an easy-to-use tool designed for local government units (LGUs) to consolidate information about the income-generating properties they own. This initiative aims to enhance efficiency and transparency in property management and development planning. The portal focused on two types of property: land (including agricultural and construction) and buildings (such as business, residential, and special-purpose structures).

In addition to property registration, the portal provides several useful features, including:

1. Monitoring the status of the property, which involves tracking its usage and the conditions under which it is utilized.

2. Tracking property values, which includes managing bookkeeping, estimating market values, and projecting maintenance costs.

**Getting Started**

**Dependencies**

**System Requirements**

* OS: Windows 10 or later
* .NET SDK: .NET 7.0 SDK
* Database: PostgreSQL 13+
* IDE: Visual Studio 2022+
* Web Server: Kestrel / IIS

**Core Packages**

* Microsoft.EntityFrameworkCore.\* – ORM
* Npgsql.EntityFrameworkCore.PostgreSQL – PostgreSQL provider
* Azure.Storage.Blobs – File storage
* ClosedXML – Excel exports
* FluentValidation.AspNetCore – Form validation
* HtmlSanitizer – Secure HTML rendering
* MailKit, NETCore.MailKit – Email support
* Swashbuckle.AspNetCore – API documentation
* Serilog – Structured logging with PostgreSQL sink
* Microsoft.Identity.\* – Azure AD authentication

**Installing**

**Step 1: Clone the Repository**

git clone https://yourrepo.url/PropertyManagementPortal.git

cd PropertyManagementPortal

**Step 2: Configuration**

Create a file named appsettings.Development.json in the root and add the following:

{

"Logging": {

"LogLevel": {

"Default": "Information",

"Microsoft.AspNetCore": "Warning"

}

},

"AllowedHosts": "\*",

"ConnectionStrings": {

"DevConnection": "Server=localhost;Database=property\_management\_portal\_db;Port=5432;User Id=postgres;Password=your-password;",

"AzureBlobStorage": "your-azure-blob-connection-string"

},

"EncryptionKey": "YourSecretPassword",

"FileContainerName": "test",

"AppIdentitySettings": {

"ApplicationStartDate": "10.1.2024",

"TestSite": "N",

"AppLink": "https://localhost:5001",

"DevEmails": "your-dev-email@domain.com",

"Utils": "GUID-HERE",

"DefaultLanguageId": "1"

},

"MailSettings": {

"EmailId": "do-not-reply@example.com",

"Name": "do-not-reply",

"Password": "your-email-password",

"Host": "smtp.office365.com",

"Port": 587,

"UseSSL": true

},

"AzureAd": {

"Instance": "https://login.microsoftonline.com/",

"Domain": "yourdomain.onmicrosoft.com",

"TenantId": "your-tenant-id",

"ClientId": "your-client-id",

"ClientSecret": "your-client-secret",

"Authority": "https://login.microsoftonline.com/your-tenant-id",

"CallbackPath": "/signin-oidc"

},

"Serilog": {

"Using": [ "Serilog.Sinks.MSSqlServer" ],

"MinimumLevel": {

"Default": "Error",

"Override": {

"Microsoft": "Warning",

"System": "Warning"

}

},

"WriteTo": [

{

"Name": "PostgreSQL",

"Args": {

"connectionString": "Server=localhost;Database=lgaa-pmp;Port=5432;User Id=postgres;Password=your-password;",

"sinkOptionsSection": {

"tableName": "Serilogs",

"schemaName": "dbo",

"autoCreateSqlTable": true

},

"restrictedToMinimumLevel": "Error"

}

}

],

"Enrich": [

"FromLogContext",

"WithMachineName",

"WithProcessId",

"WithThreadId"

],

"Properties": {

"ApplicationName": "PropertyManagementPortal"

}

}

}

**Step 3: Restore Dependencies**

dotnet restore

**Step 4: Apply EF Core Migrations**

dotnet ef database update

**Executing program**

To launch the portal locally:

dotnet run

Once running, access the site via:  
<https://localhost:5001>

**Help**

**Common Issues**

* PostgreSQL Connection Error: Ensure the server is running and connection details are valid.
* Blob Storage Errors: Check account name, key, and container permissions.
* Email Delivery Fails: Validate SMTP credentials and firewall access to port 587.
* Azure AD Login Failure: Ensure your Azure configuration (ClientId, Secret, TenantId) is correct.

**Debugging Tips**

* Use dotnet watch run to auto-reload during development.
* Monitor Serilog entries in the Serilogs table within your PostgreSQL DB.

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**Version History**

* 0.2
  + Various bug fixes and optimizations
  + Added property report exports and improved logging
  + Improved input validation on asset registration
* **0.1**
  + Initial release
  + Core modules: property registration, monitoring, and value tracking

**License**

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