

CRUDWebApp

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Chapter 1

CRUDWebApp

1.1 Overview

The **CRUDWebApp** is composed of 2 projects:

- **CRUDService**: based on ASP.NET Core which serves as backend application
- **FrontEnd**: based on Blazor WebAssembly (WASM) which serves as SPA frontend application.

For detailed information open [refman.pdf](#).

1.2 Caution

For the whole app to work properly as is, you need **Postgres Server** running on **localhost** on port **5432**.

If your configuration **differs**, edit connection specifics in **appsettings.json** in **root directory** of **CRUDService** to match yours.

1.3 Used Libraries

1.3.1 Backend

- Microsoft.EntityFrameworkCore
- Microsoft.EntityFrameworkCore.Metadata.Builders
- Microsoft.AspNetCore.Mvc
- Microsoft.AspNetCore.Authorization
- Microsoft.EntityFrameworkCore
- System.ComponentModel.DataAnnotations
- System.Security.Cryptography

- Microsoft.EntityFrameworkCore.Migrations
- Npgsql.EntityFrameworkCore.PostgreSQL.Metadata
- Microsoft.EntityFrameworkCore.Storage.ValueConversion
- Microsoft.EntityFrameworkCore.Infrastructure
- Microsoft.IdentityModel.Tokens
- System.IdentityModel.Tokens.Jwt
- System.Security.Claims

1.3.2 Frontend

- System.ComponentModel.DataAnnotations
- System.Text.Json
- System.Net.Http.Headers
- System.Net.Http.Json
- Microsoft.AspNetCore.Components
- System.IdentityModel.Tokens.Jwt
- System.Security.Claims
- Blazored.LocalStorage
- Microsoft.AspNetCore.Components.Forms
- Microsoft.AspNetCore.Components.Routing
- Microsoft.AspNetCore.Components.Web
- Microsoft.AspNetCore.Components.Web.Virtualization
- Microsoft.AspNetCore.Components.WebAssembly.Http
- Microsoft.JSInterop
- Microsoft.AspNetCore.Components.WebAssembly.Hosting

1.4 How to compile

- Download code from github: <https://github.com/sigmor10/CRUDWebApp>
- Open Console / PowerShell in [CRUDService](#) project's root directory
- Run the "dotnet ef database update" command to run migrations, or you can load sql dump
- Open the main folder and run .sln file in Visual Studio 2022
- Run both projects [CRUDService](#) and [FrontEnd](#) in any order
 - Note 1: If [FrontEnd](#) is run before [CRUDService](#), requests to backend will fail.
 - Note 2: On first run of [CRUDService](#) you will be prompted with whether to trust ASP.NET self signed Certificate. Agree to it so that the app will run with REST API communication over https

Chapter 2

Namespace Index

2.1 Namespace List

Here is a list of all documented namespaces with brief descriptions:

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3.1 Class Hierarchy

This inheritance list is sorted roughly, but not completely, alphabetically:

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CRUDService.DTOs.DetailedContactDTO	51
CRUDService.DTOs.CreateContactRequest	48
CRUDService.DTOs.GetContactResponse	52
CRUDService.DTOs.UpdateContactRequest	71
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FrontEnd.Models.Category	20
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Chapter 4

Class Index

4.1 Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

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CRUDService.Migrations.AppDbContextModelSnapshot	16
CRUDService.Controllers.AuthController	
Controller class which handles http(s) communication, through the use of REST API. It only handles requests/responses, actual operations are relayed to service layer	16
FrontEnd.Services.AuthService	
Authentication and jwt token handling class	18
CRUDService.DTOs.BaseContactDTO	
Base DTO holds every field that is used in every other contact DTO class Annotated for early validation and early rejection of invalid requests	19
CRUDService.Models.Category	
Entity class for Dictionary table Categories	20
FrontEnd.Models.Category	
Entity class for Dictionary entity Category For database table constraint details see Contracts/↔ CategoryConfiguration.cs file Annotated for early validation and early rejection of invalid requests	20
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Controller class which handles http(s) communication, through the use of REST API. It only handles requests/responses, actual operations are relayed to service layer	26
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Implements repository logic related to access to the database	37

CRUDService.Service.ContactService	
Implements bussiness logic and mediates between contrler and repository layers	42
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CRUDService.Migrations.InitialCreate	63
CRUDService.Repository.IUserRepository	
Interface possesses collection of methods for handling data stored in the database	64
CRUDService.Service.IUserService	
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Entity class for Dictionary entity SubCategory it is used only for dictionary entries For SubCategory that are limited to bussiness Category For database table constraint details see Contracts/SubCategoryConfiguration.cs file Annotated for early valdiation and early rejection of invalid requests	70
CRUDService.Contracts.SubCategoryConfiguration	
Class needed for configuring specific rules of its table in the db	71
CRUDService.DTOs.UpdateContactRequest	
DTO class for use when recieving Contact update requests. Annotated for early valdiation and early rejection of invalid requests	71
FrontEnd.Models.UpdateContactRequest	
DTO class for use when recieving Contact update requests Annotated for early valdiation and early rejection of invalid requests	72
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Chapter 5

Namespace Documentation

5.1 CRUDService Namespace Reference

5.2 CRUDService.Contracts Namespace Reference

Classes

- class [CategoryConfiguration](#)
Class needed for configuring specific rules of its table in the db.
- class [ContactConfiguration](#)
Class needed for configuring specific rules of Contacts table in the database.
- class [SubCategoryConfiguration](#)
Class needed for configuring specific rules of its table in the db.

5.3 CRUDService.Controllers Namespace Reference

Classes

- class [AuthController](#)
Controller class which handles http(s) communication, through the use of REST API. It only handles requests/responses, actual operations are relayed to service layer.
- class [ContactController](#)
Controller class which handles http(s) communication, through the use of REST API. It only handles requests/responses, actual operations are relayed to service layer.

5.4 CRUDService.Data Namespace Reference

Classes

- class [AppDbContext](#)
Class used to manage the connection to the database.
- class **Initializer**
Populates empty database tables.

5.5 CRUDService.DTOs Namespace Reference

Classes

- class [BaseContactDTO](#)
Base DTO holds every field that is used in every other contact DTO class Annotated for early validation and early rejection of invalid requests.
- class [CreateContactRequest](#)
DTO class used for updates and creation requests, it posses every field informative field of contact. Annotated for early validation and early rejection of invalid requests.
- class [DetailedContactDTO](#)
More detailed DTO used for adding missing fields from BASEContactDTO. It's used to minimize code duplication. Annotated for early validation and early rejection of invalid requests.
- class [GetContactResponse](#)
Detailed DTO class used to transfer data needed for detailed view of contact info. Caution: Password field is purposefully omitted due to security reasons. Annotated for early validation and early rejection of invalid requests.
- class [UpdateContactRequest](#)
DTO class for use when receiving Contact update requests. Annotated for early validation and early rejection of invalid requests.

5.6 CRUDService.Helpers Namespace Reference

Classes

- class **ContactMapper**
Class contains methods used to transform [Contact](#) entity to and from DTO objects.
- class **HelperMethods**
Collection of helper methods.

5.7 CRUDService.Migrations Namespace Reference

Classes

- class [AppDbContextModelSnapshot](#)
- class [InitialCreate](#)

5.8 CRUDService.Models Namespace Reference

Classes

- class [Category](#)
Entity class for Dictionary table Categories.
- class [Contact](#)
Entity class for CRUD entity [Contact](#) For database table constraint details see Contracts/ContactConfiguration.cs file.
- class [SubCategory](#)
Entity class for Dictionary entity [SubCategory](#) it is used only for dictionary entries For [SubCategory](#) that are limited to business [Category](#) For database table constraint details see Contracts/SubCategoryConfiguration.cs file.
- class [User](#)
Class representing a user.

5.9 CRUDService.Repository Namespace Reference

Classes

- class [ContactRepository](#)
Implements repository logic related to access to the database.
- interface [IContactRepository](#)
Interface possesses collection of methods for handling data stored in the database.
- interface [IUserRepository](#)
Interface possesses collection of methods for handling data stored in the database.
- class [UserRepository](#)
Implementation of [IUserRepository](#) interface.

5.10 CRUDService.Service Namespace Reference

Classes

- class [ContactService](#)
Implements bussiness logic and mediates between contrler and repository layers.
- interface [IContactService](#)
Defines bussiness logic operations for [Contact](#) management.
- interface [IUserService](#)
Defines bussiness logic in regards authentication of users.
- class [UserService](#)

5.11 CRUDService.Validators Namespace Reference

Classes

- class [PasswordValidator](#)
Custom password validator for use in automatic password validation through annotations.

5.12 FrontEnd Namespace Reference

5.13 FrontEnd.Models Namespace Reference

Classes

- class [Category](#)
Entity class for Dictionary entity [Category](#) For database table constraint details see Contracts/Category↔ Configuration.cs file Annotated for early valdiation and early rejection of invalid requests.
- class [Contact](#)
Base DTO holds every field that is used in every other contact DTO class Annotated for early valdiation and early rejection of invalid requests.
- class [CreateContactRequest](#)

dTO class used for updates and creation requests, it posses every field informative field of contact Annotated for early validation and early rejection of invalid requests.

- class [DetailedContact](#)

More detailed DTO used for adding missing fields from BASEContactDTO. It's used to minimize code duplication. Annotated for early validation and early rejection of invalid requests.

- class [GetContactResponse](#)

Detailed DTO class used to transfer data needed for detailed view of contact info. Caution: Password field is purposefully omitted due to security reasons. Annotated for early validation and early rejection of invalid requests.

- class [SubCategory](#)

Entity class for Dictionary entity [SubCategory](#) it is used only for dictionary entries For [SubCategory](#) that are limited to bussiness [Category](#) For database table constraint details see Contracts/SubCategoryConfiguration.cs file Annotated for early validation and early rejection of invalid requests.

- class [UpdateContactRequest](#)

DTO class for use when recieving [Contact](#) update requests Annotated for early validation and early rejection of invalid requests.

- class [User](#)

Class representing a user. Annotated for early validation and early rejection of invalid requests.

5.14 FrontEnd.Pages Namespace Reference

Classes

- class [ContactAddView](#)

Code behind of [ContactAddView](#).

- class [ContactDetails](#)
- class [ContactEditView](#)
- class [ContactList](#)
- class [Login](#)

5.15 FrontEnd.Services Namespace Reference

Classes

- class [AuthService](#)

Authentication and jwt token handling class.

5.16 FrontEnd.Validators Namespace Reference

Classes

- class [PasswordValidator](#)

Custom password validator for use in automatic password validation through annotations.

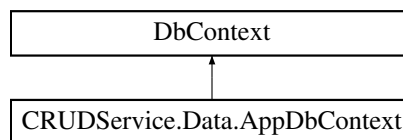
Chapter 6

Class Documentation

6.1 CRUDService.Data.AppDbContext Class Reference

Class used to manage the connection to the database.

Inheritance diagram for CRUDService.Data.AppDbContext:



Public Member Functions

- **AppDbContext** (DbContextOptions< [AppDbContext](#) > options)

Protected Member Functions

- override void [OnModelCreating](#) (ModelBuilder modelBuilder)
Applies custom rules to properties of columns that are based on class fields.

