## DotnetIdentity

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## **Todo List**

Class DotNetIdentity.Controllers.AdminController

add translation

Class DotNetIdentity.Controllers.ErrorsController

add translation

Class DotNetIdentity.Controllers.UserController

add translation

Member DotNetIdentity.Controllers.UserController.Login (SignInViewModel viewModel)

Implement Ldap Login

Class DotNetIdentity.Services.SettingsService.SettingsService

add Idap settings class

2 Todo List

# Namespace Index

## 2.1 Namespace List

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# **Hierarchical Index**

## 3.1 Class Hierarchy

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

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# **Class Index**

### 4.1 Class List

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# **Namespace Documentation**

### 5.1 DotNetIdentity Namespace Reference

### 5.2 DotNetIdentity.Controllers Namespace Reference

### **Classes**

class AdminController

Controller Class for Admin views

· class ClaimBasedController

Controller to test ClaimBased Authorization

class CultureController

controller for culture settings

· class ErrorsController

Controller for error views

class HomeController

Controller for Home views

class RoleBasedController

Controller to test RoleBased Authorization

· class UserController

Controller Class for User views

### 5.3 DotNetIdentity.Data Namespace Reference

### **Classes**

class AppDbContext

Application Database context class

### 5.4 DotNetIdentity.Helpers Namespace Reference

### **Classes**

· class EmailHelper

class for email methods

### 5.5 DotNetIdentity.Helpers.TagHelpers Namespace Reference

#### Classes

· class UserProfileImageTagHelper

html taghelper class

· class UserRolesTagHelper

html tag helper class

### 5.6 DotNetIdentity.IdentitySettings Namespace Reference

### **Classes**

· class ClaimsTransformation

class to define own claims

· class ErrorDescriber

class to override IdentityErrorDescriber IdentotyError messages

· class TwoFactorAuthenticationService

class providing 2fa auth services

### 5.7 DotNetIdentity.IdentitySettings.Requirements Namespace Reference

### **Classes**

class FreeTrialExpireHandler

class to define own Identity requirements type of FreeTrialExpireRequirement

· class FreeTrialExpireRequirement

class to define own Identity requirements type of IAuthorizationRequirement

class MinimumAgeHandler

class implementing AuthorizationHandler of type MinimumAgeRequirement

· class MinimumAgeRequirement

class to define own Identity requirements type of IAuthorizationRequirement

### 5.8 DotNetIdentity.IdentitySettings.Validators Namespace Reference

### **Classes**

· class PasswordValidator

class to validate a password

· class UserValidator

class to validate IdentityUser

### 5.9 DotNetIdentity.Models Namespace Reference

### **Enumerations**

```
    enum Gender { Unknown , Male , Female }
        Gender enum
    enum Department { Software , HR , Accounting , Management }
        Department enum
    enum TwoFactorType { None , Email , Authenticator }
```

TwoFactorType enum

### 5.9.1 Enumeration Type Documentation

### 5.9.1.1 Department

```
enum DotNetIdentity.Models.Department
```

### Department enum

#### Enumerator

Software	summary>Department Softwaresummary>Department HR
HR	summary>Department Accounting
Accounting	summary>Department Management

### Definition at line 16 of file Enums.cs.

```
00016 {
00018 Software,
00020 HR,
00022 Accounting,
00024 Management }
```

### 5.9.1.2 Gender

enum DotNetIdentity.Models.Gender

Gender enum

#### Enumerator

Unknown	Unknown summary>gender unknownsummary>gender ma	
Male summary>gender female		

### Definition at line 6 of file Enums.cs.

```
00006 {
00008 Unknown,
00010 Male,
00012 Female }
```

### 5.9.1.3 TwoFactorType

```
enum DotNetIdentity.Models.TwoFactorType
```

### TwoFactorType enum

### **Enumerator**

None	summary>2fa type nonesummary>2fa type en	
Email	summary>2fa type Authenticator app	

### Definition at line 28 of file Enums.cs.

### 5.10 DotNetIdentity.Models.BusinessModels Namespace Reference

### **Classes**

· class EmailModel

class to define a email

class GlobalSettings

class to define a global settings object

class MailSettings

class to define a ail settings object

### 5.11 DotNetIdentity.Models.DataModels Namespace Reference

### **Classes**

class ApplicationSettings

class define an Settings object

class AppLogs

class to define ann Log object

• class SessionCache

class to define a SessionCache object

### 5.12 DotNetIdentity.Models.Identity Namespace Reference

### **Classes**

class AppRole

class to define a role object

class AppUser

class to define a user object

### 5.13 DotNetIdentity.Models.ViewModels Namespace Reference

### **Classes**

• class AssignRoleViewModel

model for UserEditView

class ChangePasswordViewModel

model for ChangePassword view

class EditUserViewModel

model for EditUser view

· class ErrorViewModel

model for displaying errors

class ForgotPasswordViewModel

model for ForgotPassword view

· class NewUserModel

model for NewUser view

class ResetPasswordViewModel

model for ResetPassword view

• class SignInViewModel

model for Login view

class SignUpViewModel

model for Register view

· class StatusCodesModel

model for Error Statuscodes

• class TwoFactorAuthenticatorViewModel

model for TwoFactorAuthenticator view

· class TwoFactorLoginVieWModel

the model for TwoFactorLogin view

class TwoFactorTypeViewModel

model for TwoFactorType view

• class UpdateProfileViewModel

model for UpdateProfile view

· class UpsertRoleViewModel

model for the UpsertRole view

### 5.14 DotNetIdentity.Services Namespace Reference

### 5.15 DotNetIdentity.Services.SettingsService Namespace Reference

### **Classes**

• class AppSettingsBase

base class for Settings classes

• interface ISettingsService

Interface class for SettingsService

class SettingsService

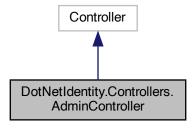
class for settings service

## **Class Documentation**

### 6.1 DotNetIdentity.Controllers.AdminController Class Reference

Controller Class for Admin views

Inheritance diagram for DotNetIdentity.Controllers.AdminController:



### **Public Member Functions**

AdminController (AppDbContext db, ILogger< AdminController > log, IConfiguration conf, UserManager
 AppUser > userManager, RoleManager
 AppBole > roleManager, SignInManager
 AppUser > signIn← Manager)

Controller Class constructor

IActionResult Index ()

Controller Action for Index

• IActionResult SystemLogs ()

Controller Action for SystemLogs

• IActionResult AuditLogs ()

Controller Action for AutditLogs

• IActionResult ErrorLogs ()

Controller Action for ErrorLogs

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async Task< IActionResult > Users ()

Controller Action for Users

async Task< IActionResult > Roles ()

Controller Action for Roles

IActionResult GetErrorLogs (DataRequest request)

Controller Post Method to fetch ErrorLogs

IActionResult GetAppLogs (DataRequest request)

Controller Post Method to fetch Applicationlogs

IActionResult GetAuditLogs (DataRequest request)

Controller Post Method to fetch AuditLogs

JsonResult GetUsers (DataRequest request)

Controller Post Method to fetch Users

async Task< IActionResult > NewUser ()

Controller Action for NewUser view

• async Task< ActionResult > NewUser (NewUserModel viewModel)

controler Post Method to save a new User

async Task< IActionResult > UpsertRole (string? id)

Controller Action for view UpsertRole

async Task< ActionResult > DisableUser (string UserId)

Controller GET Method to disable a user account

async Task< ActionResult > EnableUser (string UserId)

Controller GET Method to enable a user account

async Task< ActionResult > EnableLdapLogin (string UserId)

Controller GET Method to enable Idap login for a user account

async Task< ActionResult > DisableLdapLogin (string UserId)

Controller GET Method to disable Idap login for a user account

async Task< ActionResult > EnableMfaForce (string UserId)

Controller GET Method to enable mfa enforcement for a user account

async Task< ActionResult > DisableMfaForce (string UserId)

Controller GET Method to disable mfa enforcement for a user account

async Task< |ActionResult > UpsertRole (UpsertRoleViewModel viewModel)

Controller POST Method to enable a user account

• async Task< IActionResult > DeleteUser (string id)

Controller POST Method to delete a user account

async Task< IActionResult > DeleteRole (string id)

Controller POST Method to enable a role

async Task< IActionResult > EditUser (string id)

Controller action to serve the EditUserView

• async Task< IActionResult > EditUser (EditUserViewModel viewModel)

Controller POST Method to save user changes

### 6.1.1 Detailed Description

Controller Class for Admin views

Todo add translation

Definition at line 24 of file AdminController.cs.

### 6.1.2 Constructor & Destructor Documentation

### 6.1.2.1 AdminController()

### Controller Class constructor

### **Parameters**

db	type DotNetIdentity.Data.AppDbContext
log	type Microsoft.Extensions.Logging.lLogger
conf	type Microsoft.Extensions.Configuration.IConfiguration
userManager	type Microsoft.AspNetCore.Identity.UserManager
roleManager	type Microsoft.AspNetCore.Identity.RoleManager
signInManager	type Microsoft.AspNetCore.Identity.SignInManager

### Definition at line 60 of file AdminController.cs.

### 6.1.3 Member Function Documentation

### 6.1.3.1 AuditLogs()

```
IActionResult DotNetIdentity.Controllers.AdminController.AuditLogs ( )
```

### Controller Action for AutditLogs

### Returns

View of type DotnetIdentity. Views. Admin. AuditLogs

### 6.1.3.2 DeleteRole()

```
async Task< IActionResult > DotNetIdentity.Controllers.AdminController.DeleteRole ( string id ) [inline]
```

Controller POST Method to enable a role

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#### **Parameters**

```
id id of the role
```

#### Returns

redirect to controller action Roles

Definition at line 391 of file AdminController.cs.

```
00392
00393
                  var role = await _roleManager.FindByIdAsync(id);
00394
                  if (role != null)
00395
00396
                      var result = await _roleManager.DeleteAsync(role);
00397
                      if (!result.Succeeded)
00398
00399
                          result.Errors.ToList().ForEach(f => ModelState.AddModelError(string.Empty,
       f.Description));
00400
00401
00402
                  else
00403
                  {
                      ModelState.AddModelError(string.Empty, "Role not found.");
00404
00405
00406
                  _logger.LogInformation("AUDIT: " + User.Identity!.Name + " deleted role " + id);
00407
                  return RedirectToAction("Roles");
00408
```

### 6.1.3.3 DeleteUser()

```
async Task< IActionResult > DotNetIdentity.Controllers.AdminController.DeleteUser ( string id) [inline]
```

Controller POST Method to delete a user account

### **Parameters**

```
id the id of the user
```

### Returns

redirect to controller action Users

Definition at line 371 of file AdminController.cs.

```
00371
00372
                   var user = await _userManager.FindByIdAsync(id);
                   if(user!=null) {
   var result = await _userManager.DeleteAsync(user);
00373
00374
00375
                       if(!result.Succeeded) {
00376
                           result.Errors.ToList().ForEach(f => ModelState.AddModelError(string.Empty,
       f.Description));
00377
00378
                   } else {
00379
                       ModelState.AddModelError(string.Empty, "User not found.");
00380
00381
                   _logger.LogInformation("AUDIT: " + User.Identity!.Name + " deleted user " + id);
                   return RedirectToAction("Users");
00382
              }
00383
```

### 6.1.3.4 DisableLdapLogin()

```
\label{eq:async} \mbox{Task} < \mbox{ActionResult} > \mbox{DotNetIdentity.Controllers.AdminController.DisableLdapLogin (} \\ \mbox{string $UserId$} ) \mbox{ [inline]}
```

Controller GET Method to disable Idap login for a user account

#### **Parameters**

User←	the id of the user
ld	

#### Returns

ison object (true / false)

Definition at line 282 of file AdminController.cs.

```
00282
                    var user = await _userManager.FindByIdAsync(UserId);
00283
00284
                    if(user==null) {
00285
                         return Json(new { success = false });
00286
00287
                    user.IsLdapLogin = false;
                   await _userManager.UpdateAsync(user);
_logger.LogInformation("AUDIT: " + User.Identity!.Name + " disabled ldap login for user "
00288
00289
       + user.UserName);
00290
                   return Json(new {success = true});
00291
```

### 6.1.3.5 DisableMfaForce()

Controller GET Method to disable mfa enforcement for a user account

#### **Parameters**

User⊷	the id of the user
ld	

### Returns

json object (true / false)

Definition at line 316 of file AdminController.cs.

```
00316
                  var user = await _userManager.FindByIdAsync(UserId);
00317
00318
                  if(user==null) {
00319
                      return Json(new { success = false });
00320
00321
                  user.IsMfaForce = false;
00322
                 await _userManager.UpdateAsync(user);
                   _logger.LogInformation("AUDIT: " + User.Identity!.Name + " disabled mfa enforce for user "
00323
       + user.UserName);
00324
                  return Json(new {success = true});
00325
```

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### 6.1.3.6 DisableUser()

```
async Task< ActionResult > DotNetIdentity.Controllers.AdminController.DisableUser ( string \ \textit{UserId} \ ) \quad [inline]
```

Controller GET Method to disable a user account

#### **Parameters**

```
User← the id of the user Id
```

#### Returns

json object (true / false)

Definition at line 231 of file AdminController.cs.

```
00231
                  var user = await _userManager.FindByIdAsync(UserId);
00232
00233
                  if(user==null) {
                      return Json(new { success = false });
00234
00235
00236
                  user.IsEnabled = false;
00237
                 await _userManager.UpdateAsync(user);
00238
                   _logger.LogInformation("AUDIT: " + User.Identity!.Name + " disabled user " +
      user.UserName);
00239
                  return Json(new {success = true});
00240
```

### 6.1.3.7 EditUser() [1/2]

Controller POST Method to save user changes

#### **Parameters**

```
viewModel a model of type Dotnetidentity.Models.ViewModels.EditUserViewModel
```

### Returns

view of type Dotnetidentity. Views. Admin. EditUser

### Definition at line 448 of file AdminController.cs.

```
00450
                  if (ModelState.IsValid)
00451
00452
                      var user = await _userManager.FindByIdAsync(viewModel.Id);
00453
                      if (user != null)
00454
00455
                           if (user.PhoneNumber != viewModel.PhoneNumber && _userManager.Users.Any(a =>
       a.PhoneNumber == viewModel.PhoneNumber))
00456
00457
                              ModelState.AddModelError(string.Empty, "Phone number already in use.");
00458
                          }
00459
                          else
```

```
00460
                           {
                               user.FirstName = viewModel.FirstName;
00461
00462
                               user.LastName = viewModel.LastName;
                               user.UserName = viewModel.UserName;
00463
00464
                               user.Email = viewModel.Email;
00465
                               user.PhoneNumber = viewModel.PhoneNumber;
00466
                               user.Gender = viewModel.Gender;
00467
                               user.Department = viewModel.Department.ToString();
00468
00469
                               var result = await _userManager.UpdateAsync(user);
00470
                               if (result.Succeeded)
00471
00472
                                   // Roles
00473
                                   foreach (var item in viewModel.Roles)
00474
00475
                                        if (item.IsAssigned)
00476
00477
                                           await _userManager.AddToRoleAsync(user, item.RoleName);
00478
00479
                                       else
00480
                                       {
00481
                                           await _userManager.RemoveFromRoleAsync(user, item.RoleName);
00482
00483
00484
00485
                                   // Claims
00486
                                   var userClaims = await _userManager.GetClaimsAsync(user);
00487
                                   var departmentClaim = userClaims.FirstOrDefault(a => a.Type ==
       "Department");
00488
                                   var claimsToAdd = new Claim("Department",
       Enum.GetName(viewModel.Department)!);
00489
                                   if (departmentClaim != null)
00490
00491
                                       await _userManager.ReplaceClaimAsync(user, departmentClaim,
       claimsToAdd);
00492
00493
                                   else
00495
                                       await _userManager.AddClaimAsync(user, claimsToAdd);
00496
                                   _logger.LogInformation("AUDIT: " + User.Identity!.Name + " modified user "
00497
       + user.UserName):
00498
                                   return RedirectToAction("Users"):
00499
00500
                               result.Errors.ToList().ForEach(f => ModelState.AddModelError(string.Empty,
       f.Description));
00501
                           }
00502
00503
                       else
00504
00505
                           ModelState.AddModelError(string.Empty, "User not found.");
00506
00507
00508
                  return View(viewModel):
00509
00510
              }
```

References DotNetIdentity.Models.ViewModels.EditUserViewModel.Department, DotNetIdentity.Models.ViewModels.EditUserViewModel.Department, DotNetIdentity.Models.ViewModels.EditUserViewModel.Gender, DotNetIdentity.Models.ViewModels.EditUserViewModel.Gender, DotNetIdentity.Models.ViewModels.EditUserViewModel.LastName, DotNetIdentity.Models.ViewModels.EditUserViewModel.PhoneNumber, DotNetIdentity.Models.ViewModels.EditUserViewModel.Roles and DotNetIdentity.Models.ViewModels.EditUserViewModel.UserName.