Properties

- DbSet< [Contact](#) > **Contacts** [get, set]
- DbSet< [Category](#) > **Categories** [get, set]
- DbSet< [SubCategory](#) > **SubCategories** [get, set]

6.1.1 Detailed Description

Class used to manage the connection to the database.

6.1.2 Member Function Documentation

6.1.2.1 OnModelCreating()

```
override void CRUDService.Data.AppDbContext.OnModelCreating (
    modelBuilder modelBuilder) [inline], [protected]
```

Applies custom rules to properties of columns that are based on class fields.

Parameters

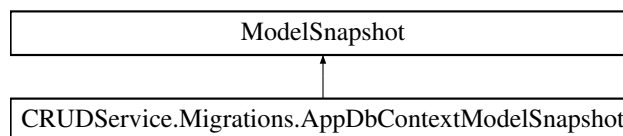
<i>modelBuilder</i>	
---------------------	--

The documentation for this class was generated from the following file:

- CRUDService/Data/AppDbContext.cs

6.2 CRUDService.Migrations.AppDbContextModelSnapshot Class Reference

Inheritance diagram for CRUDService.Migrations.AppDbContextModelSnapshot:



Protected Member Functions

- override void **BuildModel** (ModelBuilder modelBuilder)

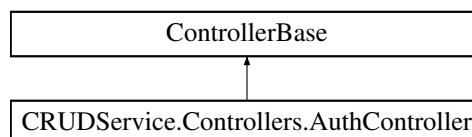
The documentation for this class was generated from the following file:

- CRUDService/Migrations/AppDbContextModelSnapshot.cs

6.3 CRUDService.Controllers.AuthController Class Reference

Controller class which handles http(s) communication, through the use of REST API. It only handles requests/responses, actual operations are relayed to service layer.

Inheritance diagram for CRUDService.Controllers.AuthController:



Public Member Functions

- [AuthController](#) (ILogger< [ContactController](#) > logger, [IUserService](#) service)
Constructor with dependency injections.
- async Task< IActionResult > [Authorize](#) ([FromBody] [User](#) user)
Returns paginated list of Contacts.

Private Attributes

- readonly [IUserService](#) `_userService`
Property used to access [User Service](#).
- readonly ILogger< [ContactController](#) > `_logger`

6.3.1 Detailed Description

Controller class which handles http(s) communication, through the use of REST API. It only handles requests/responses, actual operations are relayed to service layer.

6.3.2 Constructor & Destructor Documentation

6.3.2.1 AuthController()

```
CRUDService.Controllers.AuthController.AuthController (
    ILogger< ContactController > logger,
    IUserService service) [inline]
```

Constructor with dependency injections.

Parameters

<code>logger</code>	
<code>service</code>	

6.3.3 Member Function Documentation

6.3.3.1 Authorize()

```
async Task< IActionResult > CRUDService.Controllers.AuthController.Authorize (
    [FromBody] User user) [inline]
```

Returns paginated list of Contacts.

Parameters

<code>user</code>	User object passed for use of in service layer
-------------------	--

Returns

Jwt Token or 401 Unauthorized message

The documentation for this class was generated from the following file:

- `CRUDService/Controllers/AuthController.cs`

6.4 FrontEnd.Services.AuthService Class Reference

Authentication and jwt token handling class.

Public Member Functions

- **AuthService** (ILocalStorageService localStorage)
- async Task [InitializeAsync](#) ()
Initializes token and authorization mechanics.
- async Task [SetToken](#) (string token)
Puts token in local storage.
- async Task [Logout](#) ()
Logs user out and deletes token.

Properties

- bool **IsLoggedIn** [get, private set]
- string? **UserEmail** [get, private set]

Events

- Action? **OnChange**

Private Member Functions

- void **NotifyStateChanged** ()

Private Attributes

- readonly ILocalStorageService **_localStorage**

6.4.1 Detailed Description

Authentication and jwt token handling class.

6.4.2 Member Function Documentation

6.4.2.1 InitializeAsync()

```
async Task FrontEnd.Services.AuthService.InitializeAsync () [inline]
```

Initializes token and authorization mechanics.

Returns

6.4.2.2 Logout()

```
async Task FrontEnd.Services.AuthService.Logout () [inline]
```

Logs user out and deletes token.

Returns

6.4.2.3 SetToken()

```
async Task FrontEnd.Services.AuthService.SetToken (
    string token) [inline]
```

Puts token in local storage.

Parameters

<i>token</i>	Jwt token
--------------	-----------

Returns

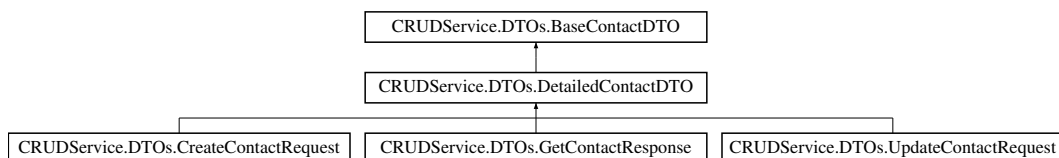
The documentation for this class was generated from the following file:

- FrontEnd/Services/AuthService.cs

6.5 CRUDService.DTOs.BaseContactDTO Class Reference

Base DTO holds every field that is used in every other contact DTO class Annotated for early validation and early rejection of invalid requests.

Inheritance diagram for CRUDService.DTOs.BaseContactDTO:



Properties

- Guid **Id** [get, set]
- required string **Name** [get, set]
- required string **Surname** [get, set]
- required string **Email** [get, set]

6.5.1 Detailed Description

Base DTO holds every field that is used in every other contact DTO class Annotated for early validation and early rejection of invalid requests.

The documentation for this class was generated from the following file:

- CRUService/DTOs/BaseContactDTO.cs

6.6 CRUService.Models.Category Class Reference

Entity class for Dcitionary table Categories.

Properties

- required int **Id** [get, set]
- required string **Name** [get, set]

6.6.1 Detailed Description

Entity class for Dcitionary table Categories.

The documentation for this class was generated from the following file:

- CRUService/Models/Category.cs

6.7 FrontEnd.Models.Category Class Reference

Entity class for Dictionary entity [Category](#) For database table constraint details see Contracts/Category↔ Configuration.cs file Annotated for early validation and early rejection of invalid requests.

Properties

- int **Id** [get, set]
- required string **Name** [get, set]

6.7.1 Detailed Description

Entity class for Dictionary entity [Category](#) For database table constraint details see Contracts/Category↔ Configuration.cs file Annotated for early validation and early rejection of invalid requests.

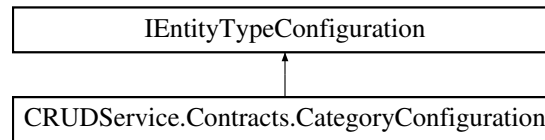
The documentation for this class was generated from the following file:

- FrontEnd/Models/Category.cs

6.8 CRUDService.Contracts.CategoryConfiguration Class Reference

Class needed for configuring specific rules of its table in the db.

Inheritance diagram for CRUDService.Contracts.CategoryConfiguration:



Public Member Functions

- void [Configure](#) (EntityTypeBuilder< [Category](#) > builder)
Sets configuration of the Categories table.

6.8.1 Detailed Description

Class needed for configuring specific rules of its table in the db.

6.8.2 Member Function Documentation

6.8.2.1 Configure()

```
void CRUDService.Contracts.CategoryConfiguration.Configure (
    EntityTypeBuilder< Category > builder) [inline]
```

Sets configuration of the Categories table.

Parameters

<i>builder</i>	
----------------	--

The documentation for this class was generated from the following file:

- `CRUDService/Contracts/CategoryConfiguration.cs`

6.9 CRUDService.Models.Contact Class Reference

Entity class for CRUD entity [Contact](#) For database table constraint details see `Contracts/ContactConfiguration.cs` file.

Properties

- Guid **Id** = Guid.NewGuid() [get, set]
- required string **Name** [get, set]
- required string **Surname** [get, set]
- required string **Email** [get, set]
- string? **PasswordHash** [get, set]
- required int **CategoryId** [get, set]
- string? **SubCategory** [get, set]
- required string **Phone** [get, set]
- required DateOnly **BirthDate** [get, set]

6.9.1 Detailed Description

Entity class for CRUD entity [Contact](#) For database table constraint details see Contracts/ContactConfiguration.cs file.

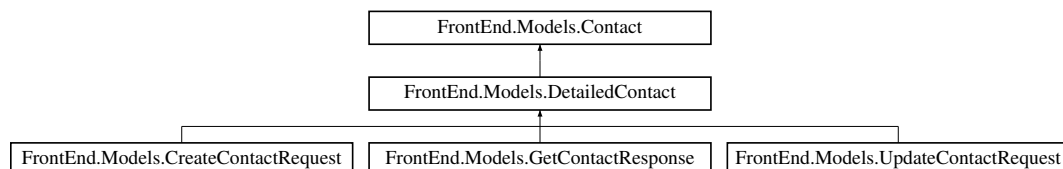
The documentation for this class was generated from the following file:

- CRUDService/Models/Contact.cs

6.10 FrontEnd.Models.Contact Class Reference

Base DTO holds every field that is used in every other contact DTO class Annotated for early validation and early rejection of invalid requests.

Inheritance diagram for FrontEnd.Models.Contact:



Properties

- Guid **Id** [get, set]
- string? **Name** [get, set]
- string? **Surname** [get, set]
- string? **Email** [get, set]

6.10.1 Detailed Description

Base DTO holds every field that is used in every other contact DTO class Annotated for early validation and early rejection of invalid requests.

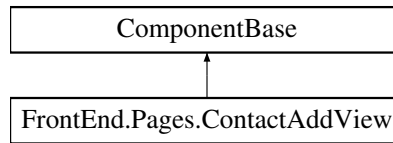
The documentation for this class was generated from the following file:

- FrontEnd/Models/Contact.cs

6.11 FrontEnd.Pages.ContactAddView Class Reference

Code behind of [ContactAddView](#).

Inheritance diagram for FrontEnd.Pages.ContactAddView:



Protected Member Functions

- override async Task [OnInitializedAsync](#) ()
Redirects unauthorized users to the login page.
- override async Task [OnParametersSetAsync](#) ()
Initializes contact list.

Properties

- string **selectedSubCategory** [get, set]
- int **selectedCategory** [get, set]

Private Member Functions

- void **SetToDefaultValues** ()
Sets Entity and form to default values.
- async Task [LoadContent](#) ()
Fetches paginated list from backend.
- void **FilterSubCategories** ()
Filters SubCategories to select only one viable for given category.
- async Task< bool > [ValidateEmail](#) ()
Checks if given email is already in use by other user.
- async Task [SaveContact](#) ()
Saves edited contact.
- void **RedirectToList** ()
Redirects to contact list view.

Private Attributes

- [CreateContactRequest](#)? **contact** = new()
- List< [Category](#) >? **categories**
- List< [SubCategory](#) >? **subCats**
- List< [SubCategory](#) > **filteredSubCats** = new()
- bool **emailExists** = false
- bool **IsCustomSubCategory** = false
- string **_selectedSubCategory**
- int **_selectedCategory**

6.11.1 Detailed Description

Code behind of [ContactAddView](#).

6.11.2 Member Function Documentation

6.11.2.1 LoadContent()

```
async Task FrontEnd.Pages.ContactAddView.LoadContent () [inline], [private]
```

Fetches paginated list from backend.

Returns

6.11.2.2 OnInitializedAsync()

```
override async Task FrontEnd.Pages.ContactAddView.OnInitializedAsync () [inline], [protected]
```

Redirects unauthorized users to the login page.

Returns

6.11.2.3 OnParametersSetAsync()

```
override async Task FrontEnd.Pages.ContactAddView.OnParametersSetAsync () [inline], [protected]
```

Initializes contact list.

Returns

6.11.2.4 SaveContact()

```
async Task FrontEnd.Pages.ContactAddView.SaveContact () [inline], [private]
```

Saves edited contact.

Returns

6.11.2.5 ValidateEmael()

```
async Task< bool > FrontEnd.Pages.ContactAddView.ValidateEmael () [inline], [private]
```

Checks if given email is already in use by other user.

Returns

bool saying whether email is valid and not taken

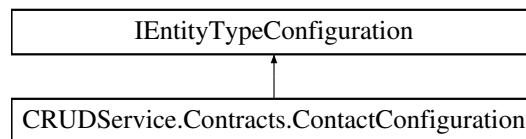
The documentation for this class was generated from the following file:

- FrontEnd/Pages/ContactAddView.razor.cs

6.12 CRUDService.Contracts.ContactConfiguration Class Reference

Class needed for configuring specific rules of Contacts table in the database.

Inheritance diagram for CRUDService.Contracts.ContactConfiguration:



Public Member Functions

- void [Configure](#) (EntityTypeBuilder< [Contact](#) > builder)
Sets configuration of the Contacts table.

6.12.1 Detailed Description

Class needed for configuring specific rules of Contacts table in the database.

6.12.2 Member Function Documentation

6.12.2.1 Configure()

```
void CRUDService.Contracts.ContactConfiguration.Configure (  
    EntityTypeBuilder< Contact > builder) [inline]
```

Sets configuration of the Contacts table.

Parameters

<i>builder</i>	
----------------	--

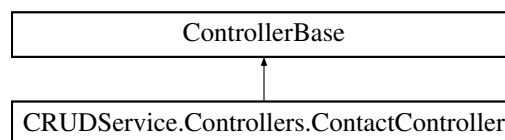
The documentation for this class was generated from the following file:

- CRUDService/Contracts/ContactConfiguration.cs

6.13 CRUDService.Controllers.ContactController Class Reference

Controller class which handles http(s) communication, through the use of REST API. It only handles requests/responses, actual operations are relayed to service layer.

Inheritance diagram for CRUDService.Controllers.ContactController:



Public Member Functions

- [ContactController](#) (ILogger< [ContactController](#) > logger, [IContactService](#) service)
Constructor with dependency injections.
- async Task< IActionResult > [GetContacts](#) (int skip, int take)
Returns paginated list of Contacts.
- async Task< IActionResult > [GetContact](#) (Guid id)
Returns a detailed Contact with given id.
- async Task< IActionResult > [GetCategories](#) ()
Returns list of all categories.
- async Task< IActionResult > [GetSubCategories](#) (int id)
Returns list of anmes of all subcategories for given category id.
- async Task< IActionResult > [GetSubAllCategories](#) ()
Returns list of anmes of all subcategories.
- async Task< IActionResult > [CheckIfEmailTaken](#) ([FromQuery] string email)
Returns information if email is taken or not.
- async Task< IActionResult > [CreateContact](#) ([FromBody] [CreateContactRequest](#) request)
Creates new Contact instance.
- async Task< IActionResult > [UpdateContact](#) (Guid id, [FromBody] [UpdateContactRequest](#) request)
Updates existing Contact instance.
- async Task< IActionResult > [DeleteContact](#) (Guid id)
Deletes existing Contact.

Private Attributes

- readonly [IContactService](#) **_contactService**
Properly used to access Contact Service.
- readonly ILogger< [ContactController](#) > **_logger**

6.13.1 Detailed Description

Controller class which handles http(s) communication, through the use of REST API. It only handles requests/responses, actual operations are relayed to service layer.

6.13.2 Constructor & Destructor Documentation

6.13.2.1 ContactController()

```
CRUDService.Controllers.ContactController.ContactController (
    ILogger< ContactController > logger,
    IContactService service) [inline]
```

Constructor with dependency injections.

Parameters

<i>logger</i>	
<i>service</i>	

6.13.3 Member Function Documentation

6.13.3.1 CheckIfEmailTaken()

```
async Task< IActionResult > CRUDService.Controllers.ContactController.CheckIfEmailTaken (
    [FromQuery] string email) [inline]
```

Returns information if email is taken or not.

Parameters

<i>email</i>	Email that is to be checked
--------------	-----------------------------

Returns

bool saying whether given email already exists in database or not

6.13.3.2 CreateContact()

```
async Task< IActionResult > CRUDService.Controllers.ContactController.CreateContact (
    [FromBody] CreateContactRequest request) [inline]
```

Creates new Contact instance.

Parameters

<i>request</i>	CreateContactRequest object with data needed to create new Contact
----------------	--

Returns

201 code or 400, depending on whether entry was created or not

6.13.3.3 DeleteContact()

```
async Task< IActionResult > CRUDService.Controllers.ContactController.DeleteContact (
    Guid id) [inline]
```

Deletes existing Contact.

Parameters

<i>id</i>	Contact's Guid
-----------	----------------

Returns

404 code if Contact with given id does not exist 200 code if Contact was successfully deleted

6.13.3.4 GetCategories()

```
async Task< IActionResult > CRUDService.Controllers.ContactController.GetCategories () [inline]
```

Returns list of all categories.

Returns

List of all categories in the database

6.13.3.5 GetContact()

```
async Task< IActionResult > CRUDService.Controllers.ContactController.GetContact (
    Guid id) [inline]
```

Returns a detailed Contact with given id.

Parameters

<i>id</i>	Guid of the requested contact
-----------	-------------------------------

Returns

404 or requested Contact transformed into [GetContactResponse](#) Object

6.13.3.6 GetContacts()

```
async Task< IActionResult > CRUDService.Controllers.ContactController.GetContacts (
    int skip,
    int take) [inline]
```

Returns paginated list of Contacts.

Parameters

<i>skip</i>	Defines how many records should be skipped
<i>take</i>	Defines max length of returned list

Returns

Returns list Of [BaseContactDTO](#) objects, can be empty

6.13.3.7 GetSubAllCategories()

```
async Task< IActionResult > CRUDService.Controllers.ContactController.GetSubAllCategories ()  
[inline]
```

Returns list of anmes of all subcategories.

Returns

list of all subcategoires in the database

6.13.3.8 GetSubCategories()

```
async Task< IActionResult > CRUDService.Controllers.ContactController.GetSubCategories (  
    int id) [inline]
```

Returns list of anmes of all subcategories for given category id.

Parameters

<i>id</i>	Id of the category, requested subcategories belongg to.
-----------	---

Returns

List of all subcategory names that belong to Category with given id

6.13.3.9 UpdateContact()

```
async Task< IActionResult > CRUDService.Controllers.ContactController.UpdateContact (  
    Guid id,  
    [FromBody] UpdateContactRequest request) [inline]
```

Updates existing Contact instance.

Parameters

<i>id</i>	Contact's Guid
<i>request</i>	UpdateContactRequest object containing new/updated data for existing Contact

Returns

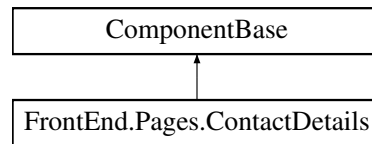
following http codes: 404 if no contact exists with given id, 204 if update was successful 400 if data in [UpdateContactRequest](#) was invalid

The documentation for this class was generated from the following file:

- CRUDService/Controllers/ContactController.cs

6.14 FrontEnd.Pages.ContactDetails Class Reference

Inheritance diagram for FrontEnd.Pages.ContactDetails:



Protected Member Functions

- override async Task [OnParametersSetAsync](#) ()
Initializes contact list.

Properties

- Guid **id** [get, set]

Private Member Functions

- async Task [LoadContactList](#) ()
Fetches paginated list from backend.
- async Task [DeleteContact](#) (Guid id)
Sends delete request.
- void [RedirectToEdit](#) (Guid id)
Redirects to [Contact](#)'s edit view.
- void [RedirectToList](#) ()
Redirects to contact list view.

Private Attributes

- [GetContactResponse?](#) **contact**

6.14.1 Member Function Documentation

6.14.1.1 DeleteContact()

```

async Task FrontEnd.Pages.ContactDetails.DeleteContact (
    Guid id) [inline], [private]
  
```

Sends delete request.

Parameters

<i>id</i>	Contact 's Guid
-----------	---------------------------------

Returns

6.14.1.2 LoadContactList()

```
async Task FrontEnd.Pages.ContactDetails.LoadContactList () [inline], [private]
```

Fetches paginated list from backend.

Returns

6.14.1.3 OnParametersSetAsync()

```
override async Task FrontEnd.Pages.ContactDetails.OnParametersSetAsync () [inline], [protected]
```

Initializes contact list.

Returns

6.14.1.4 RedirectToEdit()

```
void FrontEnd.Pages.ContactDetails.RedirectToEdit (  
    Guid id) [inline], [private]
```

Redirects to [Contact](#)'s edit view.

Parameters

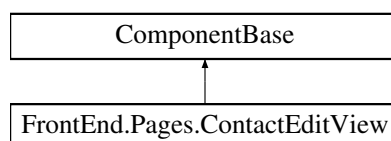
<i>id</i>	Contact 's Guid
-----------	---------------------------------

The documentation for this class was generated from the following file:

- FrontEnd/Pages/ContactDetails.razor.cs

6.15 FrontEnd.Pages.ContactEditView Class Reference

Inheritance diagram for FrontEnd.Pages.ContactEditView:



Protected Member Functions

- override async Task [OnInitializedAsync](#) ()
Redirects unauthorized users to the login page.
- override async Task [OnParametersSetAsync](#) ()
Initializes contact list.

Properties

- Guid **id** [get, set]
- string **selectedSubCategory** [get, set]
- int **selectedCategory** [get, set]

Private Member Functions

- void **SetToDefaultValues** ()
Sets Entity and form to default values.
- async Task [LoadContent](#) ()
Fetches paginated list from backend.
- void **FilterSubCategories** ()
Filters SubCategories to select only one viable for given category.
- async Task< bool > [ValidateEmail](#) ()
Checks if given email is already in use by other user.
- async Task [SaveContact](#) ()
Saves edited contact.
- void [RedirectToDetails](#) (Guid id)
Redirects to [Contact](#)'s edit view.

Private Attributes

- [GetContactResponse?](#) **ogContact**
- [UpdateContactRequest?](#) **contact**
- List< [Category](#) >? **categories**
- List< [SubCategory](#) >? **subCats**
- List< [SubCategory](#) > **filteredSubCats** = new()
- bool **emailExists** = false
- bool **IsCustomSubCategory** = false
- string **_selectedSubCategory**
- int **_selectedCategory**

6.15.1 Member Function Documentation

6.15.1.1 LoadContent()

```
async Task FrontEnd.Pages.ContactEditView.LoadContent () [inline], [private]
```

Fetches paginated list from backend.