### 6.1.3.8 EditUser() [2/2]

```
async Task< IActionResult > DotNetIdentity.Controllers.AdminController.EditUser ( string id) [inline]
```

Controller action to serve the EditUserView

#### **Parameters**

id the id of the user

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#### Returns

view of type DotNetIdentity.Models.ViewModels.EditUserViewModel

Definition at line 415 of file AdminController.cs.

```
00416
00417
                  var user = await _userManager.FindByIdAsync(id);
00418
                   if (user == null)
00419
00420
                       return RedirectToAction("Users");
00421
                  var viewModel = user.Adapt<EditUserViewModel>();
00422
00423
00424
                  var userRoles = await _userManager.GetRolesAsync(user);
00425
                  viewModel.Roles = await _roleManager.Roles.Select(s => new AssignRoleViewModel
00426
00427
                       RoleId = s.Id
                      RoleName = s.Name,
IsAssigned = userRoles.Any(a => a == s.Name)
00428
00429
00430
                  }).ToListAsync();
00431
00432
                  var userClaims = await _userManager.GetClaimsAsync(user);
00433
                  var departmentClaim = userClaims.FirstOrDefault(f => f.Type == "Department");
                  if (departmentClaim != null)
00434
00435
00436
                       viewModel.Department = Enum.Parse<Department>(departmentClaim.Value);
00437
                  }
00438
00439
                  return View(viewModel);
00440
```

References DotNetIdentity.Models.ViewModels.EditUserViewModel.Roles.

### 6.1.3.9 EnableLdapLogin()

Controller GET Method to enable Idap login for a user account

### **Parameters**

User⇔	the id of the user
ld	

#### Returns

json object (true / false)

Definition at line 265 of file AdminController.cs.

```
00265
00266
                  var user = await _userManager.FindByIdAsync(UserId);
00267
                  if(user==null) {
                      return Json(new { success = false });
00268
00269
00270
                  user.IsLdapLogin = true;
00271
                  await _userManager.UpdateAsync(user);
00272
                  _logger.LogInformation("AUDIT: " + User.Identity!.Name + " enabled LDAP login for user " +
       user.UserName);
00273
                  return Json(new {success = true});
              }
00274
```

#### 6.1.3.10 EnableMfaForce()

```
\label{eq:async} \mbox{Task} < \mbox{ActionResult} > \mbox{DotNetIdentity.Controllers.AdminController.EnableMfaForce (} \\ \mbox{string $UserId$} ) \mbox{ [inline]}
```

#### Controller GET Method to enable mfa enforcement for a user account

#### **Parameters**

User⊷	the id of the user
ld	

#### Returns

json object (true / false)

## Definition at line 299 of file AdminController.cs.

```
00299
00300
                  var user = await _userManager.FindByIdAsync(UserId);
00301
                  if(user==null) {
                      return Json(new { success = false });
00302
00303
00304
                  user.IsMfaForce = true;
00305
                 await _userManager.UpdateAsync(user);
00306
                   _logger.LogInformation("AUDIT: " + User.Identity!.Name + " enabled mfa enforce for user "
       + user.UserName);
00307
                  return Json(new {success = true});
00308
```

#### 6.1.3.11 EnableUser()

## Controller GET Method to enable a user account

#### **Parameters**

User⊷	the id of the user
ld	

#### Returns

json object (true / false)

### Definition at line 248 of file AdminController.cs.

```
00248
00249
                    var user = await _userManager.FindByIdAsync(UserId);
00250
                    if(user==null) {
00251
                        return Json(new { success = false });
00252
00253
                    user.IsEnabled = true;
                   await _userManager.UpdateAsync(user);
_logger.LogInformation("AUDIT: " + User.Identity!.Name + " enabled user " +
00254
00255
       user.UserName);
00256
                    return Json(new {success = true});
00257
```

## 6.1.3.12 ErrorLogs()

IActionResult DotNetIdentity.Controllers.AdminController.ErrorLogs ( )

Controller Action for ErrorLogs

Returns

View of type DotnetIdentity. Views. Admin. Errorogs

## 6.1.3.13 GetAppLogs()

Controller Post Method to fetch Applicationlogs

**Parameters** 

```
request type DatatablesJs.Data.DataRequest
```

Returns

Jason-Array of DatatablesJs.Data.DataResult

```
Definition at line 119 of file AdminController.cs.
```

## 6.1.3.14 GetAuditLogs()

Controller Post Method to fetch AuditLogs

**Parameters** 

```
request type DatatablesJs.Data.DataRequest
```

Returns

Jason-Array of DatatablesJs.Data.DataResult

```
Definition at line 131 of file AdminController.cs.
```

#### 6.1.3.15 GetErrorLogs()

Controller Post Method to fetch ErrorLogs

#### **Parameters**

```
request type DatatablesJs.Data.DataRequest
```

#### Returns

Jason-Array of DatatablesJs.Data.DataResult

#### Definition at line 107 of file AdminController.cs.

#### 6.1.3.16 GetUsers()

```
JsonResult DotNetIdentity.Controllers.AdminController.GetUsers ( {\tt DataRequest}\ request\ )\ [{\tt inline}]
```

Controller Post Method to fetch Users

### **Parameters**

```
request type DatatablesJs.Data.DataRequest
```

#### Returns

Jason-Array of DatatablesJs.Data.DataResult

#### Definition at line 143 of file AdminController.cs.

## 6.1.3.17 Index()

IActionResult DotNetIdentity.Controllers.AdminController.Index ( )

Controller Action for Index

Returns

View of type DotnetIdentity. Views. Admin. Index

## 6.1.3.18 NewUser() [1/2]

```
async Task< IActionResult > DotNetIdentity.Controllers.AdminController.NewUser ( ) [inline]
```

Controller Action for NewUser view

Returns

view of type DotnetIdentity. Views. Admin. NewUser

```
Definition at line 152 of file AdminController.cs.
```

#### 6.1.3.19 NewUser() [2/2]

```
\label{eq:async} \mbox{Task} < \mbox{ActionResult} > \mbox{DotNetIdentity.Controllers.AdminController.NewUser (} \\ \mbox{NewUserModel } \mbox{viewModel }) \mbox{ [inline]}
```

controler Post Method to save a new User

**Parameters** 

```
viewModel | type DotnetIdentity.Models.ViewModels.NewUserModel
```

Returns

view of type DotnetIdentity. Views. Admin. New User

```
Definition at line 170 of file AdminController.cs.
```

```
00172
                   if (ModelState.IsValid)
00173
00174
                      var user = new AppUser();
00175
                      user.IsEnabled = true;
                      user.IsMfaForce = viewModel.IsMfaForce;
00176
00177
                      user.IsLdapLogin = viewModel.IsLdapLogin;
00178
                      user.FirstName = viewModel.FirstName;
00179
                      user.LastName = viewModel.LastName;
00180
                      user.Email = viewModel.Email;
00181
                      user.EmailConfirmed = true;
                      user.Gender = viewModel.Gender;
00182
00183
                      user.Department = viewModel.Department.ToString();
00184
                      user.UserName = viewModel.UserName;
00185
                       var result = await _userManager.CreateAsync(user, viewModel.Password);
00186
00187
                       if (result.Succeeded)
00188
00189
                           // roles
00190
                           foreach (var item in viewModel.Roles)
00191
00192
                               if (item. Is Assigned)
00193
00194
                                   await _userManager.AddToRoleAsync(user, item.RoleName);
00195
00196
                               else
00197
00198
                                   await _userManager.RemoveFromRoleAsync(user, item.RoleName);
00199
00200
                           }
00201
00202
00203
                      ViewData["message"] = "User created success fully.";
00204
                      _logger.LogInformation("AUDIT: " + User.Identity!.Name + " created new user " +
       user.UserName);
00205
00206
                   return View(new NewUserModel());
00207
```

References DotNetIdentity.Models.ViewModels.NewUserModel.Department, DotNetIdentity.Models.ViewModels.NewUserModel.Ema DotNetIdentity.Models.ViewModels.NewUserModel.FirstName, DotNetIdentity.Models.ViewModels.NewUserModel.Gender, DotNetIdentity.Models.ViewModels.NewUserModel.IsLdapLogin, DotNetIdentity.Models.ViewModels.NewUserModel.IsMfaForce, DotNetIdentity.Models.ViewModels.NewUserModel.LastName, DotNetIdentity.Models.ViewModels.NewUserModel.Password, DotNetIdentity.Models.ViewModels.NewUserModel.Roles, and DotNetIdentity.Models.ViewModels.NewUserModel.UserName.

#### 6.1.3.20 Roles()

 ${\tt async \ Task< IActionResult > DotNetIdentity.Controllers.AdminController.Roles \ ()}$ 

Controller Action for Roles

Returns

View of type DotnetIdentity. Views. Admin. Users

#### 6.1.3.21 SystemLogs()

IActionResult DotNetIdentity.Controllers.AdminController.SystemLogs ( )

Controller Action for SystemLogs

Returns

View of type DotnetIdentity. Views. Admin. SystemLogs

#### 6.1.3.22 UpsertRole() [1/2]

```
async Task< IActionResult > DotNetIdentity.Controllers.AdminController.UpsertRole ( string? id) [inline]
```

Controller Action for view UpsertRole

**Parameters** 



Returns

view of type Dotnetidentity. Views. Admin. UpsertRole

Definition at line 214 of file AdminController.cs.

### 6.1.3.23 UpsertRole() [2/2]

```
\label{eq:async} \verb| Task < IActionResult > DotNetIdentity.Controllers.AdminController.UpsertRole ( \\ | UpsertRoleViewModel \ viewModel \ ) \ [inline] \\
```

Controller POST Method to enable a user account

**Parameters** 

viewModel tmodel of type Dotnetidentity.Models.ViewModels.UpsertRoleViewModel

Returns

redirect to controller action Roles

Definition at line 333 of file AdminController.cs.

```
00334
00335
                  if (ModelState.IsValid)
00336
00337
                      var isUpdate = viewModel.Id != null;
00338
                      var role = isUpdate ? await _roleManager.FindByIdAsync(viewModel.Id) : new AppRole() {
00339
      Name = viewModel.Name, CreatedOn = DateTime.Now };
00340
00341
                      if (isUpdate)
00342
00343
                          role.Name = viewModel.Name;
00344
00345
                      var result = isUpdate ? await _roleManager.UpdateAsync(role) : await
00346
      _roleManager.CreateAsync(role);
00347
                      if (result.Succeeded)
```

```
00348
00349
                            if(isUpdate) {
       _logger.LogInformation("AUDIT: " + User.Identity!.Name + " changed name of " + viewModel.Id + " to " + viewModel.Name);
00350
00351
                           } else {
                                _logger.LogInformation("AUDIT: " + User.Identity!.Name + " created role " +
00352
       viewModel.Name);
00353
00354
                           return RedirectToAction("Roles");
00355
                       result.Errors.ToList().ForEach(f => ModelState.AddModelError(string.Empty,
00356
      f.Description));
00357
                       result.Errors.ToList().ForEach(f => TempData["Error"] += f.Description);
00358
00359
                   //return View(viewModel);
//return View("Roles", await _roleManager.Roles.ToListAsync());
00360
00361
00362
                   return RedirectToAction("Roles");
00363
```

References DotNetIdentity.Models.ViewModels.UpsertRoleViewModel.Id, and DotNetIdentity.Models.ViewModels.UpsertRoleViewModels.UpsertRol

#### 6.1.3.24 Users()

```
async Task< IActionResult > DotNetIdentity.Controllers.AdminController.Users ( )
```

Controller Action for Users

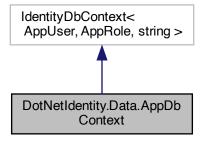
Returns

View of type DotnetIdentity. Views. Admin. Users

## 6.2 DotNetIdentity.Data.AppDbContext Class Reference

Application Database context class

Inheritance diagram for DotNetIdentity.Data.AppDbContext:



## **Public Member Functions**

AppDbContext (DbContextOptions < AppDbContext > options)
 class constructor

## **Protected Member Functions**

override void OnModelCreating (ModelBuilder builder)
 Overriding OnModelCreation to seed intitial data

## **Properties**

```
    DbSet < AppLogs >? AppLogs [get, set]
        Property AppLogs
    DbSet < ApplicationSettings >? AppSettings [get, set]
        property AppSettings
    DbSet < SessionCache >? AppSessionCache [get, set]
        property AppSessionCache
```

## 6.2.1 Detailed Description

Application Database context class

Definition at line 12 of file AppDbContext.cs.

## 6.2.2 Constructor & Destructor Documentation

## 6.2.2.1 AppDbContext()

Returns

```
Definition at line 19 of file AppDbContext.cs.

00019
00020 } : base(options) {
```

## 6.2.3 Member Function Documentation

#### 6.2.3.1 OnModelCreating()

#### Overriding OnModelCreation to seed intitial data

#### **Parameters**

builder type ModelBuilder

```
Definition at line 41 of file AppDbContext.cs.
```

```
00042
00043
                    base.OnModelCreating(builder):
00044
00045
                    builder.Entity<ApplicationSettings>()
00046
                              .HasKey(x => new { x.Name, x.Type });
00047
00048
                    builder.Entity<ApplicationSettings>()
00049
                                   .Property(x => x.Value);
00050
00051
                        seeding default settings
                    builder.Entity<ApplicationSettings>().HasData(new ApplicationSettings {Name =
00052
        "ApplicationName", Type = "GlobalSettings", Value = "SecPass"});
        builder.Entity<ApplicationSettings>().HasData(new ApplicationSettings {Name =
"SessionTimeoutWarnAfter", Type = "GlobalSettings", Value = "50000"});
builder.Entity<ApplicationSettings>().HasData(new ApplicationSettings {Name =
00053
00054
        "SessionTimeoutRedirAfter", Type = "GlobalSettings", Value = "70000"});
        builder.Entity-ApplicationSettings>().HasData(new ApplicationSettings {Name = "SessionCookieExpiration", Type = "GlobalSettings", Value = "7"});
00055
        builder.Entity<ApplicationSettings>().HasData(new ApplicationSettings {Name = "Username",
Type = "MailSettings", Value = "YOUR_Smtp_Username"});
00056
00057
                    builder.Entity<ApplicationSettings>().HasData(new ApplicationSettings {Name = "Password",
        Type = "MailSettings", Value = "YOUR_SmtpPassword");
builder.Entity<ApplicationSettings>().HasData(new ApplicationSettings {Name =
        "SmtpServer", Type = "MailSettings", Value = "YOUR_SmtpServer"});
        builder.Entity<ApplicationSettings>().HasData(new ApplicationSettings {Name = "SmtpPort",
Type = "MailSettings", Value = "587"});
00059
                    builder.Entity<ApplicationSettings>().HasData(new ApplicationSettings {Name =
00060
        "SmtpUseTls", Type = "MailSettings", Value = "true"});
                    builder.Entity<ApplicationSettings>().HasData(new ApplicationSettings {Name =
00061
        "SmtpFromAddress", Type = "MailSettings", Value = "YOUR_From_Address"});
00062
00063
                     //Seeding roles to AspNetRoles table
                    builder.Entity<AppRole>().HasData(new AppRole { Id =
00064
        "dffc6dd5-b145-41e9-a861-c87ff673e9ca", Name = "Admin", NormalizedName = "ADMIN".ToUpper() });
00065
                    builder.Entity<AppRole>().HasData(new AppRole { Id =
        "f8a527ac-d7f6-4d9d-aca6-46b2261b042b", Name = "User", NormalizedName = "USER".ToUpper() });
00066
                    builder.Entity<AppRole>().HasData(new AppRole { Id =
        g7a527ac-d7t6-4d7z-aca6-45t2261b042b", Name = "Editor", NormalizedName = "EDITOR".ToUpper() });
        builder.Entity<AppRole>().HasData(new AppRole { Id = "p9a527ac-d77w-4d3r-aca6-35b2261b042b", Name = "Moderator", NormalizedName = "MODERATOR".ToUpper()
00067
00068
00069
00070
00071
                     //a hasher to hash the password before seeding the user to the db
00072
                    var hasher = new PasswordHasher<AppUser>();
00073
00074
                     //Seeding the Admin User to AspNetUsers table
00075
                    builder.Entity<AppUser>().HasData(
00076
                         new AppUser
00077
                              Id = "6fbfb682-568c-4f5b-a298-85937ca4f7f3", // primary key
00078
00079
                              UserName = "super.admin",
                              NormalizedUserName = "SUPER.ADMIN",
00080
                              PasswordHash = hasher.HashPassword(null!, "Test1000!"),
00081
00082
                              Email = "super.admin@local.app"
00083
                              NormalizedEmail = "SUPER.ADMIN@LOCAL.APP",
                              EmailConfirmed = true,
00084
                              FirstName = "Super",
LastName = "Admin",
00085
00086
                              IsMfaForce = false,
00087
                              IsLdapLogin = false,
00088
00089
                              IsEnabled = true
00090
00091
                    );
00092
00093
                     //Seeding the relation between our user and role to AspNetUserRoles table
```

## 6.2.4 Property Documentation

#### 6.2.4.1 AppLogs

```
DbSet<AppLogs>? DotNetIdentity.Data.AppDbContext.AppLogs [get], [set]
```

#### Property AppLogs

Definition at line 25 of file AppDbContext.cs. 00025 {get;set;}

#### 6.2.4.2 AppSessionCache

```
DbSet<SessionCache>? DotNetIdentity.Data.AppDbContext.AppSessionCache [get], [set]
property AppSessionCache
```

Definition at line 35 of file AppDbContext.cs.

00035 {get:set:}

## 6.2.4.3 AppSettings

```
DbSet<ApplicationSettings>? DotNetIdentity.Data.AppDbContext.AppSettings [get], [set]
```

property AppSettings

Definition at line 30 of file AppDbContext.cs. 00030 {get;set;}

Referenced by DotNetIdentity.Services.SettingsService.AppSettingsBase.Load(), and DotNetIdentity.Services.SettingsService.AppSettingsBase.Load()

# 6.3 DotNetIdentity.Models.DataModels.ApplicationSettings Class Reference

class define an Settings object

## **Properties**

## 6.3.1 Detailed Description

class define an Settings object

Definition at line 7 of file ApplicationSettings.cs.

## 6.3.2 Property Documentation

## 6.3.2.1 Name

```
string? DotNetIdentity.Models.DataModels.ApplicationSettings.Name [get], [set]
property name
string

Definition at line 12 of file ApplicationSettings.cs.
00012 {get;set;}
```

 $Referenced\ by\ DotNetIdentity. Services. Settings Service. App Settings Base. Save ().$ 

## 6.3.2.2 Type

```
string? DotNetIdentity.Models.DataModels.ApplicationSettings.Type [get], [set]
property Type
string

Definition at line 17 of file ApplicationSettings.cs.
00017 {get; set;}
```

## 6.3.2.3 Value

```
string? DotNetIdentity.Models.DataModels.ApplicationSettings.Value [get], [set]
property value
string

Definition at line 22 of file ApplicationSettings.cs.
00022 {get;set;}
```

## 6.4 DotNetIdentity.Models.DataModels.AppLogs Class Reference

class to define ann Log object

## **Properties**

```
    int id [get, set]
        property id
    string? Exception [get, set]
        property Exception
    string Level = string.Empty [get, set]
        property Level
    string Message = string.Empty [get, set]
        property Message
    string MessageTemplate = string.Empty [get, set]
        property MessageTemplate
    string Properties = string.Empty [get, set]
        property Properties
    string Timestamp = string.Empty [get, set]
        property Timestamp
```

## 6.4.1 Detailed Description

class to define ann Log object

Definition at line 5 of file AppLogs.cs.

## 6.4.2 Property Documentation

#### 6.4.2.1 Exception

```
string? DotNetIdentity.Models.DataModels.AppLogs.Exception [get], [set]
property Exception
string

Definition at line 15 of file AppLogs.cs.
00015 {get;set;}
```

## 6.4.2.2 id

```
int DotNetIdentity.Models.DataModels.AppLogs.id [get], [set]
property id
int
```

Definition at line 10 of file AppLogs.cs.

00010 {get;set;}

#### 6.4.2.3 Level

```
string DotNetIdentity.Models.DataModels.AppLogs.Level = string.Empty [get], [set]
property Level
```

string

Definition at line 20 of file AppLogs.cs. 00020 {get;set;} = string.Empty;

#### 6.4.2.4 Message

```
string DotNetIdentity.Models.DataModels.AppLogs.Message = string.Empty [get], [set]
property Message
```

string

```
Definition at line 25 of file AppLogs.cs. 00025 {get;set;} = string.Empty;
```

#### 6.4.2.5 MessageTemplate

```
string DotNetIdentity.Models.DataModels.AppLogs.MessageTemplate = string.Empty [get], [set]
property MessageTemplate
string

Definition at line 30 of file AppLogs.cs.
00030 {get;set;} = string.Empty;
```

## 6.4.2.6 Properties

```
string DotNetIdentity.Models.DataModels.AppLogs.Properties = string.Empty [get], [set]
property Properties
string
Definition at line 35 of file AppLogs.cs.
00035 {get;set;} = string.Empty;
```

## 6.4.2.7 Timestamp

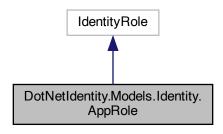
```
string DotNetIdentity.Models.DataModels.AppLogs.Timestamp = string.Empty [get], [set]
property Timestamp
string

Definition at line 40 of file AppLogs.cs.
00040 {get;set;} = string.Empty;
```

## 6.5 DotNetIdentity.Models.Identity.AppRole Class Reference

class to define a role object

Inheritance diagram for DotNetIdentity.Models.Identity.AppRole:



## **Properties**

• DateTime CreatedOn [get, set]

property created on

## 6.5.1 Detailed Description

class to define a role object

Definition at line 8 of file AppRole.cs.

## 6.5.2 Property Documentation

#### 6.5.2.1 CreatedOn

```
DateTime DotNetIdentity.Models.Identity.AppRole.CreatedOn [get], [set]
```

property created on

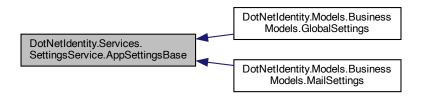
DateTime

Definition at line 14 of file AppRole.cs. 00014 { get; set; }

# 6.6 DotNetIdentity.Services.SettingsService.AppSettingsBase Class Reference

base class for Settings classes

Inheritance diagram for DotNetIdentity.Services.SettingsService.AppSettingsBase:



## **Public Member Functions**

• AppSettingsBase ()

class constructor

virtual void Load (AppDbContext unitOfWork)

load method

virtual void Save (AppDbContext unitOfWork)

save method

## 6.6.1 Detailed Description

base class for Settings classes

Definition at line 9 of file AppSettingsBase.cs.

## 6.6.2 Constructor & Destructor Documentation

## 6.6.2.1 AppSettingsBase()

```
DotNetIdentity.Services.SettingsService.AppSettingsBase.AppSettingsBase ( ) [inline]
```

class constructor

```
Definition at line 23 of file AppSettingsBase.cs.
```

## 6.6.3 Member Function Documentation

## 6.6.3.1 Load()

load method

**Parameters** 

unitOfWork	type DbContext
	-71

Definition at line 35 of file AppSettingsBase.cs.

```
00037
                   // ARGUMENT CHECKING SKIPPED FOR BREVITY
                  \ensuremath{//} 3 get settings for this type name
00038
00039
                  var settings = unitOfWork.AppSettings!.Where(w => w.Type == _name).ToList();
00040
00041
                  foreach (var propertyInfo in _properties)
00042
00043
                       // get the setting from the settings list
00044
                       var setting = settings.SingleOrDefault(s => s.Name == propertyInfo.Name);
                       if (setting != null)
00045
00046
00047
                           // 4 assign the setting values to the properties in the type inheriting this class
                          propertyInfo.SetValue(this, Convert.ChangeType(setting.Value,
      propertyInfo.PropertyType));
00049
00050
00051
              }
```

References DotNetIdentity.Data.AppDbContext.AppSettings.

#### 6.6.3.2 Save()

save method

**Parameters** 

```
unitOfWork type DbContext
```

Definition at line 57 of file AppSettingsBase.cs.

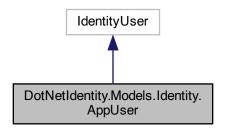
```
00058
                  // 5 load existing settings for this type
00060
                  var settings = unitOfWork.AppSettings!.Where(w => w.Type == _name).ToList();
00061
00062
                  foreach (var propertyInfo in _properties)
00063
                      object propertyValue = propertyInfo.GetValue(this, null)!;
00064
00065
                      string value = (propertyValue == null) ? null! : propertyValue.ToString()!;
00066
00067
                      var setting = settings.SingleOrDefault(s => s.Name == propertyInfo.Name);
00068
                      if (setting != null)
00069
00070
                          // 6 update existing value
00071
                          setting.Value = value;
00072
00073
00074
00075
                          // 7 create new setting
00076
                          var newSetting = new ApplicationSettings()
00077
00078
                              Name = propertyInfo.Name,
00079
                               Type = _name,
00080
                              Value = value,
00081
00082
                          unitOfWork.AppSettings!.Add(newSetting);
00083
00084
                  }
00085
```

 $References\ Dot Net Identity. Data. App Db Context. App Settings, \ and\ Dot Net Identity. Models. Data Models. Application Settings. Name.$ 

## 6.7 DotNetIdentity.Models.Identity.AppUser Class Reference

class to define a user object

Inheritance diagram for DotNetIdentity.Models.Identity.AppUser:



## **Properties**

```
• TwoFactorType TwoFactorType [get, set]
    2fa type property
• DateTime BirthDay [get, set]
    birthday property
• Gender Gender [get, set]
    gender property
• DateTime CreatedOn [get, set]
    birthday CreatedOn
• String? FirstName = string.Empty [get, set]
     firstname property
• String? LastName = string.Empty [get, set]
    lastname property
• bool IsMfaForce [get, set]
    2fa force property
• bool lsLdapLogin [get, set]
    Idap login property
• string? Department = string.Empty [get, set]
    department property
• string? ProfilePicture [get, set]
    profile picture proerty
• bool lsEnabled [get, set]
    account enbaled property
```

## 6.7.1 Detailed Description

class to define a user object

Definition at line 8 of file AppUser.cs.