Returns

6.15.1.2 OnInitializedAsync()

```
override async Task FrontEnd.Pages.ContactEditView.OnInitializedAsync () [inline], [protected]
```

Redirects unauthorized users to the login page.

Returns

6.15.1.3 OnParametersSetAsync()

```
override async Task FrontEnd.Pages.ContactEditView.OnParametersSetAsync () [inline], [protected]
```

Initializes contact list.

Returns

6.15.1.4 RedirectToDetails()

```
void FrontEnd.Pages.ContactEditView.RedirectToDetails (
    Guid id) [inline], [private]
```

Redirects to [Contact](#)'s edit view.

Parameters

<i>id</i>	Contact Guid
-----------	------------------------------

6.15.1.5 SaveContact()

```
async Task FrontEnd.Pages.ContactEditView.SaveContact () [inline], [private]
```

Saves edited contact.

Returns

6.15.1.6 ValidateEmail()

```
async Task< bool > FrontEnd.Pages.ContactEditView.ValidateEmail () [inline], [private]
```

Checks if given email is already in use by other user.

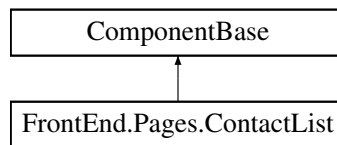
Returns

The documentation for this class was generated from the following file:

- FrontEnd/Pages/ContactEditView.razor.cs

6.16 FrontEnd.Pages.ContactList Class Reference

Inheritance diagram for FrontEnd.Pages.ContactList:



Protected Member Functions

- override async Task [OnInitializedAsync](#) ()
Initializes contact list.

Private Member Functions

- async Task [LoadContactList](#) ()
Fetches paginated list from backend.
- async Task [IncrementSkip](#) ()
Next list page.
- async Task [DecrementSkip](#) ()
Previous list page.
- async Task [DeleteContact](#) (Guid id)
Sends delete request.
- void [RedirectToEdit](#) (Guid id)
Redirects to [Contact](#)'s edit view.
- void [RedirectToDetails](#) (Guid id)
Redirects to [Contact](#)'s details view.
- void [RedirectToAdd](#) ()
Redirects to add contact view.

Private Attributes

- List< [Contact](#) >? **contacts**
- int **skip** = 0
- int **take** = 7

6.16.1 Member Function Documentation

6.16.1.1 DecrementSkip()

```
async Task FrontEnd.Pages.ContactList.DecrementSkip () [inline], [private]
```

Previous list page.

Returns

6.16.1.2 DeleteContact()

```
async Task FrontEnd.Pages.ContactList.DeleteContact (
    Guid id) [inline], [private]
```

Sends delete request.

Parameters

<i>id</i>	Contact 's Guid
-----------	---------------------------------

Returns

6.16.1.3 IncrementSkip()

```
async Task FrontEnd.Pages.ContactList.IncrementSkip () [inline], [private]
```

Next list page.

Returns

6.16.1.4 LoadContactList()

```
async Task FrontEnd.Pages.ContactList.LoadContactList () [inline], [private]
```

Fetches paginated list from backend.

Returns

6.16.1.5 OnInitializedAsync()

```
override async Task FrontEnd.Pages.ContactList.OnInitializedAsync () [inline], [protected]
```

Initializes contact list.

Returns

6.16.1.6 RedirectToDetails()

```
void FrontEnd.Pages.ContactList.RedirectToDetails (  
    Guid id) [inline], [private]
```

Redirects to [Contact](#)'s details view.

Parameters

<i>id</i>	Contact 's Guid
-----------	---------------------------------

6.16.1.7 RedirectToEdit()

```
void FrontEnd.Pages.ContactList.RedirectToEdit (
    Guid id) [inline], [private]
```

Redirects to [Contact](#)'s edit view.

Parameters

<i>id</i>	Contact 's Guid
-----------	---------------------------------

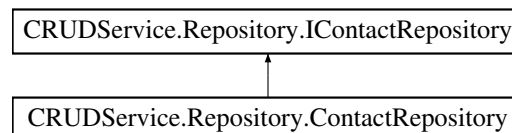
The documentation for this class was generated from the following file:

- FrontEnd/Pages/ContactList.razor.cs

6.17 CRUDService.Repository.ContactRepository Class Reference

Implements repository logic related to access to the database.

Inheritance diagram for CRUDService.Repository.ContactRepository:



Public Member Functions

- [ContactRepository](#) ([AppDbContext](#) context)
Constructor.
- async Task< bool > [CheckIfIdExists](#) (Guid id)
Checks if contact with given id exists.
- async Task< [Contact](#)?> [FindContactById](#) (Guid id)
Retrieves contact by its id.
- async Task< List< [Contact](#) > > [FindAllContacts](#) (int skip, int take)
Retrieves a paginated list of contacts.
- async Task< List< [Category](#) > > [FindAllCategories](#) ()
Retrieves all categories.
- async Task< string?> [FindCategoryNameById](#) (int id)
Retrieves a category name for given id.
- async Task< string?> [FindUserEmailById](#) (Guid id)
Retrieves user email by her/his id.

- async Task< List< string > > [FindAllSubCategoriesById](#) (int id)
Fetches all subcategories for given id.
- async Task [AddContact](#) ([Contact](#) contact)
Adds new contact.
- async Task< bool > [UpdateContact](#) ([Contact](#) contact)
Updates existing contact.
- async Task< bool > [DeleteContact](#) (Guid id)
Deletes existing contact.
- Task< bool > [CheckIfEmailTaken](#) (string email)
Retrieves contact by its Email.
- async Task< List< [SubCategory](#) > > [FindAllSubCategories](#) ()
Fetches all subcategories.

Private Attributes

- readonly [AppDbContext](#) _context

6.17.1 Detailed Description

Implements repository logic related to access to the database.

6.17.2 Constructor & Destructor Documentation

6.17.2.1 ContactRepository()

```
CRUDService.Repository.ContactRepository.ContactRepository (
    AppDbContext context) [inline]
```

Constructor.

Parameters

context	
-------------------------	--

6.17.3 Member Function Documentation

6.17.3.1 AddContact()

```
async Task CRUDService.Repository.ContactRepository.AddContact (
    Contact contact) [inline]
```

Adds new contact.

Parameters

contact	Contact object
-------------------------	--------------------------------

Returns

Implements [CRUDService.Repository.IContactRepository](#).

6.17.3.2 CheckIfEmailTaken()

```
Task< bool > CRUDService.Repository.ContactRepository.CheckIfEmailTaken (
    string email) [inline]
```

Retrieves contact by its Email.

Parameters

<i>email</i>	
--------------	--

Returns

true if given email exists or false if not

Implements [CRUDService.Repository.IContactRepository](#).

6.17.3.3 CheckIfIdExists()

```
async Task< bool > CRUDService.Repository.ContactRepository.CheckIfIdExists (
    Guid id) [inline]
```

Checks if contact with given id exists.

Parameters

<i>id</i>	Contacts Guid
-----------	---------------

Returns

true if exists false if not

Implements [CRUDService.Repository.IContactRepository](#).

6.17.3.4 DeleteContact()

```
async Task< bool > CRUDService.Repository.ContactRepository.DeleteContact (
    Guid id) [inline]
```

Deletes existing contact.

Parameters

<i>id</i>	Contact 's Guid
-----------	---------------------------------

Returns

true if object was deleted successfully false if not

Implements [CRUDService.Repository.IContactRepository](#).

6.17.3.5 FindAllCategories()

```
async Task< List< Category > > CRUDService.Repository.ContactRepository.FindAllCategories ()  
[inline]
```

Retrieves all categories.

Returns

[Category](#) object

Implements [CRUDService.Repository.IContactRepository](#).

6.17.3.6 FindAllContacts()

```
async Task< List< Contact > > CRUDService.Repository.ContactRepository.FindAllContacts (  
    int skip,  
    int take) [inline]
```

Retrieves a paginated list of contacts.

Parameters

<i>skip</i>	Defines how many records should be skipped
<i>take</i>	Defines max length of returned list

Returns

Either [Contact](#) object or null

Implements [CRUDService.Repository.IContactRepository](#).

6.17.3.7 FindAllSubCategories()

```
async Task< List< SubCategory > > CRUDService.Repository.ContactRepository.FindAllSubCategories  
() [inline]
```

Fetches all subcategories.

Returns

List of all subcategories

Implements [CRUDService.Repository.IContactRepository](#).

6.17.3.8 FindAllSubCategoriesById()

```
async Task< List< string > > CRUDService.Repository.ContactRepository.FindAllSubCategories↵  
ById (  
    int id) [inline]
```

Fetches all subcategories for given id.

Parameters

<i>id</i>	Id of a Category
-----------	----------------------------------

Returns

List of names of all the subcategory names belonging to the given [Category](#)

Implements [CRUDService.Repository.IContactRepository](#).

6.17.3.9 FindCategoryNameById()

```
async Task< string?> CRUDService.Repository.ContactRepository.FindCategoryNameById (
    int id) [inline]
```

Retrieves a category name for given id.

Parameters

<i>id</i>	Id of a Category
-----------	----------------------------------

Returns

[Category](#)'s name

Implements [CRUDService.Repository.IContactRepository](#).

6.17.3.10 FindContactById()

```
async Task< Contact?> CRUDService.Repository.ContactRepository.FindContactById (
    Guid id) [inline]
```

Retrieves contact by its id.

Parameters

<i>id</i>	Contacts Guid
-----------	---------------

Returns

Either [Contact](#) object or null

Implements [CRUDService.Repository.IContactRepository](#).

6.17.3.11 FindUserEmailById()

```
async Task< string?> CRUDService.Repository.ContactRepository.FindUserEmailById (
    Guid id) [inline]
```

Retrieves user email by her/his id.

Parameters

<i>id</i>	Contact 's Guid
-----------	---------------------------------

Returns

[Contact](#)'s email

Implements [CRUDService.Repository.IContactRepository](#).

6.17.3.12 UpdateContact()

```
async Task< bool > CRUDService.Repository.ContactRepository.UpdateContact (
    Contact contact) [inline]
```

Updates existing contact.

Parameters

<i>contact</i>	Contact object
----------------	--------------------------------

Returns

true if object was updated successfully false if not

Implements [CRUDService.Repository.IContactRepository](#).

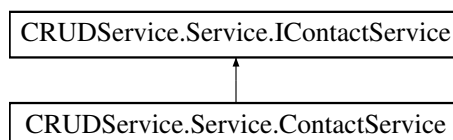
The documentation for this class was generated from the following file:

- [CRUDService/Repository/ContactRepository.cs](#)

6.18 CRUDService.Service.ContactService Class Reference

Implements bussiness logic and mediates between contrler and repository layers.

Inheritance diagram for [CRUDService.Service.ContactService](#):



Public Member Functions

- [ContactService](#) ([IContactRepository](#) contactRepo)
Constructor for supporting injections.
- async Task< bool > [AddContact](#) ([Contact](#) contact)
Adds new contact.
- async Task< bool > [CheckIfEmailTaken](#) (string email)
Retrieves contact by its Email.
- async Task< bool > [CheckIfIdExists](#) (Guid id)
Checks if contact with given id exists.
- async Task< bool > [CommonContactValidation](#) ([Contact](#) contact)
Performs validations for update and creation of contact.
- async Task< bool > [DeleteContact](#) (Guid id)
Deletes existing contact.
- async Task< List< [Category](#) > > [FindAllCategories](#) ()
Retrieves all categories.
- async Task< List< [Contact](#) > > [FindAllContacts](#) (int skip, int take)
Retrieves a paginated list of contacts.
- async Task< List< [SubCategory](#) > > [FindAllSubCategories](#) ()
Fetches all subcategories.
- async Task< List< string > > [FindAllSubCategoriesById](#) (int id)
Fetches all subcategories by category id.
- async Task< string?> [FindCategoryNameById](#) (int id)
Retrieves a category name for given id.
- async Task< [Contact](#)?> [FindContactById](#) (Guid id)
Retrieves contact by its id.
- async Task< string?> [FindUserEmailById](#) (Guid id)
Retrieves user email by her/his id.
- async Task< bool > [UpdateContact](#) ([Contact](#) contact)
Updates existing contact.

Private Attributes

- readonly [IContactRepository](#) _contactRepo

6.18.1 Detailed Description

Implements bussiness logic and mediates between contrler and repository layers.

6.18.2 Constructor & Destructor Documentation

6.18.2.1 ContactService()

```
CRUDService.Service.ContactService.ContactService (
    IContactRepository contactRepo) [inline]
```

Constructor for supporting injections.

Parameters

<i>contactRepo</i>	Injected ContactRepository object
--------------------	---

6.18.3 Member Function Documentation

6.18.3.1 AddContact()

```
async Task< bool > CRUDService.Service.ContactService.AddContact (  
    Contact contact) [inline]
```

Adds new contact.

Parameters

<i>contact</i>	Contact object
----------------	--------------------------------

Returns

bool whether [Contact](#) object was successfully added to the database

Implements [CRUDService.Service.IContactService](#).

6.18.3.2 CheckIfEmailTaken()

```
async Task< bool > CRUDService.Service.ContactService.CheckIfEmailTaken (  
    string email) [inline]
```

Retrieves contact by its Email.

Parameters

<i>email</i>	
--------------	--

Returns

bool saying whether email exists or not

Implements [CRUDService.Service.IContactService](#).

6.18.3.3 CheckIfIdExists()

```
async Task< bool > CRUDService.Service.ContactService.CheckIfIdExists (  
    Guid id) [inline]
```

Checks if contact with given id exists.

Parameters

<i>id</i>	Contact 's Guid
-----------	---------------------------------

Returns

bool saying whether object with given id exists or not

Implements [CRUDService.Service.IContactService](#).

6.18.3.4 CommonContactValidation()

```
async Task< bool > CRUDService.Service.ContactService.CommonContactValidation (
    Contact contact) [inline]
```

Performs validations for update and creation of contact.

Parameters

<i>contact</i>	Contact object
----------------	--------------------------------

Returns

bool saying whether given [Contact](#) object's properties

Implements [CRUDService.Service.IContactService](#).

6.18.3.5 DeleteContact()

```
async Task< bool > CRUDService.Service.ContactService.DeleteContact (
    Guid id) [inline]
```

Deletes existing contact.

Parameters

<i>id</i>	Contact 's Guid
-----------	---------------------------------

Returns

bool sqying whether deletion was successful or not

Implements [CRUDService.Service.IContactService](#).

6.18.3.6 FindAllCategories()

```
async Task< List< Category > > CRUDService.Service.ContactService.FindAllCategories () [inline]
```

Retrieves all categories.

Returns

List of [Category](#) objects in the database

Implements [CRUDService.Service.IContactService](#).

6.18.3.7 FindAllContacts()

```
async Task< List< Contact > > CRUDService.Service.ContactService.FindAllContacts (
    int skip,
    int take) [inline]
```

Retrieves a paginated list of contacts.

Parameters

<i>skip</i>	Defines how many records should be skipped
<i>take</i>	Defines max length of returned list

Returns

Either [Contact](#) object or null

Implements [CRUDService.Service.IContactService](#).

6.18.3.8 FindAllSubCategories()

```
async Task< List< SubCategory > > CRUDService.Service.ContactService.FindAllSubCategories ()
[inline]
```

Fetches all subcategories.

Returns

List of all [SubCategory](#) objects in the database

Implements [CRUDService.Service.IContactService](#).

6.18.3.9 FindAllSubCategoriesById()

```
async Task< List< string > > CRUDService.Service.ContactService.FindAllSubCategoriesById (
    int id) [inline]
```

Fetches all subcategories by category id.

Parameters

<i>id</i>	
-----------	--

Returns

List of names of all the subcategory names belonging to the given [Category](#)

Implements [CRUDService.Service.IContactService](#).

6.18.3.10 FindCategoryNameById()

```
async Task< string?> CRUDService.Service.ContactService.FindCategoryNameById (
    int id) [inline]
```

Retrieves a category name for given id.

Parameters

<i>id</i>	Id of Category object
-----------	---------------------------------------

Returns

List of names of all subcategories of category with given id

Implements [CRUDService.Service.IContactService](#).

6.18.3.11 FindContactById()

```
async Task< Contact?> CRUDService.Service.ContactService.FindContactById (
    Guid id) [inline]
```

Retrieves contact by its id.

Parameters

<i>id</i>	Contact 's Guid
-----------	---------------------------------

Returns

[Contact](#) object or null

Implements [CRUDService.Service.IContactService](#).

6.18.3.12 FindUserEmailById()

```
async Task< string?> CRUDService.Service.ContactService.FindUserEmailById (
    Guid id) [inline]
```

Retrieves user email by her/his id.

Parameters

<i>id</i>	Contact 's Guid
-----------	---------------------------------

Returns

Email as string or null

Implements [CRUDService.Service.IContactService](#).

6.18.3.13 UpdateContact()

```
async Task< bool > CRUDService.Service.ContactService.UpdateContact (
    Contact contact) [inline]
```

Updates existing contact.

Parameters

<i>contact</i>	Contact object
----------------	--------------------------------

Returns

bool saying whether update was successful or not

Implements [CRUDService.Service.IContactService](#).

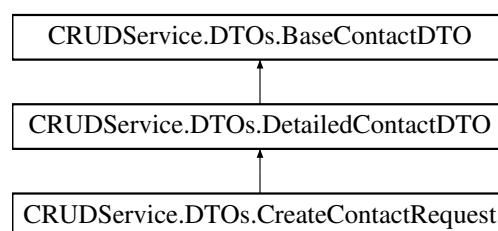
The documentation for this class was generated from the following file:

- [CRUDService/Service/ContactService.cs](#)

6.19 CRUDService.DTOs.CreateContactRequest Class Reference

DTO class used for updates and creation requests, it posses every field informative field of contact. Annotated for early valdiation and early rejection of invalid requests.

Inheritance diagram for [CRUDService.DTOs.CreateContactRequest](#):



Properties

- required int **CategoryId** [get, set]
- required string **Password** [get, set]

Properties inherited from [CRUDService.DTOs.DetailedContactDTO](#)

- string? **SubCategory** [get, set]
- required string **Phone** [get, set]
- required DateOnly **BirthDate** [get, set]

Properties inherited from [CRUDService.DTOs.BaseContactDTO](#)

- Guid **Id** [get, set]
- required string **Name** [get, set]
- required string **Surname** [get, set]
- required string **Email** [get, set]

6.19.1 Detailed Description

DTO class used for updates and creation requests, it posses every field informative field of contact. Annotated for early valdiation and early rejection of invalid requests.

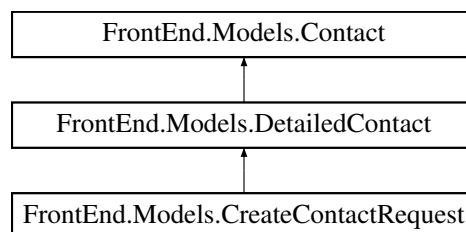
The documentation for this class was generated from the following file:

- CRUDService/DTOs/CreateContactRequest.cs

6.20 FrontEnd.Models.CreateContactRequest Class Reference

dTO class used for updates and creation requests, it posses every field informative field of contact Annotated for early valdiation and early rejection of invalid requests.

Inheritance diagram for FrontEnd.Models.CreateContactRequest:



Properties

- int? **CategoryId** [get, set]
- string? **Password** [get, set]

Properties inherited from [FrontEnd.Models.DetailedContact](#)

- string? **SubCategory** [get, set]
- string? **Phone** [get, set]
- DateOnly **BirthDate** [get, set]

Properties inherited from [FrontEnd.Models.Contact](#)

- Guid **Id** [get, set]
- string? **Name** [get, set]
- string? **Surname** [get, set]
- string? **Email** [get, set]

6.20.1 Detailed Description

dTO class used for updates and creation requests, it posses every field informative field of contact Annotated for early valdiation and early rejection of invalid requests.

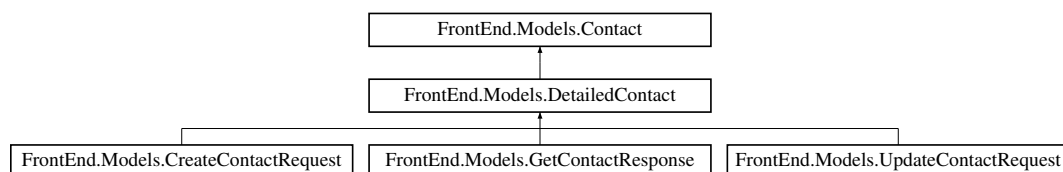
The documentation for this class was generated from the following file:

- FrontEnd/Models/CreateContactRequest.cs

6.21 FrontEnd.Models.DetailedContact Class Reference

More detailed DTO used for adding missing fields from BASEContactDTO. It's used to minimize code duplication. Annotated for early valdiation and early rejection of invalid requests.

Inheritance diagram for FrontEnd.Models.DetailedContact:



Properties

- string? **SubCategory** [get, set]
- string? **Phone** [get, set]
- DateOnly **BirthDate** [get, set]

Properties inherited from [FrontEnd.Models.Contact](#)

- Guid **Id** [get, set]
- string? **Name** [get, set]
- string? **Surname** [get, set]
- string? **Email** [get, set]

6.21.1 Detailed Description

More detailed DTO used for adding missing fields from BASEContactDTO. It's used to minimize code duplication. Annotated for early validation and early rejection of invalid requests.

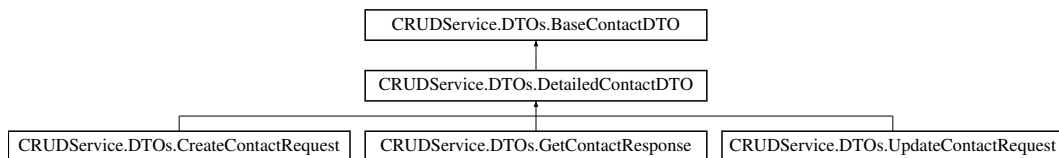
The documentation for this class was generated from the following file:

- FrontEnd/Models/DetailedContact.cs

6.22 CRUDService.DTOs.DetailedContactDTO Class Reference

More detailed DTO used for adding missing fields from BASEContactDTO. It's used to minimize code duplication. Annotated for early validation and early rejection of invalid requests.