## 6.7.2 Property Documentation

#### 6.7.2.1 BirthDay

```
DateTime DotNetIdentity.Models.Identity.AppUser.BirthDay [get], [set]
```

birthday property

DateTime

Definition at line 19 of file AppUser.cs.

```
00019 { get; set; }
```

## 6.7.2.2 CreatedOn

```
DateTime DotNetIdentity.Models.Identity.AppUser.CreatedOn [get], [set]
```

birthday CreatedOn

DateTime

Definition at line 29 of file AppUser.cs.

```
00029 { get; set; }
```

## 6.7.2.3 Department

```
string? DotNetIdentity.Models.Identity.AppUser.Department = string.Empty [get], [set]
```

department property

Department

Definition at line 54 of file AppUser.cs.

```
00054 { get; set; } = string.Empty;
```

#### 6.7.2.4 FirstName

```
String? DotNetIdentity.Models.Identity.AppUser.FirstName = string.Empty [get], [set]
```

firstname property

string

```
Definition at line 34 of file AppUser.cs. 00034 {get; set;} = string.Empty;
```

## 6.7.2.5 Gender

```
Gender DotNetIdentity.Models.Identity.AppUser.Gender [get], [set]
gender property
Gender
```

Definition at line 24 of file AppUser.cs. 00024 { get; set; }

## 6.7.2.6 IsEnabled

```
bool DotNetIdentity.Models.Identity.AppUser.IsEnabled [get], [set]
```

account enbaled property

bool

Definition at line 64 of file AppUser.cs. 00064 {get; set;}

## 6.7.2.7 IsLdapLogin

```
bool DotNetIdentity.Models.Identity.AppUser.IsLdapLogin [get], [set]
```

Idap login property

bool

Definition at line 49 of file AppUser.cs. 00049 {get; set;}

#### 6.7.2.8 IsMfaForce

```
bool DotNetIdentity.Models.Identity.AppUser.IsMfaForce [get], [set]
```

2fa force property

bool

Definition at line 44 of file AppUser.cs. 00044 {get; set;}

#### 6.7.2.9 LastName

```
String? DotNetIdentity.Models.Identity.AppUser.LastName = string.Empty [get], [set]
lastname property
string
Definition at line 39 of file AppUser.cs.
00039 {get; set;} = string.Empty;
```

#### 6.7.2.10 ProfilePicture

```
string? DotNetIdentity.Models.Identity.AppUser.ProfilePicture [get], [set]
profile picture proerty
string

Definition at line 59 of file AppUser.cs.
00059 { get; set; }
```

## 6.7.2.11 TwoFactorType

```
TwoFactorType DotNetIdentity.Models.Identity.AppUser.TwoFactorType [get], [set]
2fa type property
TwoFactorType
Definition at line 14 of file AppUser.cs.
00014 { get; set; }
```

# 6.8 DotNetIdentity.Models.ViewModels.AssignRoleViewModel Class Reference

model for UserEditView

## **Properties**

```
    string Roleld = default! [get, set]
        the role id
    string RoleName = default! [get, set]
        the role neame
    bool IsAssigned [get, set]
        if role is assigned
```

## 6.8.1 Detailed Description

model for UserEditView

Definition at line 6 of file AssignRoleViewModel.cs.

## 6.8.2 Property Documentation

## 6.8.2.1 IsAssigned

```
bool DotNetIdentity.Models.ViewModels.AssiqnRoleViewModel.IsAssiqned [qet], [set]
```

if role is assigned

bool

Definition at line 22 of file AssignRoleViewModel.cs.

```
00022 { get; set; }
```

#### 6.8.2.2 Roleld

```
string DotNetIdentity.Models.ViewModels.AssignRoleViewModel.RoleId = default! [get], [set]
```

the role id

string

Definition at line 12 of file AssignRoleViewModel.cs. 00012 { get; set; } = default!;

#### 6.8.2.3 RoleName

```
string DotNetIdentity.Models.ViewModels.AssignRoleViewModel.RoleName = default! [get], [set]
```

the role neame

string

Definition at line 17 of file AssignRoleViewModel.cs.

```
00017 { get; set; } = default!;
```

# 6.9 DotNetIdentity.Models.ViewModels.ChangePasswordViewModel Class Reference

model for ChangePassword view

## **Properties**

```
    string Password = default! [get, set]
        the password
    string NewPassword = default! [get, set]
        the new password
    string NewPasswordConfirm = default! [get, set]
        the new password confirmed
```

## 6.9.1 Detailed Description

model for ChangePassword view

Definition at line 8 of file ChangePasswordViewModel.cs.

## 6.9.2 Property Documentation

#### 6.9.2.1 NewPassword

```
string DotNetIdentity.Models.ViewModels.ChangePasswordViewModel.NewPassword = default! [get],
[set]
```

the new password

string

Definition at line 19 of file ChangePasswordViewModel.cs. 00019 { get; set; } = default!;

Referenced by DotNetIdentity.Controllers.UserController.ChangePassword().

#### 6.9.2.2 NewPasswordConfirm

```
string DotNetIdentity.Models.ViewModels.ChangePasswordViewModel.NewPasswordConfirm = default!
[get], [set]
```

the new password confirmed

string

Definition at line 25 of file ChangePasswordViewModel.cs. 00025 { get; set; } = default!;

#### 6.9.2.3 Password

string DotNetIdentity.Models.ViewModels.ChangePasswordViewModel.Password = default! [get],
[set]

the password

string

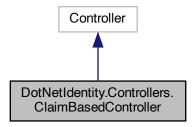
Definition at line 14 of file ChangePasswordViewModel.cs. 00014 { get; set; } = default!;

Referenced by DotNetIdentity.Controllers.UserController.ChangePassword().

## 6.10 DotNetIdentity.Controllers.ClaimBasedController Class Reference

Controller to test ClaimBased Authorization

Inheritance diagram for DotNetIdentity.Controllers.ClaimBasedController:



## **Public Member Functions**

· IActionResult HR ()

Controller action for HR view

• IActionResult Software ()

Controller action for Software view

IActionResult Employee ()

Controller action for Employee view

• IActionResult FreeTrial ()

Controller action for FreeTrial view

• IActionResult Violence ()

Controller action for AtLeast18Policy view

## 6.10.1 Detailed Description

Controller to test ClaimBased Authorization

Definition at line 9 of file ClaimBasedController.cs.

## 6.10.2 Member Function Documentation

## 6.10.2.1 Employee()

```
IActionResult DotNetIdentity.Controllers.ClaimBasedController.Employee ( )
```

Controller action for Employee view

Returns

view Employee

## 6.10.2.2 FreeTrial()

```
{\tt IActionResult\ DotNetIdentity.Controllers.ClaimBasedController.FreeTrial\ (\ )}
```

Controller action for FreeTrial view

Returns

view FreeTrial

## 6.10.2.3 HR()

```
IActionResult DotNetIdentity.Controllers.ClaimBasedController.HR ( )
```

Controller action for HR view

Returns

view HR

#### 6.10.2.4 Software()

 ${\tt IActionResult\ DotNetIdentity.Controllers.ClaimBasedController.Software\ (\ )}$ 

Controller action for Software view

Returns

view Software

## 6.10.2.5 Violence()

 ${\tt IActionResult\ DotNetIdentity.Controllers.ClaimBasedController.Violence\ (\ )}$ 

Controller action for AtLeast18Policy view

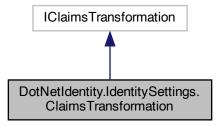
Returns

view AtLeast18Policy

# 6.11 DotNetIdentity.IdentitySettings.ClaimsTransformation Class Reference

class to define own claims

Inheritance diagram for DotNetIdentity.IdentitySettings.ClaimsTransformation:



## **Public Member Functions**

- ClaimsTransformation (UserManager < AppUser > userManager, RoleManager < AppRole > roleManager)
   class constructor
- async Task < ClaimsPrincipal > TransformAsync (ClaimsPrincipal principal)
   Task to add claims to identoty

## 6.11.1 Detailed Description

class to define own claims

Definition at line 11 of file ClaimsTransformation.cs.

## 6.11.2 Constructor & Destructor Documentation

## 6.11.2.1 ClaimsTransformation()

class constructor

#### **Parameters**

userManager	UserManager
roleManager	RoleManager

## Definition at line 27 of file ClaimsTransformation.cs.

## 6.11.3 Member Function Documentation

## 6.11.3.1 TransformAsync()

Task to add claims to identoty

## **Parameters**

```
principal ClaimsPrincipal
```

## Returns

ClaimsPrincipal

```
Definition at line 38 of file ClaimsTransformation.cs.
00040
                   var identity = principal.Identity as ClaimsIdentity;
                  var user = await _userManager.FindByNameAsync(identity?.Name);
if (user != null)
00041
00042
00043
00044
                       if (!principal.HasClaim(c => c.Type == ClaimTypes.Gender))
00045
00046
                           var genderClaim = new Claim(ClaimTypes.Gender, Enum.GetName(user.Gender)!);
00047
                           identity?.AddClaim(genderClaim);
00048
00049
00050
                       if (!principal.HasClaim(c => c.Type == ClaimTypes.DateOfBirth))
00051
00052
                           var birthDayClaim = new Claim(ClaimTypes.DateOfBirth,
       user.BirthDay.ToShortDateString());
00053
                           identity?.AddClaim(birthDayClaim);
00054
00055
00056
                       if (!principal.HasClaim(c => c.Type == "FreeTrial"))
00057
00058
                           var freeTrialClaim = new Claim("FreeTrial", user.CreatedOn.ToShortDateString());
00059
                           identity?.AddClaim(freeTrialClaim);
00060
00061
00062
                       if (!principal.HasClaim(c => c.Type == "Department") &&
       ! \verb|String.IsNullOrEmpty| (user.Department)|)
00063
00064
                           var departmentClaim = new Claim("Department", user.Department!);
00065
                           identity?.AddClaim(departmentClaim);
00066
00067
00068
                       if (!principal.HasClaim(c => c.Type == ClaimTypes.GivenName))
00069
00070
                           var givennameClaim = new Claim(ClaimTypes.GivenName, user.FirstName!);
00071
                           identity?.AddClaim(givennameClaim);
00072
00074
                       if (!principal.HasClaim(c => c.Type == ClaimTypes.Surname))
00075
00076
                           var surnameClaim = new Claim(ClaimTypes.Surname, user.LastName!);
00077
                           identity?.AddClaim(surnameClaim);
00078
00079
00080
                       if(!principal.HasClaim(c=>c.Type=="SelectedCulture")) {
00081
       System.Globalization.CultureInfo.CurrentCulture.ToString().ToLower();
00082
                           var cultureClaim = new Claim("SelectedCulture", culture);
00083
                           identity?.AddClaim(cultureClaim);
00084
00085
00086
                       if (!principal.HasClaim(c => c.Type == "RolesCombined"))
00087
00088
                           var rls = await _userManager.GetRolesAsync(user);
00089
                           if (rls != null)
00090
00091
                               var rlsComb = "";
00092
                               if(rls.Count()>0 && rls.Count()<=1) {</pre>
00093
                                   rlsComb = rls[0].ToString();
00094
                                   for(int i=0;i<rls.Count;i++)</pre>
00095
00096
```

## 6.12 DotNetIdentity.Controllers.CultureController Class Reference

else { rlsComb += rls[i]; }

identity?.AddClaim(rolesCombinedClaim);

if(rlsComb.Length>0)

if(i+1!=rls.Count) { rlsComb += rls[i] + ","; }

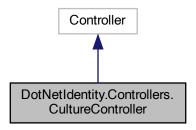
var rolesCombinedClaim = new Claim("RolesCombined", rlsComb!);

controller for culture settings

}

return principal;

Inheritance diagram for DotNetIdentity.Controllers.CultureController:



## **Public Member Functions**

IActionResult SetCulture (string culture, string returnUrl)
 controller POST method to set current culture

## 6.12.1 Detailed Description

controller for culture settings

Definition at line 17 of file CultureController.cs.

#### 6.12.2 Member Function Documentation

## 6.12.2.1 SetCulture()

controller POST method to set current culture

#### **Parameters**

culture	the culture as string
returnUrl	the return url as string

## Returns

a local redirect to variable returnUrl

## Definition at line 26 of file CultureController.cs.

```
00027 {
00028 Response.Cookies.Append(
00029 CookieRequestCultureProvider.DefaultCookieName,
00030 CookieRequestCultureProvider.MakeCookieValue(new RequestCulture(culture)),
00031 new CookieOptions { Expires = DateTimeOffset.UtcNow.AddYears(1) }
00032 );
00033 return LocalRedirect(returnUrl);
```

# 6.13 DotNetIdentity.Models.ViewModels.EditUserViewModel Class Reference

model for EditUser view

## **Properties**

```
• string Id = default! [get, set]
    the user id
• string UserName = default! [get, set]
    the username
• string Email = default! [get, set]
    the email
• string PhoneNumber = default! [get, set]
    the phone number
• Gender Gender = Gender.Unknown [get, set]
    the gener
• Department Department = Department.Software [get, set]
     the department
• List < AssignRoleViewModel > Roles = new() [get, set]
    the roles assigned
• string FirstName = string.Empty [get, set]
    the firstname
• string LastName = string.Empty [get, set]
     the lastname
```

## 6.13.1 Detailed Description

model for EditUser view

Definition at line 6 of file EditUserViewModel.cs.

## 6.13.2 Property Documentation

#### 6.13.2.1 Department

Department DotNetIdentity.Models.ViewModels.EditUserViewModel.Department = Department.Software
[get], [set]

the department

Department

Definition at line 37 of file EditUserViewModel.cs. 00037 { get; set; } = Department.Software;

Referenced by DotNetIdentity.Controllers.AdminController.EditUser().

#### 6.13.2.2 Email

```
string DotNetIdentity.Models.ViewModels.EditUserViewModel.Email = default! [get], [set]
```

the email

string

Definition at line 22 of file EditUserViewModel.cs.

00022 { get; set; } = default!;

Referenced by DotNetIdentity.Controllers.AdminController.EditUser().

#### 6.13.2.3 FirstName

```
string DotNetIdentity.Models.ViewModels.EditUserViewModel.FirstName = string.Empty [get],
[set]
```

the firstname

string

Definition at line 47 of file EditUserViewModel.cs. 00047 {get;set;} = string.Empty;

Referenced by DotNetIdentity.Controllers.AdminController.EditUser().

#### 6.13.2.4 Gender

```
Gender DotNetIdentity.Models.ViewModels.EditUserViewModel.Gender = Gender.Unknown [get], [set]
```

the gener

Gender

Definition at line 32 of file EditUserViewModel.cs. 00032 { get; set; } = Gender.Unknown;

Referenced by DotNetIdentity.Controllers.AdminController.EditUser().

#### 6.13.2.5 ld

```
string DotNetIdentity.Models.ViewModels.EditUserViewModel.Id = default! [get], [set]
```

the user id

string

Definition at line 12 of file EditUserViewModel.cs.

```
00012 { get; set; } = default!;
```

Referenced by DotNetIdentity.Controllers.AdminController.EditUser().

#### 6.13.2.6 LastName

```
string DotNetIdentity.Models.ViewModels.EditUserViewModel.LastName = string.Empty [get], [set]
```

the lastname

string

Definition at line 52 of file EditUserViewModel.cs.

```
00052 {get; set;} = string.Empty;
```

Referenced by DotNetIdentity.Controllers.AdminController.EditUser().

## 6.13.2.7 PhoneNumber

```
string DotNetIdentity.Models.ViewModels.EditUserViewModel.PhoneNumber = default! [get], [set]
```

the phone number

string

Definition at line 27 of file EditUserViewModel.cs.

```
00027 { get; set; } = default!;
```

Referenced by DotNetIdentity.Controllers.AdminController.EditUser().