Inheritance diagram for CRUDService.DTOs.DetailedContactDTO:



Properties

- string? **SubCategory** [get, set]
- required string **Phone** [get, set]
- required DateOnly **BirthDate** [get, set]

Properties inherited from [CRUDService.DTOs.BaseContactDTO](#)

- Guid **Id** [get, set]
- required string **Name** [get, set]
- required string **Surname** [get, set]
- required string **Email** [get, set]

6.22.1 Detailed Description

More detailed DTO used for adding missing fields from BASEContactDTO. It's used to minimize code duplication. Annotated for early validation and early rejection of invalid requests.

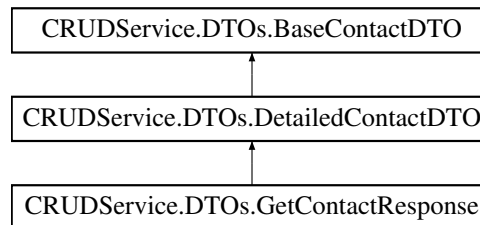
The documentation for this class was generated from the following file:

- CRUDService/DTOs/DetailedContactDTO.cs

6.23 CRUDService.DTOs.GetContactResponse Class Reference

Detailed DTO class used to transfer data needed for detailed view of contact info. Caution: Password field is purposefully omitted due to security reasons. Annotated for early validation and early rejection of invalid requests.

Inheritance diagram for `CRUDService.DTOs.GetContactResponse`:



Properties

- required string **Category** [get, set]

Properties inherited from `CRUDService.DTOs.DetailedContactDTO`

- string? **SubCategory** [get, set]
- required string **Phone** [get, set]
- required DateOnly **BirthDate** [get, set]

Properties inherited from `CRUDService.DTOs.BaseContactDTO`

- Guid **Id** [get, set]
- required string **Name** [get, set]
- required string **Surname** [get, set]
- required string **Email** [get, set]

6.23.1 Detailed Description

Detailed DTO class used to transfer data needed for detailed view of contact info. Caution: Password field is purposefully omitted due to security reasons. Annotated for early validation and early rejection of invalid requests.

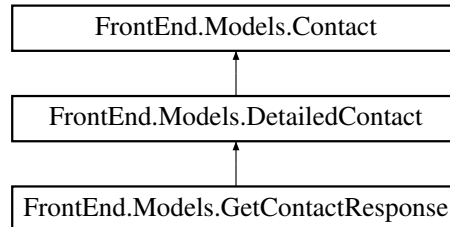
The documentation for this class was generated from the following file:

- `CRUDService/DTOs/GetContactResponse.cs`

6.24 FrontEnd.Models.GetContactResponse Class Reference

Detailed DTO class used to transfer data needed for detailed view of contact info. Caution: Password field is purposefully omitted due to security reasons. Annotated for early validation and early rejection of invalid requests.

Inheritance diagram for FrontEnd.Models.GetContactResponse:



Properties

- string? **Category** [get, set]

Properties inherited from [FrontEnd.Models.DetailedContact](#)

- string? **SubCategory** [get, set]
- string? **Phone** [get, set]
- DateOnly **BirthDate** [get, set]

Properties inherited from [FrontEnd.Models.Contact](#)

- Guid **Id** [get, set]
- string? **Name** [get, set]
- string? **Surname** [get, set]
- string? **Email** [get, set]

6.24.1 Detailed Description

Detailed DTO class used to transfer data needed for detailed view of contact info. Caution: Password field is purposefully omitted due to security reasons. Annotated for early validation and early rejection of invalid requests.

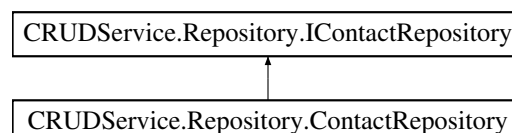
The documentation for this class was generated from the following file:

- FrontEnd/Models/GetContactResponse.cs

6.25 CRUDService.Repository.IContactRepository Interface Reference

Interface possesses collection of methods for handling data stored in the database.

Inheritance diagram for CRUDService.Repository.IContactRepository:



Public Member Functions

- Task< bool > [CheckIfIdExists](#) (Guid id)
Checks if contact with given id exists.
- Task< [Contact?](#)> [FindContactById](#) (Guid id)
Retrieves contact by its id.
- Task< bool > [CheckIfEmailTaken](#) (string email)
Retrieves contact by its Email.
- Task< List< [Contact](#) > > [FindAllContacts](#) (int skip, int take)
Retrieves a paginated list of contacts.
- Task< List< [Category](#) > > [FindAllCategories](#) ()
Retrieves all categories.
- Task< string?> [FindCategoryNameById](#) (int id)
Retrieves a category name for given id.
- Task< string?> [FindUserEmailById](#) (Guid id)
Retrieves user email by her/his id.
- Task< List< string > > [FindAllSubCategoriesById](#) (int id)
Fetches all subcategories for given id.
- Task< List< [SubCategory](#) > > [FindAllSubCategories](#) ()
Fetches all subcategories.
- Task [AddContact](#) ([Contact](#) contact)
Adds new contact.
- Task< bool > [UpdateContact](#) ([Contact](#) contact)
Updates existing contact.
- Task< bool > [DeleteContact](#) (Guid id)
Deletes existing contact.

6.25.1 Detailed Description

Interface possesses collection of methods for handling data stored in the database.

6.25.2 Member Function Documentation

6.25.2.1 AddContact()

```
Task CRUDService.Repository.IContactRepository.AddContact (
    Contact contact)
```

Adds new contact.

Parameters

<i>contact</i>	Contact object
----------------	--------------------------------

Returns

Implemented in [CRUDService.Repository.ContactRepository](#).

6.25.2.2 CheckIfEmailTaken()

```
Task< bool > CRUDService.Repository.IContactRepository.CheckIfEmailTaken (
    string email)
```

Retrieves contact by its Email.

Parameters

<i>email</i>	
--------------	--

Returns

true if given email exists or false if not

Implemented in [CRUDService.Repository.ContactRepository](#).

6.25.2.3 CheckIfIdExists()

```
Task< bool > CRUDService.Repository.IContactRepository.CheckIfIdExists (
    Guid id)
```

Checks if contact with given id exists.

Parameters

<i>id</i>	Contacts Guid
-----------	---------------

Returns

true if exists false if not

Implemented in [CRUDService.Repository.ContactRepository](#).

6.25.2.4 DeleteContact()

```
Task< bool > CRUDService.Repository.IContactRepository.DeleteContact (
    Guid id)
```

Deletes existing contact.

Parameters

<i>id</i>	Contact's Guid
-----------	--------------------------------

Returns

true if object was deleted successfully false if not

Implemented in [CRUDService.Repository.ContactRepository](#).

6.25.2.5 FindAllCategories()

```
Task< List< Category > > CRUDService.Repository.IContactRepository.FindAllCategories ()
```

Retrieves all categories.

Returns

[Category](#) object

Implemented in [CRUDService.Repository.ContactRepository](#).

6.25.2.6 FindAllContacts()

```
Task< List< Contact > > CRUDService.Repository.IContactRepository.FindAllContacts (
    int skip,
    int take)
```

Retrieves a paginated list of contacts.

Parameters

<i>skip</i>	Defines how many records should be skipped
<i>take</i>	Defines max length of returned list

Returns

Either [Contact](#) object or null

Implemented in [CRUDService.Repository.ContactRepository](#).

6.25.2.7 FindAllSubCategories()

```
Task< List< SubCategory > > CRUDService.Repository.IContactRepository.FindAllSubCategories ()
```

Fetches all subcategories.

Returns

List of all subcategories

Implemented in [CRUDService.Repository.ContactRepository](#).

6.25.2.8 FindAllSubCategoriesById()

```
Task< List< string > > CRUDService.Repository.IContactRepository.FindAllSubCategoriesById (
    int id)
```

Fetches all subcategories for given id.

Parameters

<i>id</i>	Id of a Category
-----------	----------------------------------

Returns

List of names of all the subcategory names belonging to the given [Category](#)

Implemented in [CRUDService.Repository.ContactRepository](#).

6.25.2.9 FindCategoryNameById()

```
Task< string?> CRUDService.Repository.IContactRepository.FindCategoryNameById (
    int id)
```

Retrieves a category name for given id.

Parameters

<i>id</i>	Id of a Category
-----------	----------------------------------

Returns

[Category](#)'s name

Implemented in [CRUDService.Repository.ContactRepository](#).

6.25.2.10 FindContactById()

```
Task< Contact?> CRUDService.Repository.IContactRepository.FindContactById (
    Guid id)
```

Retrieves contact by its id.

Parameters

<i>id</i>	Contacts Guid
-----------	---------------

Returns

Either [Contact](#) object or null

Implemented in [CRUDService.Repository.ContactRepository](#).

6.25.2.11 FindUserEmailById()

```
Task< string?> CRUDService.Repository.IContactRepository.FindUserEmailById (
    Guid id)
```

Retrieves user email by her/his id.

Parameters

<i>id</i>	Contact 's Guid
-----------	---------------------------------

Returns

[Contact](#)'s email

Implemented in [CRUDService.Repository.ContactRepository](#).

6.25.2.12 UpdateContact()

```
Task< bool > CRUDService.Repository.IContactRepository.UpdateContact (
    Contact contact)
```

Updates existing contact.

Parameters

<i>contact</i>	Contact object
----------------	--------------------------------

Returns

true if object was updated successfully false if not

Implemented in [CRUDService.Repository.ContactRepository](#).

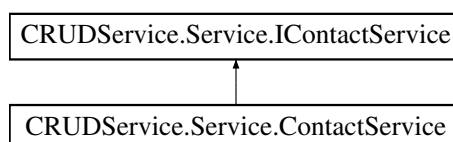
The documentation for this interface was generated from the following file:

- CRUDService/Repository/IContactRepository.cs

6.26 CRUDService.Service.IContactService Interface Reference

Defines bussiness logic operations for [Contact](#) management.

Inheritance diagram for CRUDService.Service.IContactService:



Public Member Functions

- Task< bool > [CheckIfEmailTaken](#) (string email)
Retrieves contact by its Email.
- Task< bool > [CheckIfIdExists](#) (Guid id)
Checks if contact with given id exists.
- Task< [Contact](#)? > [FindContactById](#) (Guid id)
Retrieves contact by its id.
- Task< List< [Contact](#) > > [FindAllContacts](#) (int skip, int take)
Retrieves a paginated list of contacts.
- Task< List< [Category](#) > > [FindAllCategories](#) ()
Retrieves all categories.
- Task< string? > [FindCategoryNameById](#) (int id)
Retrieves a category name for given id.
- Task< string? > [FindUserEmailById](#) (Guid id)
Retrieves user email by her/his id.
- Task< List< string > > [FindAllSubCategoriesById](#) (int id)
Fetches all subcategories by category id.
- Task< List< [SubCategory](#) > > [FindAllSubCategories](#) ()
Fetches all subcategories.
- Task< bool > [AddContact](#) ([Contact](#) contact)
Adds new contact.
- Task< bool > [UpdateContact](#) ([Contact](#) contact)
Updates existing contact.
- Task< bool > [DeleteContact](#) (Guid id)
Deletes existing contact.
- Task< bool > [CommonContactValidation](#) ([Contact](#) contact)
Performs validations for update and creation of contact.