## 6.13.2.8 Roles

```
List<AssignRoleViewModel> DotNetIdentity.Models.ViewModels.EditUserViewModel.Roles = new()
[get], [set]
```

the roles assigned

Returns

List of type AppRole

Definition at line 42 of file EditUserViewModel.cs.

```
00042 { get; set; } = new();
```

 $Referenced \ by \ Dot Net Identity. Controllers. Admin Controller. Edit User ().$ 

#### 6.13.2.9 UserName

```
string DotNetIdentity.Models.ViewModels.EditUserViewModel.UserName = default! [get], [set]
```

the username

string

```
Definition at line 17 of file EditUserViewModel.cs. 00017 { get; set; } = default!;
```

Referenced by DotNetIdentity.Controllers.AdminController.EditUser().

## 6.14 DotNetIdentity.Helpers.EmailHelper Class Reference

class for email methods

## **Public Member Functions**

• EmailHelper (ISettingsService sett)

class constructor

• async Task SendAsync (EmailModel model)

method to send a mail

## 6.14.1 Detailed Description

class for email methods

Definition at line 12 of file EmailHelper.cs.

## 6.14.2 Constructor & Destructor Documentation

## 6.14.2.1 EmailHelper()

class constructor

**Parameters** 

```
sett | type |SettingsService
```

Definition at line 23 of file EmailHelper.cs.

```
00024 {
00025 __sett = sett;
00026 }
```

## 6.14.3 Member Function Documentation

#### 6.14.3.1 SendAsync()

method to send a mail

#### **Parameters**

model	type EmailModel
-------	-----------------

Returns

Definition at line 33 of file EmailHelper.cs.

```
00034
00035
                     var mail = new MailMessage
00036
00037
                          Subject = model.Subject,
                          Body = model.Body,
From = new MailAddress(_sett.Mail.SmtpFromAddress!),
00038
00039
00040
                          IsBodyHtml = true
00041
                     };
00042
00043
                     var smtp = new SmtpClient
00044
                          Host = _sett.Mail.SmtpServer!,
Port = Convert.ToInt32(_sett.Mail.SmtpPort),
EnableSsl = Convert.ToBoolean(_sett.Mail.SmtpUseTls),
00045
00046
00047
                          DeliveryMethod = SmtpDeliveryMethod.Network,
00048
00049
                          UseDefaultCredentials = false,
00050
                          Credentials = new NetworkCredential(_sett.Mail.Username, _sett.Mail.Password)
00051
00052
00053
                     mail.To.Add(model.To);
00054
00055
                     await smtp.SendMailAsync(mail);
00056
```

References DotNetIdentity.Models.BusinessModels.EmailModel.Body, DotNetIdentity.Models.BusinessModels.EmailModel.Subject, and DotNetIdentity.Models.BusinessModels.EmailModel.To.

# 6.15 DotNetIdentity.Models.BusinessModels.EmailModel Class Reference

class to define a email

## **Properties**

```
    string Subject = default! [get, set]
        property subject
    string Body = default! [get, set]
        property body
    string To = default! [get, set]
        property to
```

## 6.15.1 Detailed Description

class to define a email

Definition at line 6 of file EmailModel.cs.

## 6.15.2 Property Documentation

## 6.15.2.1 Body

```
string DotNetIdentity.Models.BusinessModels.EmailModel.Body = default! [get], [set]
property body
string

Definition at line 17 of file EmailModel.cs.
00017 { get; set; } = default!;
```

Referenced by DotNetIdentity.Helpers.EmailHelper.SendAsync().

## 6.15.2.2 Subject

```
string DotNetIdentity.Models.BusinessModels.EmailModel.Subject = default! [get], [set]
property subject
string

Definition at line 12 of file EmailModel.cs.
00012 { get; set; } = default!;
```

Referenced by DotNetIdentity.Helpers.EmailHelper.SendAsync().

#### 6.15.2.3 To

```
string DotNetIdentity.Models.BusinessModels.EmailModel.To = default! [get], [set]
property to
string

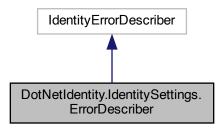
Definition at line 22 of file EmailModel.cs.
00022 { get; set; } = default!;
```

Referenced by DotNetIdentity.Helpers.EmailHelper.SendAsync().

## 6.16 DotNetIdentity.IdentitySettings.ErrorDescriber Class Reference

class to override IdentityErrorDescriber IdentotyError messages

Inheritance diagram for DotNetIdentity.IdentitySettings.ErrorDescriber:



## **Static Public Member Functions**

- static IdentityError PasswordContainsUsername () custom IdentityError if password contains username
- static IdentityError UserNameLength ()
   custom IdentityError if username length is too short
- static IdentityError UserNameContainsEmail ()
   custom IdentityError if username contains user email

## 6.16.1 Detailed Description

class to override IdentityErrorDescriber IdentotyError messages

Definition at line 8 of file ErrorDescriber.cs.

#### 6.16.2 Member Function Documentation

#### 6.16.2.1 PasswordContainsUsername()

```
static IdentityError DotNetIdentity.IdentitySettings.ErrorDescriber.PasswordContainsUsername (
) [static]
```

custom IdentityError if password contains username

Returns

IdentityError

Referenced by DotNetIdentity.IdentitySettings.Validators.PasswordValidator.ValidateAsync().

#### 6.16.2.2 UserNameContainsEmail()

static IdentityError DotNetIdentity.IdentitySettings.ErrorDescriber.UserNameContainsEmail ( )
[static]

custom IdentityError if username contains user email

Returns

IdentityError

 $Referenced \ by \ Dot Net Identity. Identity Settings. Validators. User Validator. Validate A sync().$ 

#### 6.16.2.3 UserNameLength()

static IdentityError DotNetIdentity.IdentitySettings.ErrorDescriber.UserNameLength ( ) [static]

custom IdentityError if username length is too short

Returns

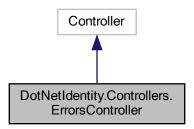
IdentityError

Referenced by DotNetIdentity.IdentitySettings.Validators.UserValidator.ValidateAsync().

# 6.17 DotNetIdentity.Controllers.ErrorsController Class Reference

Controller for error views

Inheritance diagram for DotNetIdentity.Controllers.ErrorsController:



# **Public Member Functions**

- IActionResult ErrorEx ()

  controller action for ErrorEx view
- IActionResult ErrorCd (int statusCode)

Controller action for ErrorCd view

# 6.17.1 Detailed Description

Controller for error views

Todo add translation

Definition at line 17 of file ErrorsController.cs.

### 6.17.2 Member Function Documentation

# 6.17.2.1 ErrorCd()

Controller action for ErrorCd view

#### **Parameters**

statusCode

#### Returns

view ErrorCd

```
Definition at line 45 of file ErrorsController.cs.
```

```
00046
00047
                  var statusCodeData = HttpContext.Features.Get<IStatusCodeReExecuteFeature>();
00048
                  StatusCodesModel md = new StatusCodesModel();
00049
                  md.StatusCode = statusCode;
00050
                  md.RouteOfException = statusCodeData!.OriginalPath;
00051
00052
                  switch (statusCode)
00053
00054
                      // request timeout
                      case 408:
00055
00056
                         md.ErrorMessage = "Timeout. The request timed out..";
00057
00058
                      // badrequest
00059
                      case 400:
00060
                          md.ErrorMessage = "Badrequest. The request meets not the controllers expetation.";
00061
                          break;
00062
                      // forbidden
00063
                      case 403:
                          md.ErrorMessage = "Acess denied!";
00064
00065
                          break;
                      // unauthorized
00066
00067
                      case 401:
00068
                          md.ErrorMessage = "You're not authorized to access this resource!";
00069
00070
                      //page not found
00071
                      case 404:
00072
                          md.ErrorMessage = "Sorry the page you requested could not be found";
00073
                          break;
00074
                      // server error
00075
                      case 500:
00076
                          md.ErrorMessage = "Sorry something went wrong on the server";
00077
                          break;
00078
                      // service unavailable
00079
                      case 503:
08000
                          md.ErrorMessage = "Sorry, the service is currently unavailable.";
00081
                          break;
00082
                      default:
                          md.ErrorMessage = "Sorry, there was an error.";
00083
00084
                          break;
00085
                  }
00086
00087
                  return View("ErrorCd", md);
00088
              }
```

# 6.17.2.2 ErrorEx()

IActionResult DotNetIdentity.Controllers.ErrorsController.ErrorEx ( ) [inline]

controller action for ErrorEx view

Returns

view ErrorEx

```
Definition at line 23 of file ErrorsController.cs.
```

```
00025
                  var exceptionFeature = HttpContext.Features.Get<IExceptionHandlerPathFeature>();
00026
00027
                   if (exceptionFeature != null)
00028
                      if(exceptionFeature.Error.StackTrace!=null) {
00029
00030
                           ViewBag.StackTrace = exceptionFeature.Error.StackTrace;
00031
00032
                      ViewBag.ErrorMessage = exceptionFeature.Error.Message;
00033
                      ViewBag.RouteOfException = exceptionFeature.Path;
00034
00035
00036
                  return View();
00037
              }
```

# 6.18 DotNetIdentity.Models.ViewModels.ErrorViewModel Class Reference

model for displaying errors

# **Properties**

```
    string? RequestId [get, set]
        the rquest id
    bool ShowRequestId [get]
        show the requst id
```

# 6.18.1 Detailed Description

model for displaying errors

Definition at line 5 of file ErrorViewModel.cs.

# 6.18.2 Property Documentation

#### 6.18.2.1 Requestld

```
string? DotNetIdentity.Models.ViewModels.ErrorViewModel.RequestId [get], [set]
the rquest id
string
```

```
Definition at line 11 of file ErrorViewModel.cs. 00011 { get; set; }
```

#### 6.18.2.2 ShowRequestId

```
bool DotNetIdentity.Models.ViewModels.ErrorViewModel.ShowRequestId [get]
show the requst id

Returns
```

Definition at line 16 of file ErrorViewModel.cs.

# 6.19 DotNetIdentity.Models.ViewModels.ForgotPasswordViewModel Class Reference

model for ForgotPassword view

# **Properties**

bool

```
• string Email = default! [get, set]

the user email
```

# 6.19.1 Detailed Description

model for ForgotPassword view

Definition at line 6 of file ForgotPasswordViewModel.cs.

# 6.19.2 Property Documentation

# 6.19.2.1 Email

```
string DotNetIdentity.Models.ViewModels.ForgotPasswordViewModel.Email = default! [get], [set]
the user email
```

string

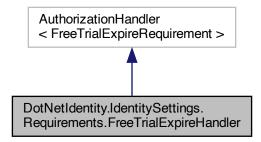
Definition at line 12 of file ForgotPasswordViewModel.cs. 00012 { get; set; } = default!;

Referenced by DotNetIdentity.Controllers.UserController.ForgotPassword().

# 6.20 DotNetIdentity.IdentitySettings.Requirements.FreeTrialExpire Handler Class Reference

class to define own Identity requirements type of FreeTrialExpireRequirement

 $Inheritance\ diagram\ for\ Dot Net Identity. Identity Settings. Requirements. Free Trial Expire Handler:$ 



#### **Protected Member Functions**

override Task HandleRequirementAsync (AuthorizationHandlerContext context, FreeTrialExpireRequirement requirement)

overriding HandleRequirementAsync

# 6.20.1 Detailed Description

class to define own Identity requirements type of FreeTrialExpireRequirement

Definition at line 13 of file FreeTrialExpireRequirement.cs.

#### 6.20.2 Member Function Documentation

#### 6.20.2.1 HandleRequirementAsync()

overriding HandleRequirementAsync

#### **Parameters**

context	AuthorizationHandlerContext
requirement	FreeTrialExpireRequirement

#### Returns

Task

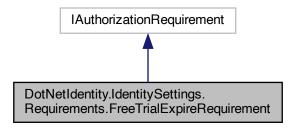
#### Definition at line 21 of file FreeTrialExpireRequirement.cs.

```
00022
00023
                    var freeTrialClaim = context.User.FindFirst(f => f.Type == "FreeTrial");
if (freeTrialClaim != null)
00024
00025
00026
                         var freeTrialExpires = Convert.ToDateTime(freeTrialClaim.Value).AddDays(30);
00027
                         if (DateTime.Now < freeTrialExpires)</pre>
00028
00029
                             context.Succeed(requirement);
00030
00031
                        else
00032
00033
                             context.Fail();
00034
00035
                    }
00036
00037
                    return Task.CompletedTask;
```

# 6.21 DotNetIdentity.IdentitySettings.Requirements.FreeTrialExpire Requirement Class Reference

class to define own Identity requirements type of IAuthorizationRequirement

 $Inheritance\ diagram\ for\ Dot Net Identity. Identity Settings. Requirements. Free Trial Expire Requirement:$ 



# 6.21.1 Detailed Description

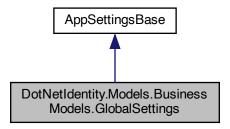
class to define own Identity requirements type of IAuthorizationRequirement

Definition at line 8 of file FreeTrialExpireRequirement.cs.

# 6.22 DotNetIdentity.Models.BusinessModels.GlobalSettings Class Reference

class to define a global settings object

Inheritance diagram for DotNetIdentity.Models.BusinessModels.GlobalSettings:



# **Properties**

```
    string? ApplicationName [get, set]
        property ApplicationName
    string? SessionTimeoutWarnAfter [get, set]
        property SessionTimeoutWarnAfter
    string? SessionTimeoutRedirAfter [get, set]
        property SessionTimeoutRedirAfter
    string? SessionCookieExpiration [get, set]
        property SessionCookieExpiration
```

#### **Additional Inherited Members**

# 6.22.1 Detailed Description

class to define a global settings object

Definition at line 7 of file GlobalSettings.cs.

# 6.22.2 Property Documentation

#### 6.22.2.1 ApplicationName

string? DotNetIdentity.Models.BusinessModels.GlobalSettings.ApplicationName [get], [set]

property ApplicationName

string

Definition at line 12 of file GlobalSettings.cs.

00012 {get; set;}

# 6.22.2.2 SessionCookieExpiration

string? DotNetIdentity.Models.BusinessModels.GlobalSettings.SessionCookieExpiration [get],
[set]

property SessionCookieExpiration

string

Definition at line 27 of file GlobalSettings.cs.

00027 {get; set;}

#### 6.22.2.3 SessionTimeoutRedirAfter

string? DotNetIdentity.Models.BusinessModels.GlobalSettings.SessionTimeoutRedirAfter [get],
[set]

property SessionTimeoutRedirAfter

string

Definition at line 22 of file GlobalSettings.cs.

00022 {get; set;}

#### 6.22.2.4 SessionTimeoutWarnAfter

string? DotNetIdentity.Models.BusinessModels.GlobalSettings.SessionTimeoutWarnAfter [get],
[set]

property SessionTimeoutWarnAfter

string

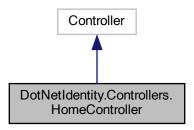
Definition at line 17 of file GlobalSettings.cs.

00017 {get; set;}

# 6.23 DotNetIdentity.Controllers.HomeController Class Reference

Controller for Home views

Inheritance diagram for DotNetIdentity.Controllers.HomeController:



#### **Public Member Functions**

- $\bullet \ \ \text{HomeController (UserManager} < \ \text{AppUser} > \ \text{userManager}) \\$ 
  - Controller constructor
- IActionResult Index ()

Controller action for view Index

• IActionResult AccessDenied ()

controller action for view AccessDenied

# 6.23.1 Detailed Description

Controller for Home views

Definition at line 11 of file HomeController.cs.

# 6.23.2 Constructor & Destructor Documentation

# 6.23.2.1 HomeController()

```
\label{lem:decontroller} DotNetIdentity. Controllers. HomeController. HomeController ( \\ UserManager < AppUser > userManager ) [inline]
```

Controller constructor

#### **Parameters**

userManager	Property UserManager
-------------	----------------------

Definition at line 22 of file HomeController.cs.

```
00023 {
00024 __userManager = userManager;
00025 }
```

### 6.23.3 Member Function Documentation

#### 6.23.3.1 AccessDenied()

```
IActionResult DotNetIdentity.Controllers.HomeController.AccessDenied ( )
controller action for view AccessDenied
Returns
```

view AccessDenied

#### 6.23.3.2 Index()

```
{\tt IActionResult\ DotNetIdentity.Controllers.HomeController.Index\ (\ )}
```

Controller action for view Index

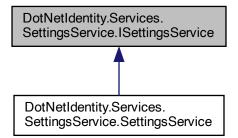
Returns

view Index

# 6.24 DotNetIdentity.Services.SettingsService.ISettingsService Interface Reference

Interface class for SettingsService

 $Inheritance\ diagram\ for\ Dot Net Identity. Services. Settings Service. IS ettings Service:$ 



#### **Public Member Functions**

```
• void Save ()

save method
```

# **Properties**

```
    GlobalSettings Global [get]
        property global settings
    MailSettings Mail [get]
        property mail settings
```

# 6.24.1 Detailed Description

Interface class for SettingsService

Definition at line 7 of file ISettingsService.cs.

#### 6.24.2 Member Function Documentation

#### 6.24.2.1 Save()

```
\verb|void DotNetIdentity.Services.SettingsService.ISettingsService.Save ()|\\
```

save method

Implemented in DotNetIdentity.Services.SettingsService.SettingsService.

# 6.24.3 Property Documentation

#### 6.24.3.1 Global

```
GlobalSettings DotNetIdentity.Services.SettingsService.ISettingsService.Global [get]
```

property global settings

GlobalSettings

Implemented in DotNetIdentity.Services.SettingsService.SettingsService.

```
Definition at line 12 of file ISettingsService.cs. 00012 { get; }
```

#### 6.24.3.2 Mail

```
MailSettings DotNetIdentity.Services.SettingsService.ISettingsService.Mail [get]
```

property mail settings

MailSettings

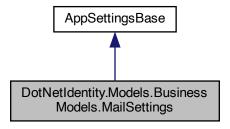
 $Implemented \ in \ Dot Net Identity. Services. Settings Service. Settings Service.$ 

```
Definition at line 17 of file ISettingsService.cs. 00017 { get; }
```

# 6.25 DotNetIdentity.Models.BusinessModels.MailSettings Class Reference

class to define a ail settings object

Inheritance diagram for DotNetIdentity.Models.BusinessModels.MailSettings:



### **Properties**

```
    string? Username [get, set]
        property Username
    string? Password [get, set]
        property Password
    string? SmtpServer [get, set]
        property SmtpServer
    string? SmtpPort [get, set]
        property SmtpPort
    string? SmtpFromAddress [get, set]
        property SmtpFromAddress
    bool SmtpUseTIs [get, set]
        property SmtpUseTIs
```

#### **Additional Inherited Members**

# 6.25.1 Detailed Description

class to define a ail settings object

Definition at line 7 of file MailSettings.cs.

# 6.25.2 Property Documentation

#### 6.25.2.1 Password

```
string? DotNetIdentity.Models.BusinessModels.MailSettings.Password [get], [set]
property Password
string
```

Definition at line 17 of file MailSettings.cs. 00017 { get; set; }

#### 6.25.2.2 SmtpFromAddress

```
string? DotNetIdentity.Models.BusinessModels.MailSettings.SmtpFromAddress [get], [set]
property SmtpFromAddress
string
```

Definition at line 32 of file MailSettings.cs. 00032 {get; set;}

#### 6.25.2.3 SmtpPort

```
string? DotNetIdentity.Models.BusinessModels.MailSettings.SmtpPort [get], [set]
property SmtpPort
string
```

Definition at line 27 of file MailSettings.cs.

#### 6.25.2.4 SmtpServer

```
string? DotNetIdentity.Models.BusinessModels.MailSettings.SmtpServer [get], [set]
property SmtpServer
string
Definition at line 22 of file MailSettings.cs.
00022 { get; set; }
```

#### 6.25.2.5 SmtpUseTIs

```
bool DotNetIdentity.Models.BusinessModels.MailSettings.SmtpUseTls [get], [set]
property SmtpUseTls
bool

Definition at line 37 of file MailSettings.cs.
00037 { get; set; }
```

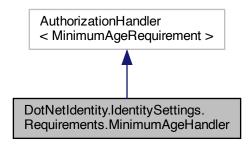
#### 6.25.2.6 Username

```
string? DotNetIdentity.Models.BusinessModels.MailSettings.Username [get], [set]
property Username
string
Definition at line 12 of file MailSettings.cs.
00012 { get; set; }
```

# 6.26 DotNetIdentity.IdentitySettings.Requirements.MinimumAgeHandler Class Reference

class implementing AuthorizationHandler of type MinimumAgeRequirement

 $Inheritance\ diagram\ for\ Dot Net Identity. Identity Settings. Requirements. Minimum Age Handler:$ 



#### **Protected Member Functions**

override Task HandleRequirementAsync (AuthorizationHandlerContext context, MinimumAgeRequirement requirement)

overriding HandleRequirementAsync

# 6.26.1 Detailed Description

class implementing AuthorizationHandler of type MinimumAgeRequirement

Definition at line 30 of file MinimumAgeRequirement.cs.

#### 6.26.2 Member Function Documentation

#### 6.26.2.1 HandleRequirementAsync()

```
override Task DotNetIdentity.IdentitySettings.Requirements.MinimumAgeHandler.HandleRequirement↔

Async (

AuthorizationHandlerContext context,

MinimumAgeRequirement requirement ) [inline], [protected]
```

overriding HandleRequirementAsync

#### **Parameters**

context	AuthorizationHandlerContext
requirement	MinimumAgeRequirement

#### Returns

Task

#### Definition at line 38 of file MinimumAgeRequirement.cs.

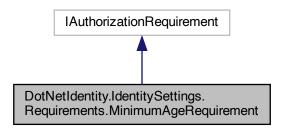
```
00039
00040
                  var birthDayClaim = context.User.FindFirst(f => f.Type == ClaimTypes.DateOfBirth);
00041
                  if (birthDayClaim != null)
00042
00043
                      var birthDay = Convert.ToDateTime(birthDayClaim.Value);
                      var calculatedAge = DateTime.Now.Year - birthDay.Year;
00044
                      if (calculatedAge >= requirement.MinimumAge)
00045
00046
00047
                          context.Succeed(requirement);
00048
00049
00050
                      {
00051
                          context.Fail();
00052
00053
00054
00055
                  return Task.CompletedTask;
00056
```

References DotNetIdentity.IdentitySettings.Requirements.MinimumAgeRequirement.MinimumAge.

# 6.27 DotNetIdentity.IdentitySettings.Requirements.MinimumAge Requirement Class Reference

class to define own Identity requirements type of IAuthorizationRequirement

Inheritance diagram for DotNetIdentity.IdentitySettings.Requirements.MinimumAgeRequirement:



#### **Public Member Functions**

 MinimumAgeRequirement (int minimumAge)
 class constructor

#### **Properties**

• int MinimumAge [get, set]

property MinimumAge

# 6.27.1 Detailed Description

class to define own Identity requirements type of IAuthorizationRequirement

Definition at line 9 of file MinimumAgeRequirement.cs.

#### 6.27.2 Constructor & Destructor Documentation

### 6.27.2.1 MinimumAgeRequirement()

class constructor

#### **Parameters**

minimumAge

Definition at line 15 of file MinimumAgeRequirement.cs.

References DotNetIdentity.IdentitySettings.Requirements.MinimumAgeRequirement.MinimumAge.

# 6.27.3 Property Documentation

#### 6.27.3.1 MinimumAge

```
int DotNetIdentity.IdentitySettings.Requirements.MinimumAgeRequirement.MinimumAge [get], [set]
property MinimumAge
```

Definition at line 24 of file MinimumAgeRequirement.cs. 00024 { get; set; }

Referenced by DotNetIdentity.IdentitySettings.Requirements.MinimumAgeHandler.HandleRequirementAsync(), and DotNetIdentity.IdentitySettings.Requirements.MinimumAgeRequirement().

# 6.28 DotNetIdentity.Models.ViewModels.NewUserModel Class Reference

model for NewUser view

# **Properties**

```
• string UserName = default! [get, set]
     the username
• string Email = default! [get, set]
    the users email address
• Gender Gender = Gender.Unknown [get, set]
• Department Department = Department.Software [get, set]
     the department
• List< AssignRoleViewModel > Roles = new() [get, set]
    the roles assigned
• string FirstName = string.Empty [get, set]
    the firstname
• string LastName = string.Empty [get, set]
    the lastname
• bool lsLdapLogin [get, set]
    if user is Idap login
• bool IsMfaForce [get, set]
    is 2fa enforced

    string Password = string.Empty [get, set]

    the password
```

# 6.28.1 Detailed Description

model for NewUser view

Definition at line 9 of file NewUserModel.cs.

### 6.28.2 Property Documentation

#### 6.28.2.1 Department

```
Department DotNetIdentity.Models.ViewModels.NewUserModel.Department = Department.Software
[get], [set]
```

the department

Department

Definition at line 30 of file NewUserModel.cs.
00030 { get; set; } = Department.Software;

Referenced by DotNetIdentity.Controllers.AdminController.NewUser().

### 6.28.2.2 Email

```
string DotNetIdentity.Models.ViewModels.NewUserModel.Email = default! [get], [set]
```

the users email address

string

Definition at line 20 of file NewUserModel.cs. 00020 { get; set; } = default!;

Referenced by DotNetIdentity.Controllers.AdminController.NewUser().

#### 6.28.2.3 FirstName

```
string DotNetIdentity.Models.ViewModels.NewUserModel.FirstName = string.Empty [get], [set]
```

the firstname

string

Definition at line 40 of file NewUserModel.cs.
00040 { get; set; } = string.Empty;

Referenced by DotNetIdentity.Controllers.AdminController.NewUser().

#### 6.28.2.4 Gender

```
Gender DotNetIdentity.Models.ViewModels.NewUserModel.Gender = Gender.Unknown [get], [set]
```

the gender

Gender

Definition at line 25 of file NewUserModel.cs.

```
00025 { get; set; } = Gender.Unknown;
```

Referenced by DotNetIdentity.Controllers.AdminController.NewUser().

#### 6.28.2.5 IsLdapLogin

```
bool DotNetIdentity.Models.ViewModels.NewUserModel.IsLdapLogin [get], [set]
```

if user is Idap login

bool

Definition at line 50 of file NewUserModel.cs.

00050 { get; set; }

Referenced by DotNetIdentity.Controllers.AdminController.NewUser().

#### 6.28.2.6 IsMfaForce

```
bool DotNetIdentity.Models.ViewModels.NewUserModel.IsMfaForce [get], [set]
```

is 2fa enforced

bool

Definition at line 55 of file NewUserModel.cs.

```
00055 { get; set; }
```

 $Referenced \ by \ Dot Net Identity. Controllers. Admin Controller. New User ().$ 

#### 6.28.2.7 LastName

```
string DotNetIdentity.Models.ViewModels.NewUserModel.LastName = string.Empty [get], [set]
```

the lastname

string

Definition at line 45 of file NewUserModel.cs.

```
00045 { get; set; } = string.Empty;
```

Referenced by DotNetIdentity.Controllers.AdminController.NewUser().

# 6.28.2.8 Password

```
string DotNetIdentity.Models.ViewModels.NewUserModel.Password = string.Empty [get], [set]
```

the password

string

Definition at line 60 of file NewUserModel.cs.

```
00060 { get; set; } = string.Empty;
```

Referenced by DotNetIdentity.Controllers.AdminController.NewUser().

#### 6.28.2.9 Roles

```
List<AssignRoleViewModel> DotNetIdentity.Models.ViewModels.NewUserModel.Roles = new() [get],
[set]
```

the roles assigned

Returns

List of type AppRole

Definition at line 35 of file NewUserModel.cs.

```
00035 { get; set; } = new();
```

Referenced by DotNetIdentity.Controllers.AdminController.NewUser().

#### 6.28.2.10 UserName

```
string DotNetIdentity.Models.ViewModels.NewUserModel.UserName = default! [get], [set]
```

the username

string

Definition at line 15 of file NewUserModel.cs.

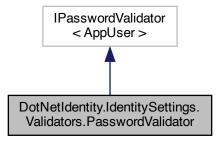
```
00015 { get; set; } = default!;
```

 $Referenced \ by \ Dot Net Identity. Controllers. Admin Controller. New User ().$ 

# 6.29 DotNetIdentity.IdentitySettings.Validators.PasswordValidator Class Reference

class to validate a password

Inheritance diagram for DotNetIdentity.IdentitySettings.Validators.PasswordValidator:



#### **Public Member Functions**

Task < IdentityResult > ValidateAsync (UserManager < AppUser > manager, AppUser user, string password)
 Task to validate a password

# 6.29.1 Detailed Description

class to validate a password

Definition at line 9 of file PasswordValidator.cs.

### 6.29.2 Member Function Documentation

### 6.29.2.1 ValidateAsync()

Task to validate a password

#### **Parameters**

manager	UserManager
user	AppUser
password	string

#### Returns

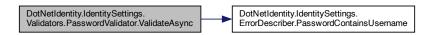
Task of type IdentityResult

Definition at line 18 of file PasswordValidator.cs.

```
var errors = new List<IdentityError>();
00021
                  if (user.UserName == password)
00022
00023
00024
                      errors.Add(ErrorDescriber.PasswordContainsUsername());
00025
00026
00027
                  if (errors.Any())
00028
00029
                      return Task.FromResult(IdentityResult.Failed(errors.ToArray()));
00030
00031
                  return Task.FromResult(IdentityResult.Success);
00032
```

References DotNetIdentity.IdentitySettings.ErrorDescriber.PasswordContainsUsername().

Here is the call graph for this function:



# 6.30 DotNetIdentity.Models.ViewModels.ResetPasswordViewModel Class Reference

model for ResetPassword view

### **Properties**

```
    string UserId = default! [get, set]
        the user id
    string Token = default! [get, set]
        the reset token
    string Password = default! [get, set]
        the password
```

# 6.30.1 Detailed Description

model for ResetPassword view

Definition at line 6 of file ResetPasswordViewModel.cs.