6.26.1 Detailed Description

Defines bussiness logic operations for [Contact](#) management.

6.26.2 Member Function Documentation

6.26.2.1 AddContact()

```
Task< bool > CRUDService.Service.IContactService.AddContact (
    Contact contact)
```

Adds new contact.

Parameters

<i>contact</i>	Contact object
----------------	--------------------------------

Returns

bool whether [Contact](#) object was successfully added to the database

Implemented in [CRUDService.Service.ContactService](#).

6.26.2.2 CheckIfEmailTaken()

```
Task< bool > CRUDService.Service.IContactService.CheckIfEmailTaken (
    string email)
```

Retrieves contact by its Email.

Parameters

<i>email</i>	
--------------	--

Returns

bool saying whether email exists or not

Implemented in [CRUDService.Service.ContactService](#).

6.26.2.3 CheckIfIdExists()

```
Task< bool > CRUDService.Service.IContactService.CheckIfIdExists (
    Guid id)
```

Checks if contact with given id exists.

Parameters

<i>id</i>	Contact 's Guid
-----------	---------------------------------

Returns

bool saying whether object with given id exists or not

Implemented in [CRUDService.Service.ContactService](#).

6.26.2.4 CommonContactValidation()

```
Task< bool > CRUDService.Service.IContactService.CommonContactValidation (
    Contact contact)
```

Performs validations for update and creation of contact.

Parameters

<i>contact</i>	Contact object
----------------	--------------------------------

Returns

bool saying whether given [Contact](#) object's properties

Implemented in [CRUDService.Service.ContactService](#).

6.26.2.5 DeleteContact()

```
Task< bool > CRUDService.Service.IContactService.DeleteContact (
    Guid id)
```

Deletes existing contact.

Parameters

<i>id</i>	Contact 's Guid
-----------	---------------------------------

Returns

bool sqying whether deletion was successful or not

Implemented in [CRUDService.Service.ContactService](#).

6.26.2.6 FindAllCategories()

```
Task< List< Category > > CRUDService.Service.IContactService.FindAllCategories ()
```

Retrieves all categories.

Returns

List of [Category](#) objects in the database

Implemented in [CRUDService.Service.ContactService](#).

6.26.2.7 FindAllContacts()

```
Task< List< Contact > > CRUDService.Service.IContactService.FindAllContacts (  
    int skip,  
    int take)
```

Retrieves a paginated list of contacts.

Parameters

<i>skip</i>	Defines how many records should be skipped
<i>take</i>	Defines max length of returned list

Returns

Either [Contact](#) object or null

Implemented in [CRUDService.Service.ContactService](#).

6.26.2.8 FindAllSubCategories()

```
Task< List< SubCategory > > CRUDService.Service.IContactService.FindAllSubCategories ()
```

Fetches all subcategories.

Returns

List of all [SubCategory](#) objects in the database

Implemented in [CRUDService.Service.ContactService](#).

6.26.2.9 FindAllSubCategoriesById()

```
Task< List< string > > CRUDService.Service.IContactService.FindAllSubCategoriesById (  
    int id)
```

Fetches all subcategories by category id.

Parameters

<i>id</i>	
-----------	--

Returns

List of names of all the subcategory names belonging to the given [Category](#)

Implemented in [CRUDService.Service.ContactService](#).

6.26.2.10 FindCategoryNameById()

```
Task< string?> CRUDService.Service.IContactService.FindCategoryNameById (
    int id)
```

Retrieves a category name for given id.

Parameters

<i>id</i>	Id of Category object
-----------	---------------------------------------

Returns

List of names of all subcategories of category with given id

Implemented in [CRUDService.Service.ContactService](#).

6.26.2.11 FindContactById()

```
Task< Contact?> CRUDService.Service.IContactService.FindContactById (
    Guid id)
```

Retrieves contact by its id.

Parameters

<i>id</i>	Contact 's Guid
-----------	---------------------------------

Returns

[Contact](#) object or null

Implemented in [CRUDService.Service.ContactService](#).

6.26.2.12 FindUserEmailById()

```
Task< string?> CRUDService.Service.IContactService.FindUserEmailById (
    Guid id)
```

Retrieves user email by her/his id.

Parameters

<i>id</i>	Contact 's Guid
-----------	---------------------------------

Returns

Email as string or null

Implemented in [CRUDService.Service.ContactService](#).

6.26.2.13 UpdateContact()

```
Task< bool > CRUDService.Service.IContactService.UpdateContact (
    Contact contact)
```

Updates existing contact.

Parameters

<i>contact</i>	Contact object
----------------	--------------------------------

Returns

bool saying whether update was successful or not

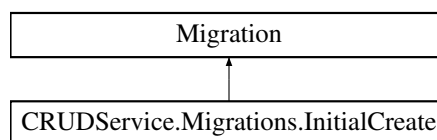
Implemented in [CRUDService.Service.ContactService](#).

The documentation for this interface was generated from the following file:

- CRUDService/Service/IContactService.cs

6.27 CRUDService.Migrations.InitialCreate Class Reference

Inheritance diagram for CRUDService.Migrations.InitialCreate:

**Protected Member Functions**

- override void **Up** (MigrationBuilder migrationBuilder)
- override void **Down** (MigrationBuilder migrationBuilder)
- override void **BuildTargetModel** (ModelBuilder modelBuilder)

6.27.1 Detailed Description

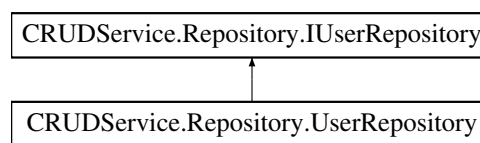
The documentation for this class was generated from the following files:

- `CRUDService/Migrations/20250418231734_InitialCreate.cs`
- `CRUDService/Migrations/20250418231734_InitialCreate.Designer.cs`

6.28 CRUDService.Repository.IUserRepository Interface Reference

Interface possesses collection of methods for handling data stored in the database.

Inheritance diagram for `CRUDService.Repository.IUserRepository`:



Public Member Functions

- `Task< string?> FindUserPasswordHash (string email)`
Retrieves password hash for given email.

6.28.1 Detailed Description

Interface possesses collection of methods for handling data stored in the database.

6.28.2 Member Function Documentation

6.28.2.1 FindUserPasswordHash()

```
Task< string?> CRUDService.Repository.IUserRepository.FindUserPasswordHash (
    string email)
```

Retrieves password hash for given email.

Parameters

<i>email</i>	
--------------	--

Returns

Hash of a password associated with given email

Implemented in [CRUDService.Repository.UserRepository](#).

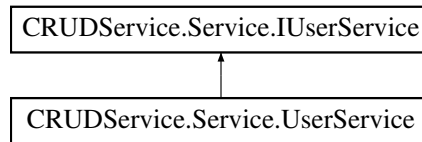
The documentation for this interface was generated from the following file:

- `CRUDService/Repository/IUserRepository.cs`

6.29 CRUDService.Service.IUserService Interface Reference

Defines bussiness logic in regards authentication of users.

Inheritance diagram for CRUDService.Service.IUserService:



Public Member Functions

- Task< string?> [FindUserPasswordHash](#) (string email)
Retrieves password hash for given email.
- Task< string?> [Authenticate](#) ([User](#) user)
Hadnles user authentication.
- Task< bool > [VerifyPassword](#) (string givenHash, string email)
Verifies given password with the one stored in database.
- string [GenerateJwtToken](#) (string email)
Generates jwt token for authorization.

6.29.1 Detailed Description

Defines bussiness logic in regards authentication of users.

6.29.2 Member Function Documentation

6.29.2.1 Authenticate()

```
Task< string?> CRUDService.Service.IUserService.Authenticate (
    User user)
```

Hadnles user authentication.

Parameters

<i>user</i>	User object
-------------	-----------------------------

Returns

Returns Jwttoken as string or null

Implemented in [CRUDService.Service.UserService](#).

6.29.2.2 FindUserPasswordHash()

```
Task< string?> CRUDService.Service.IUserService.FindUserPasswordHash (
    string email)
```

Retrieves password hash for given email.

Parameters

<i>email</i>	
--------------	--

Returns

Hashed password from the database for the given email or null

Implemented in [CRUDService.Service.UserService](#).

6.29.2.3 GenerateJwtToken()

```
string CRUDService.Service.IUserService.GenerateJwtToken (  
    string email)
```

Generates jwt token for authorization.

Parameters

<i>email</i>	
--------------	--

Returns

Jwt token as string

Implemented in [CRUDService.Service.UserService](#).

6.29.2.4 VerifyPassword()

```
Task< bool > CRUDService.Service.IUserService.VerifyPassword (  
    string givenHash,  
    string email)
```

Verifies given password with the one stored in database.

Parameters

<i>givenHash</i>	Hshed password
<i>email</i>	

Returns

bool sqying whether givenHash is the same as the one stored in the databse for the given email

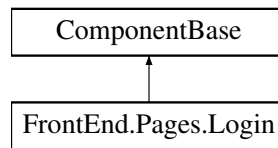
Implemented in [CRUDService.Service.UserService](#).

The documentation for this interface was generated from the following file:

- [CRUDService/Service/IUserService.cs](#)

6.30 FrontEnd.Pages.Login Class Reference

Inheritance diagram for FrontEnd.Pages.Login:



Protected Member Functions

- override async Task [OnInitializedAsync](#) ()
Redirects logged in users to homepage.

Private Member Functions

- async Task [LogIn](#) ()
Sends [Login](#) request.

Private Attributes

- [User](#) `user` = new()

6.30.1 Member Function Documentation

6.30.1.1 LogIn()

```
async Task FrontEnd.Pages.Login.LogIn () [inline], [private]
```

Sends [Login](#) request.

Returns

6.30.1.2 OnInitializedAsync()

```
override async Task FrontEnd.Pages.Login.OnInitializedAsync () [inline], [protected]
```

Redirects logged in users to homepage.

Returns

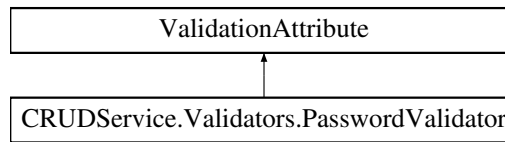
The documentation for this class was generated from the following file:

- FrontEnd/Pages/Login.razor.cs

6.31 CRUDService.Validators.PasswordValidator Class Reference

Custom password validator for use in automatic password validation through annotations.

Inheritance diagram for CRUDService.Validators.PasswordValidator:



Public Member Functions

- override bool **IsValid** (object value)
Checks if given value is valid.
- override string **FormatErrorMessage** (string name)

Properties

- bool **IsEdit** [get, set]

6.31.1 Detailed Description

Custom password validator for use in automatic password validation through annotations.

6.31.2 Member Function Documentation

6.31.2.1 IsValid()

```
override bool CRUDService.Validators.PasswordValidator.IsValid (
    object value) [inline]
```

Checks if given value is valid.