# 6.30.2 Property Documentation

#### 6.30.2.1 Password

```
string DotNetIdentity.Models.ViewModels.ResetPasswordViewModel.Password = default! [get],
[set]
```

the password

string

Definition at line 22 of file ResetPasswordViewModel.cs. 00022 { get; set; } = default!;

Referenced by DotNetIdentity.Controllers.UserController.ResetPassword().

#### 6.30.2.2 Token

```
string DotNetIdentity.Models.ViewModels.ResetPasswordViewModel.Token = default! [get], [set]
```

the reset token

string

Definition at line 17 of file ResetPasswordViewModel.cs. 00017 { get; set; } = default!;

Referenced by DotNetIdentity.Controllers.UserController.ResetPassword().

### 6.30.2.3 UserId

```
string DotNetIdentity.Models.ViewModels.ResetPasswordViewModel.UserId = default! [get], [set]
```

the user id

string

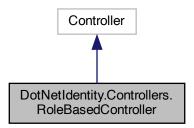
Definition at line 12 of file ResetPasswordViewModel.cs. 00012 { get; set; } = default!;

Referenced by DotNetIdentity.Controllers.UserController.ResetPassword().

# 6.31 DotNetIdentity.Controllers.RoleBasedController Class Reference

Controller to test RoleBased Authorization

Inheritance diagram for DotNetIdentity.Controllers.RoleBasedController:



# **Public Member Functions**

· IActionResult Dashboard ()

Controller Action for Dashboard view

• IActionResult Users ()

Controller Action for Users view

• IActionResult Articles ()

Controller Action for Articles view

• IActionResult Profile ()

Controller Action for Profile view

# 6.31.1 Detailed Description

Controller to test RoleBased Authorization

Definition at line 9 of file RoleBasedController.cs.

#### 6.31.2 Member Function Documentation

# 6.31.2.1 Articles()

 ${\tt IActionResult\ DotNetIdentity.Controllers.RoleBasedController.Articles\ (\ )}$ 

Controller Action for Articles view

Returns

#### 6.31.2.2 Dashboard()

```
{\tt IActionResult\ DotNetIdentity.Controllers.RoleBasedController.Dashboard\ (\ )}
```

Controller Action for Dashboard view

Returns

# 6.31.2.3 Profile()

```
IActionResult DotNetIdentity.Controllers.RoleBasedController.Profile ( )
```

Controller Action for Profile view

Returns

#### 6.31.2.4 Users()

```
IActionResult DotNetIdentity.Controllers.RoleBasedController.Users ( )
```

Controller Action for Users view

Returns

# 6.32 DotNetIdentity.Models.DataModels.SessionCache Class Reference

class to define a SessionCache object

# **Properties**

```
    string? id [get, set]
        proerty id
    byte?[] Value [get, set]
        property value
    DateTime ExpiresAtTime [get, set]
        property ExpiresAtTime
    int SlidingExpirationInSeconds [get, set]
        property SlidingExpirationInSeconds
    DateTime? AbsoluteExpiration [get, set]
        property AbsoluteExpiration
```

# 6.32.1 Detailed Description

class to define a SessionCache object

Definition at line 11 of file SessionCache.cs.

# 6.32.2 Property Documentation

# 6.32.2.1 AbsoluteExpiration

```
DateTime? DotNetIdentity.Models.DataModels.SessionCache.AbsoluteExpiration [get], [set]
```

property AbsoluteExpiration

DateTime

Definition at line 37 of file SessionCache.cs. 00037 {get; set;}

#### 6.32.2.2 ExpiresAtTime

```
DateTime DotNetIdentity.Models.DataModels.SessionCache.ExpiresAtTime [get], [set]
```

property ExpiresAtTime

DateTime

Definition at line 27 of file SessionCache.cs. 00027 {get; set;}

#### 6.32.2.3 id

```
string? DotNetIdentity.Models.DataModels.SessionCache.id [get], [set]
```

proerty id

int

Definition at line 17 of file SessionCache.cs. 00017 {get;set;}

#### 6.32.2.4 SlidingExpirationInSeconds

```
int DotNetIdentity.Models.DataModels.SessionCache.SlidingExpirationInSeconds [get], [set]
```

property SlidingExpirationInSeconds

int

Definition at line 32 of file SessionCache.cs.

00032 {get; set;}

#### 6.32.2.5 Value

```
byte? [] DotNetIdentity.Models.DataModels.SessionCache.Value [get], [set]
```

property value

byte[]

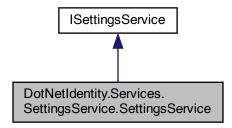
Definition at line 22 of file SessionCache.cs.

00022 {get;set;}

# 6.33 DotNetIdentity.Services.SettingsService.SettingsService Class Reference

class for settings service

Inheritance diagram for DotNetIdentity.Services.SettingsService.SettingsService:



#### **Public Member Functions**

SettingsService (AppDbContext unitOfWork)

class constructor

• void Save ()

sve method

# **Properties**

```
    Global Settings Global [get]
        global settings property
    Mail Settings Mail [get]
        mail settzings property
```

# 6.33.1 Detailed Description

class for settings service

Todo add Idap settings class

Definition at line 9 of file SettingsService.cs.

# 6.33.2 Constructor & Destructor Documentation

#### 6.33.2.1 SettingsService()

```
\label{lem:potNetIdentity.Services.SettingsService.SettingsService . SettingsService ( \\ App Db Context \ unit Of Work ) \ [inline]
```

class constructor

**Parameters** 

unitOfWork

Definition at line 37 of file SettingsService.cs.

#### 6.33.3 Member Function Documentation

#### 6.33.3.1 Save()

void DotNetIdentity.Services.SettingsService.SettingsService.Save ( ) [inline]

sve method

 $Implements\ Dot Net Identity. Services. Settings Service. IS ettings Service.$ 

Definition at line 49 of file SettingsService.cs.

```
00050
00051
    // only save changes to settings that have been loaded
00052
    if (_globalSettings.IsValueCreated)
        _globalSettings.Value.Save(_unitOfWork);
00054
00055
    if (_mailSettings.IsValueCreated)
        _mailSettings.Value.Save(_unitOfWork);
00057
00058
    _unitOfWork.SaveChanges();
00059
}
```

# 6.33.4 Property Documentation

#### 6.33.4.1 Global

```
GlobalSettings DotNetIdentity.Services.SettingsService.SettingsService.Global [get]
```

global settings property

Implements DotNetIdentity.Services.SettingsService.ISettingsService.

```
Definition at line 18 of file SettingsService.cs.
00018 { get { return _globalSettings.Value; } }
```

#### 6.33.4.2 Mail

```
MailSettings DotNetIdentity.Services.SettingsService.SettingsService.Mail [get]
```

mail settzings property

 $Implements\ Dot Net Identity. Services. Settings Service. IS ettings Service.$ 

```
Definition at line 27 of file SettingsService.cs.
00027 { get { return _mailSettings.Value; } }
```

# 6.34 DotNetIdentity.Models.ViewModels.SignInViewModel Class Reference

model for Login view

# **Properties**

```
    string UserName = string.Empty [get, set]
        the username
    string Password = default! [get, set]
        the password
    bool RememberMe = true [get, set]
        the set cookie persisten option
```

# 6.34.1 Detailed Description

model for Login view

Definition at line 6 of file SignInViewModel.cs.

# 6.34.2 Property Documentation

#### 6.34.2.1 Password

```
string DotNetIdentity.Models.ViewModels.SignInViewModel.Password = default! [get], [set]
the password
string

Definition at line 17 of file SignInViewModel.cs.
00017 { get; set; } = default!;
```

Referenced by DotNetIdentity.Controllers.UserController.Login().

#### 6.34.2.2 RememberMe

```
bool DotNetIdentity.Models.ViewModels.SignInViewModel.RememberMe = true [get], [set]
the set cookie persisten option
bool
```

Definition at line 22 of file SignInViewModel.cs. 00022 { get; set; } = true;

Referenced by DotNetIdentity.Controllers.UserController.Login().

#### 6.34.2.3 UserName

```
string DotNetIdentity.Models.ViewModels.SignInViewModel.UserName = string.Empty [get], [set]
the username
string

Definition at line 12 of file SignInViewModel.cs.
00012 {get; set;} = string.Empty;
```

Referenced by DotNetIdentity.Controllers.UserController.Login().

# 6.35 DotNetIdentity.Models.ViewModels.SignUpViewModel Class Reference

model for Register view

# **Properties**

# 6.35.1 Detailed Description

model for Register view

Definition at line 6 of file SignUpViewModel.cs.

# 6.35.2 Property Documentation

#### 6.35.2.1 BirthDay

DateTime DotNetIdentity.Models.ViewModels.SignUpViewModel.BirthDay [get], [set]

the birthday

DateTime

Definition at line 27 of file SignUpViewModel.cs. 00027 { get; set; }

Referenced by DotNetIdentity.Controllers.UserController.Register().

# 6.35.2.2 Department

```
Department DotNetIdentity.Models.ViewModels.SignUpViewModel.Department = Department.Software
[get], [set]
```

the department

Department

Definition at line 32 of file SignUpViewModel.cs. 00032 { get; set; } = Department.Software;

Referenced by DotNetIdentity.Controllers.UserController.Register().

### 6.35.2.3 Email

```
string DotNetIdentity.Models.ViewModels.SignUpViewModel.Email = default! [get], [set]
```

the email

string

Definition at line 17 of file SignUpViewModel.cs. 00017 { get; set; } = default!;

Referenced by DotNetIdentity.Controllers.UserController.Register().

#### 6.35.2.4 FirstName

```
string DotNetIdentity.Models.ViewModels.SignUpViewModel.FirstName = string.Empty [get], [set]
```

the firstname

string

Definition at line 42 of file SignUpViewModel.cs. 00042 {get; set;} = string.Empty;

Referenced by DotNetIdentity.Controllers.UserController.Register().

#### 6.35.2.5 Gender

```
Gender DotNetIdentity.Models.ViewModels.SignUpViewModel.Gender = Gender.Unknown [get], [set]
```

the gender

Gender

Definition at line 22 of file SignUpViewModel.cs.

00022 { get; set; } = Gender.Unknown;

Referenced by DotNetIdentity.Controllers.UserController.Register().

#### 6.35.2.6 LastName

```
string DotNetIdentity.Models.ViewModels.SignUpViewModel.LastName = string.Empty [get], [set]
```

the lastname

string

Definition at line 47 of file SignUpViewModel.cs. 00047 {get; set;} = string.Empty;

Referenced by DotNetIdentity.Controllers.UserController.Register().

#### 6.35.2.7 Password

```
string DotNetIdentity.Models.ViewModels.SignUpViewModel.Password = default! [get], [set]
```

the password

string

Definition at line 37 of file SignUpViewModel.cs.

00037 { get; set; } = default!;

Referenced by DotNetIdentity.Controllers.UserController.Register().

### 6.35.2.8 UserName

```
string DotNetIdentity.Models.ViewModels.SignUpViewModel.UserName = default! [get], [set]
```

the username

string

Definition at line 12 of file SignUpViewModel.cs.

00012 { get; set; } = default!;

Referenced by DotNetIdentity.Controllers.UserController.Register().

# 6.36 DotNetIdentity.Models.ViewModels.StatusCodesModel Class Reference

model for Error Statuscodes

# **Properties**

```
    int StatusCode [get, set]
        the status code
    string? ErrorMessage [get, set]
        the error message
    string? RouteOfException [get, set]
        the route that thowed the exception
```

# 6.36.1 Detailed Description

model for Error Statuscodes

Definition at line 5 of file StatusCodesModel.cs.

# 6.36.2 Property Documentation

#### 6.36.2.1 ErrorMessage

```
string? DotNetIdentity.Models.ViewModels.StatusCodesModel.ErrorMessage [get], [set]
the error message
string

Definition at line 15 of file StatusCodesModel.cs.
00015 {get; set;}
```

# 6.36.2.2 RouteOfException

```
string? DotNetIdentity.Models.ViewModels.StatusCodesModel.RouteOfException [get], [set]
the route that thowed the exception
string

Definition at line 20 of file StatusCodesModel.cs.
00020 {get; set;}
```

#### 6.36.2.3 StatusCode

```
int DotNetIdentity.Models.ViewModels.StatusCodesModel.StatusCode [get], [set]
the status code
int
```

Definition at line 10 of file StatusCodesModel.cs. 00010 {get; set;}

# 6.37 DotNetIdentity.IdentitySettings.TwoFactorAuthenticationService Class Reference

class providing 2fa auth services

#### **Public Member Functions**

- TwoFactorAuthenticationService (IConfiguration cnf, UrlEncoder urlEncoder, ISettingsService sett)
- string GenerateQrCodeUri (string email, string authenticatorKey)
   method to generate a barcode for 2fa configuration

# 6.37.1 Detailed Description

class providing 2fa auth services

Definition at line 8 of file TwoFactorAuthenticationService.cs.

### 6.37.2 Constructor & Destructor Documentation

#### 6.37.2.1 TwoFactorAuthenticationService()

```
DotNetIdentity.IdentitySettings.TwoFactorAuthenticationService.TwoFactorAuthenticationService (

IConfiguration cnf,

UrlEncoder urlEncoder,

ISettingsService sett ) [inline]
```

class constructor

#### **Parameters**

cnf	IConfiguration
urlEncoder	UrlEncoder
sett	ISettingsService

Definition at line 29 of file TwoFactorAuthenticationService.cs.

## 6.37.3 Member Function Documentation

## 6.37.3.1 GenerateQrCodeUri()

```
string DotNetIdentity.IdentitySettings.TwoFactorAuthenticationService.GenerateQrCodeUri ( string email, string authenticatorKey) [inline]
```

method to generate a barcode for 2fa configuration

#### **Parameters**

email	string
authenticatorKey	string

#### Returns

string

Definition at line 42 of file TwoFactorAuthenticationService.cs.

## 6.38 DotNetIdentity.Models.ViewModels.TwoFactorAuthenticatorView Model Class Reference

model for TwoFactorAuthenticator view

## **Properties**

```
    string SharedKey = default! [get, set]
        the shared key
    string AuthenticationUri = default! [get, set]
        the auth uri
    string VerificationCode = default! [get, set]
        the otp code
```

## 6.38.1 Detailed Description

model for TwoFactorAuthenticator view

Definition at line 6 of file TwoFactorAuthenticatorViewModel.cs.