Parameters

<i>value</i>	
--------------	--

Returns

true iof valid false otherwise

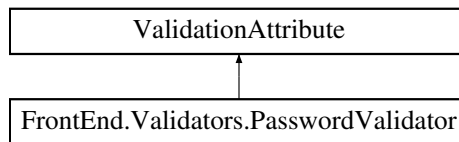
The documentation for this class was generated from the following file:

- CRUDService/Validators/PasswordValidator.cs

6.32 FrontEnd.Validators.PasswordValidator Class Reference

Custom password validator for use in automatic password validation through annotations.

Inheritance diagram for FrontEnd.Validators.PasswordValidator:



Public Member Functions

- override bool **IsValid** (object value)
Checks if given value is valid.
- override string **FormatErrorMessage** (string name)

Properties

- bool **IsEdit** [get, set]

6.32.1 Detailed Description

Custom password validator for use in automatic password validation through annotations.

6.32.2 Member Function Documentation

6.32.2.1 IsValid()

```

override bool FrontEnd.Validators.PasswordValidator.IsValid (
    object value) [inline]
  
```

Checks if given value is valid.

Parameters

<i>value</i>	
--------------	--

Returns

true iof valid false otherwise

The documentation for this class was generated from the following file:

- FrontEnd/Validators/PasswordValidator.cs

6.33 CRUService.Models.SubCategory Class Reference

Entity class for Dictionary entity [SubCategory](#) it is used only for dictionary entries For [SubCategory](#) that are limited to bussiness [Category](#) For database table constraint details see Contracts/SubCategoryConfiguration.cs file.

Properties

- int **Id** [get, set]
- required string **Name** [get, set]
- required int **CategoryId** [get, set]

6.33.1 Detailed Description

Entity class for Dictionary entity [SubCategory](#) it is used only for dictionary entries For [SubCategory](#) that are limited to bussiness [Category](#) For database table constraint details see Contracts/SubCategoryConfiguration.cs file.

The documentation for this class was generated from the following file:

- CRUService/Models/SubCategory.cs

6.34 FrontEnd.Models.SubCategory Class Reference

Entity class for Dictionary entity [SubCategory](#) it is used only for dictionary entries For [SubCategory](#) that are limited to bussiness [Category](#) For database table constraint details see Contracts/SubCategoryConfiguration.cs file Annotated for early valdiation and early rejection of invalid requests.

Properties

- int **Id** [get, set]
- required string **Name** [get, set]
- required int **CategoryId** [get, set]

6.34.1 Detailed Description

Entity class for Dictionary entity [SubCategory](#) it is used only for dictionary entries For [SubCategory](#) that are limited to bussiness [Category](#) For database table constraint details see Contracts/SubCategoryConfiguration.cs file Annotated for early valdiation and early rejection of invalid requests.

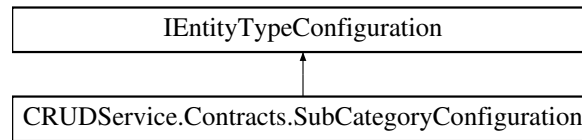
The documentation for this class was generated from the following file:

- FrontEnd/Models/SubCategory.cs

6.35 CRUDService.Contracts.SubCategoryConfiguration Class Reference

Class needed for configuring specific rules of its table in the db.

Inheritance diagram for CRUDService.Contracts.SubCategoryConfiguration:



Public Member Functions

- void [Configure](#) (EntityTypeBuilder< [SubCategory](#) > builder)
Sets configuration of the Contacts table.

6.35.1 Detailed Description

Class needed for configuring specific rules of its table in the db.

6.35.2 Member Function Documentation

6.35.2.1 Configure()

```
void CRUDService.Contracts.SubCategoryConfiguration.Configure (
    EntityTypeBuilder< SubCategory > builder) [inline]
```

Sets configuration of the Contacts table.

Parameters

<i>builder</i>	
----------------	--

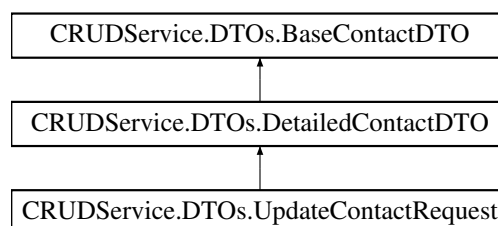
The documentation for this class was generated from the following file:

- CRUDService/Contracts/SubCategoryConfiguration.cs

6.36 CRUDService.DTOs.UpdateContactRequest Class Reference

DTO class for use when receiving Contact update requests. Annotated for early validation and early rejection of invalid requests.

Inheritance diagram for CRUDService.DTOs.UpdateContactRequest:



Properties

- required int **CategoryId** [get, set]
- string? **Password** [get, set]

Properties inherited from [CRUDService.DTOs.DetailedContactDTO](#)

- string? **SubCategory** [get, set]
- required string **Phone** [get, set]
- required DateOnly **BirthDate** [get, set]

Properties inherited from [CRUDService.DTOs.BaseContactDTO](#)

- Guid **Id** [get, set]
- required string **Name** [get, set]
- required string **Surname** [get, set]
- required string **Email** [get, set]

6.36.1 Detailed Description

DTO class for use when receiving Contact update requests. Annotated for early validation and early rejection of invalid requests.

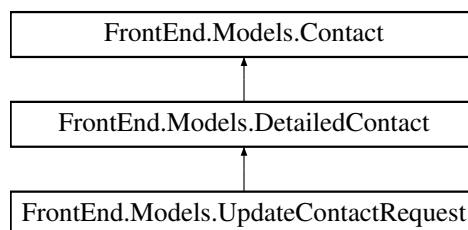
The documentation for this class was generated from the following file:

- CRUDService/DTOs/UpdateContactRequest.cs

6.37 FrontEnd.Models.UpdateContactRequest Class Reference

DTO class for use when receiving [Contact](#) update requests Annotated for early validation and early rejection of invalid requests.

Inheritance diagram for FrontEnd.Models.UpdateContactRequest:



Properties

- int? **CategoryId** [get, set]
- string? **Password** [get, set]

Properties inherited from [FrontEnd.Models.DetailedContact](#)

- string? **SubCategory** [get, set]
- string? **Phone** [get, set]
- DateOnly **BirthDate** [get, set]

Properties inherited from [FrontEnd.Models.Contact](#)

- Guid **Id** [get, set]
- string? **Name** [get, set]
- string? **Surname** [get, set]
- string? **Email** [get, set]

6.37.1 Detailed Description

DTO class for use when receiving [Contact](#) update requests Annotated for early validation and early rejection of invalid requests.

The documentation for this class was generated from the following file:

- FrontEnd/Models/UpdateContactRequest.cs

6.38 CRUDService.Models.User Class Reference

Class representing a user.

Properties

- required string **Email** [get, set]
- required string **Password** [get, set]

6.38.1 Detailed Description

Class representing a user.

The documentation for this class was generated from the following file:

- CRUDService/Models/User.cs

6.39 FrontEnd.Models.User Class Reference

Class representing a user. Annotated for early validation and early rejection of invalid requests.

Properties

- string? **Email** [get, set]
- string? **Password** [get, set]

6.39.1 Detailed Description

Class representing a user. Annotated for early validation and early rejection of invalid requests.

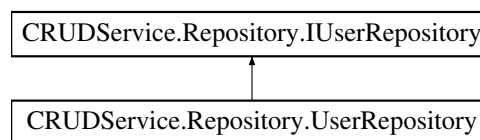
The documentation for this class was generated from the following file:

- FrontEnd/Models/User.cs

6.40 CRUDService.Repository.UserRepository Class Reference

Implementation of [IUserRepository](#) interface.

Inheritance diagram for `CRUDService.Repository.UserRepository`:



Public Member Functions

- [UserRepository](#) ([AppDbContext](#) context)
Constructor.
- async Task< string?> [FindUserPasswordHash](#) (string email)
Retrieves password hash for given email.

Private Attributes

- readonly [AppDbContext](#) _context

6.40.1 Detailed Description

Implementation of [IUserRepository](#) interface.

6.40.2 Constructor & Destructor Documentation

6.40.2.1 UserRepository()

```
CRUDService.Repository.UserRepository.UserRepository (
    AppDbContext context) [inline]
```

Constructor.

Parameters

context	
---------	--

6.40.3 Member Function Documentation

6.40.3.1 FindUserPasswordHash()

```
async Task< string?> CRUDService.Repository.UserRepository.FindUserPasswordHash (
    string email) [inline]
```

Retrieves password hash for given email.

Parameters

email	
-------	--

Returns

Hash of a password associated with given email

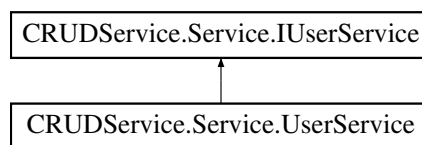
Implements [CRUDService.Repository.IUserRepository](#).

The documentation for this class was generated from the following file:

- CRUDService/Repository/UserRepository.cs

6.41 CRUDService.Service.UserService Class Reference

Inheritance diagram for CRUDService.Service.UserService:



Public Member Functions

- [UserService](#) ([IUserRepository](#) userRepo, IConfiguration config)
Constructor supporting DI.
- async Task< string?> [Authenticate](#) ([User](#) user)
Handles user authentication.
- async Task< string?> [FindUserPasswordHash](#) (string email)
Retrieves password hash for given email.
- async Task< bool > [VerifyPassword](#) (string givenHash, string email)
Verifies given password with the one stored in database.
- string [GenerateJwtToken](#) (string email)
Generates jwt token for authorization.

Private Attributes

- readonly [IUserRepository](#) **_userRepo**
- readonly [IConfiguration](#) **_config**

6.41.1 Constructor & Destructor Documentation

6.41.1.1 UserService()

```
CRUDService.Service.UserService.UserService (
    IUserRepository userRepo,
    IConfiguration config) [inline]
```

Constructor supporting DI.

Parameters

<i>userRepo</i>	Injected IUserRepository object
<i>config</i>	Injected IConfiguration object

6.41.2 Member Function Documentation

6.41.2.1 Authenticate()

```
async Task< string?> CRUDService.Service.UserService.Authenticate (
    User user) [inline]
```

Hadnles user authentication.

Parameters

<i>user</i>	User object
-------------	-----------------------------

Returns

Returns Jwttoken as string or null

Implements [CRUDService.Service.IUserService](#).

6.41.2.2 FindUserPasswordHash()

```
async Task< string?> CRUDService.Service.UserService.FindUserPasswordHash (
    string email) [inline]
```

Retrieves password hash for given email.

Parameters

<i>email</i>	
--------------	--

Returns

Hashed password from the database for the given email or null

Implements [CRUDService.Service.IUserService](#).

6.41.2.3 GenerateJwtToken()

```
string CRUDService.Service.UserService.GenerateJwtToken (  
    string email) [inline]
```

Generates jwt token for authorization.

Parameters

<i>email</i>	
--------------	--

Returns

Jwt token as string

Implements [CRUDService.Service.IUserService](#).

6.41.2.4 VerifyPassword()

```
async Task< bool > CRUDService.Service.UserService.VerifyPassword (  
    string givenHash,  
    string email) [inline]
```

Verifies given password with the one stored in database.

Parameters

<i>givenHash</i>	Hshed password
<i>email</i>	

Returns

bool sqying whether givenHash is the same as the one stored in the databse for the given email

Implements [CRUDService.Service.IUserService](#).

The documentation for this class was generated from the following file:

- CRUDService/Service/UserService.cs

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