## 6.38.2 Property Documentation

#### 6.38.2.1 AuthenticationUri

```
string DotNetIdentity.Models.ViewModels.TwoFactorAuthenticatorViewModel.AuthenticationUri =
default! [get], [set]
```

the auth uri

string

Definition at line 17 of file TwoFactorAuthenticatorViewModel.cs. 00017 { get; set; } = default!;

## 6.38.2.2 SharedKey

```
string DotNetIdentity.Models.ViewModels.TwoFactorAuthenticatorViewModel.SharedKey = default!
[get], [set]
```

the shared key

string

Definition at line 12 of file TwoFactorAuthenticatorViewModel.cs. 00012 { get; set; } = default!;

#### 6.38.2.3 VerificationCode

```
string DotNetIdentity.Models.ViewModels.TwoFactorAuthenticatorViewModel.VerificationCode =
default! [get], [set]
```

the otp code

string

Definition at line 22 of file TwoFactorAuthenticatorViewModel.cs. 00022 { get; set; } = default!;

Referenced by DotNetIdentity.Controllers.UserController.EnforceTwoFactorAuthenticator(), and DotNetIdentity.Controllers.UserCo

## 6.39 DotNetIdentity.Models.ViewModels.TwoFactorLoginVieWModel Class Reference

the model for TwoFactorLogin view

## **Properties**

```
    string VerificationCode = default! [get, set]
        the otp code
    bool IsRecoveryCode [get, set]
        bool if otp code is a recovery code
    TwoFactorType TwoFactorType [get, set]
        the type of 2fa
```

## 6.39.1 Detailed Description

the model for TwoFactorLogin view

Definition at line 6 of file TwoFactorLoginVieWModel.cs.

## 6.39.2 Property Documentation

#### 6.39.2.1 IsRecoveryCode

```
bool DotNetIdentity.Models.ViewModels.TwoFactorLoginVieWModel.IsRecoveryCode [get], [set]
```

bool if otp code is a recovery code

bool

```
Definition at line 17 of file TwoFactorLoginVieWModel.cs. 00017 \{ get; set; \}
```

## 6.39.2.2 TwoFactorType

```
TwoFactorType DotNetIdentity.Models.ViewModels.TwoFactorLoginVieWModel.TwoFactorType [get],
[set]
```

the type of 2fa

TwoFactorType

```
Definition at line 22 of file TwoFactorLoginVieWModel.cs. 00022 { get; set; }
```

Referenced by DotNetIdentity.Controllers.UserController.TwoFactorLogin().

#### 6.39.2.3 VerificationCode

```
string DotNetIdentity.Models.ViewModels.TwoFactorLoginVieWModel.VerificationCode = default!
[get], [set]
```

the otp code

string

Definition at line 12 of file TwoFactorLoginVieWModel.cs. 00012 { get; set; } = default!;

Referenced by DotNetIdentity.Controllers.UserController.TwoFactorLogin().

## 6.40 DotNetIdentity.Models.ViewModels.TwoFactorTypeViewModel Class Reference

model for TwoFactorType view

## **Properties**

• TwoFactorType TwoFactorType [get, set] the 2fa type

## 6.40.1 Detailed Description

model for TwoFactorType view

Definition at line 6 of file TwoFactorTypeViewModel.cs.

## 6.40.2 Property Documentation

#### 6.40.2.1 TwoFactorType

TwoFactorType DotNetIdentity.Models.ViewModels.TwoFactorTypeViewModel.TwoFactorType [get],
[set]

the 2fa type

TwoFactorType

Definition at line 12 of file TwoFactorTypeViewModel.cs. 00012 { get; set; }

 $Referenced \ by \ Dot Net Identity. Controllers. User Controller. Two Factor Type ().$ 

## 6.41 DotNetIdentity.Models.ViewModels.UpdateProfileViewModel Class Reference

model for UpdateProfile view

## **Properties**

## 6.41.1 Detailed Description

model for UpdateProfile view

Definition at line 6 of file UpdateProfileViewModel.cs.

## 6.41.2 Property Documentation

## 6.41.2.1 BirthDay

```
DateTime DotNetIdentity.Models.ViewModels.UpdateProfileViewModel.BirthDay [get], [set]
```

the birthday

DateTime

```
Definition at line 32 of file UpdateProfileViewModel.cs. 00032 { get; set; }
```

Referenced by DotNetIdentity.Controllers.UserController.Profile().

## 6.41.2.2 Email

```
string DotNetIdentity.Models.ViewModels.UpdateProfileViewModel.Email = default! [get], [set]
```

the email

string

Definition at line 17 of file UpdateProfileViewModel.cs.

```
00017 { get; set; } = default!;
```

Referenced by DotNetIdentity.Controllers.UserController.Profile().

#### 6.41.2.3 Gender

```
Gender DotNetIdentity.Models.ViewModels.UpdateProfileViewModel.Gender [get], [set]
```

the gender

Gender

Definition at line 27 of file UpdateProfileViewModel.cs. 00027 { get; set; }

Referenced by DotNetIdentity.Controllers.UserController.Profile().

#### 6.41.2.4 PhoneNumber

```
string DotNetIdentity.Models.ViewModels.UpdateProfileViewModel.PhoneNumber = default! [get],
[set]
```

the phone number

string

Definition at line 22 of file UpdateProfileViewModel.cs.

```
00022 { get; set; } = default!;
```

Referenced by DotNetIdentity.Controllers.UserController.Profile().

#### 6.41.2.5 ProfilePicture

```
IFormFile? DotNetIdentity.Models.ViewModels.UpdateProfileViewModel.ProfilePicture [get], [set]
```

the profile picture

**IFormFile** 

Definition at line 37 of file UpdateProfileViewModel.cs. 00037 { get; set; }

Referenced by DotNetIdentity.Controllers.UserController.Profile().

#### 6.41.2.6 UserName

```
string DotNetIdentity.Models.ViewModels.UpdateProfileViewModel.UserName = default! [get],
[set]
```

the username

string

```
Definition at line 12 of file UpdateProfileViewModel.cs. 00012 { get; set; } = default!;
```

Referenced by DotNetIdentity.Controllers.UserController.Profile().

# 6.42 DotNetIdentity.Models.ViewModels.UpsertRoleViewModel Class Reference

model for the UpsertRole view

## **Properties**

```
    string? Id [get, set]
        the role id
    string Name = default! [get, set]
        the role name
```

## 6.42.1 Detailed Description

model for the UpsertRole view

Definition at line 6 of file UpsertRoleViewModel.cs.

## 6.42.2 Property Documentation

## 6.42.2.1 ld

```
string? DotNetIdentity.Models.ViewModels.UpsertRoleViewModel.Id [get], [set]
the role id
```

string

```
Definition at line 12 of file UpsertRoleViewModel.cs. 00012 { get; set; }
```

Referenced by DotNetIdentity.Controllers.AdminController.UpsertRole().

#### 6.42.2.2 Name

```
string DotNetIdentity.Models.ViewModels.UpsertRoleViewModel.Name = default! [get], [set]
```

the role name

string

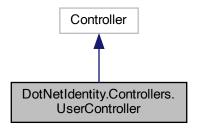
Definition at line 17 of file UpsertRoleViewModel.cs. 00017 { get; set; } = default!;

Referenced by DotNetIdentity.Controllers.AdminController.UpsertRole().

## 6.43 DotNetIdentity.Controllers.UserController Class Reference

Controller Class for User views

Inheritance diagram for DotNetIdentity.Controllers.UserController:



## **Public Member Functions**

UserController (IStringLocalizer < UserController > localizer, ILogger < UserController > log, IWebHost ←
 Environment webhostEnviroment, UserManager < AppUser > userManager, SignInManager < AppUser >
 signInManager, TwoFactorAuthenticationService twoFactorAuthService, EmailHelper emailHelper)

Controller constructor

• IActionResult Register ()

Controller action for Register view

• IActionResult debugUserInfo ()

Controller action for DebugUserInfo view

• IActionResult ping ()

Controller action for Ping view

async Task< IActionResult > Register (SignUpViewModel viewModel)

Controller POST method for Register view

async Task< IActionResult > Login (string? returnUrl)

Controller action for Login view

async Task< IActionResult > Login (SignInViewModel viewModel)

Controller POST method for Login view

async Task< IActionResult > TwoFactorLogin (string? returnUrl)

Controller action for view TwoFactorLogin

async Task< IActionResult > TwoFactorLogin (TwoFactorLoginVieWModel vieWModel)

controller POST method for TwoFactorLogin view

· async Task Logout ()

controller action for Logout

async Task< IActionResult > Profile ()

controller action for Profile view

async Task< | ActionResult > Profile (UpdateProfileViewModel viewModel)

controller POST methood for Profile view

IActionResult ChangePassword ()

controller action for ChangePassword view

async Task < IActionResult > ChangePassword (ChangePasswordViewModel viewModel)

controller POST method for ChangePassword view

IActionResult ForgotPassword ()

controller action for ForgotPassword view

async Task< IActionResult > ForgotPassword (ForgotPasswordViewModel viewModel)

controller POST method for ForgotPassword view

IActionResult ResetPassword (string userId, string token)

controller action for ResetPassword view

async Task < IActionResult > ResetPassword (ResetPasswordViewModel viewModel)

controller POST method for ResetPassword view

async Task< IActionResult > ConfirmEmail (string userId, string token)

controller action for ConfirmEmail view

async Task< IActionResult > TwoFactorType ()

controller action for view TwiFactorType

async Task< | ActionResult > TwoFactorType (TwoFactorTypeViewModel viewModel)

controller POST method for view TwoFactorType

async Task< IActionResult > EnforceTwoFactorAuthenticator ()

controller action for view EnforceTwoFactorAuthenticator

controller POST method for view EnforceTwoFactorAuthenticator

async Task< IActionResult > EnforceTwoFactorResult ()

controller action for view EnforceTwoFactorResult

async Task< IActionResult > TwoFactorAuthenticator ()

controller action for view TwoFActorAuthenticator

async Task< | ActionResult > TwoFactorAuthenticator (TwoFactorAuthenticatorViewModel)

controller POST method for view TwoFActorAuthenticator

## 6.43.1 Detailed Description

Controller Class for User views

Todo add translation

Definition at line 20 of file UserController.cs.

## 6.43.2 Constructor & Destructor Documentation

## 6.43.2.1 UserController()

#### Controller constructor

#### **Parameters**

localizer	type IStringLocalizer
log	type ILogger
webhostEnviroment	type lwebHostEnviroment
userManager	type UserManager
signInManager	type SlgnInManager
twoFactorAuthService	type TwoFactorAuthService
emailHelper	työe EmailHelper

#### Definition at line 61 of file UserController.cs.

## 6.43.3 Member Function Documentation

## 6.43.3.1 ChangePassword() [1/2]

```
{\tt IActionResult\ DotNetIdentity.Controllers.UserController.Change Password\ (\ )}
```

controller action for ChangePassword view

#### Returns

view ChangePassword

#### 6.43.3.2 ChangePassword() [2/2]

```
async\ Task < IActionResult > DotNetIdentity.Controllers.UserController.ChangePassword ( \\ ChangePasswordViewModel\ viewModel\ ) \ [inline]
```

controller POST method for ChangePassword view

**Parameters** 

viewModel ChangePasswordViewModel

Returns

redirect to action Index

```
Definition at line 410 of file UserController.cs.
```

```
00412
                   if (ModelState.IsValid)
00413
                       var me = await _userManager.FindByNameAsync(User.Identity?.Name);
00414
00415
00416
                       var passwordValid = await _userManager.CheckPasswordAsync(me, viewModel.Password);
00417
                       if (passwordValid)
00418
00419
                           var result = await _userManager.ChangePasswordAsync(me, viewModel.Password,
       viewModel.NewPassword);
00420
                           if (result.Succeeded)
00421
00422
                                await _userManager.UpdateSecurityStampAsync(me);
00423
00424
                               await _signInManager.SignOutAsync();
                               await _signInManager.SignInAsync(me, true);
_logger.LogInformation("AUDIT: " + me.UserName + " successfully changed own
00425
00426
       password!");
00427
00428
                                return RedirectToAction("Index", "Admin");
00429
                            _logger.LogWarning("AUDIT: " + me.UserName + "tried to change password. Error: " +
00430
       result.Errors.FirstOrDefault()!.ToString());
00431
                           result.Errors.ToList().ForEach(f => ModelState.AddModelError(string.Empty,
       f.Description));
00432
00433
00434
                       {
                            _logger.LogWarning("AUDIT: " + me.UserName + " tried to change password. But
00435
       provided invalid current pasword!");
00436
                           ModelState.AddModelError(string.Empty, _localizer["8"]);
00437
00438
00439
                   return View();
00440
00441
```

References DotNetIdentity.Models.ViewModels.ChangePasswordViewModel.NewPassword, and DotNetIdentity.Models.ViewModels.Vie

#### 6.43.3.3 ConfirmEmail()

controller action for ConfirmEmail view

#### **Parameters**

user⊷	the user id
ld	
token	the confirmation token

#### Returns

redirect to action Index

Definition at line 546 of file UserController.cs.

```
00548
                  var user = await _userManager.FindByIdAsync(userId);
00549
                  if (user != null)
00550
00551
                      var result = await _userManager.ConfirmEmailAsync(user, token);
00552
                      if (result.Succeeded)
00553
00554
                          _logger.LogInformation("AUDIT: " + user.UserName + " successfully confirmed email
       addres!");
00555
                          return RedirectToAction("Login");
00556
00557
00558
                  return RedirectToAction("Index", "Home");
```

#### 6.43.3.4 debugUserInfo()

IActionResult DotNetIdentity.Controllers.UserController.debugUserInfo ( )

Controller action for DebugUserInfo view

Returns

view DebugUserInfo

#### 6.43.3.5 EnforceTwoFactorAuthenticator() [1/2]

async Task< IActionResult > DotNetIdentity.Controllers.UserController.EnforceTwoFactorAuthenticator
( ) [inline]

controller action for view EnforceTwoFactorAuthenticator

Returns

view EnforceTwoFactorAuthenticator

Definition at line 603 of file UserController.cs.

```
00604
             {
00605
                  var user = await _userManager.FindByNameAsync(User.Identity?.Name);
00606
                  user.TwoFactorType = Models.TwoFactorType.Authenticator;
                  await _userManager.UpdateAsync(user);
00607
00608
00609
                  var authenticatorKey = await _userManager.GetAuthenticatorKeyAsync(user);
00610
                  if (authenticatorKey == null)
00611
00612
                      await _userManager.ResetAuthenticatorKeyAsync(user);
                      authenticatorKey = await _userManager.GetAuthenticatorKeyAsync(user);
00613
00614
00615
00616
                  return View(new TwoFactorAuthenticatorViewModel
00617
00618
                      SharedKey = authenticatorKey,
                      AuthenticationUri = _twoFactorAuthService.GenerateQrCodeUri(user.Email,
00619
       authenticatorKey)
00620
                  });
00621
```

#### 6.43.3.6 EnforceTwoFactorAuthenticator() [2/2]

controller POST method for view EnforceTwoFactorAuthenticator

#### **Parameters**

	viewModel	type TwoFactorAuthenticatorViewModel	
--	-----------	--------------------------------------	--

#### Returns

redirect to action EnforceTwoFactorResult

Definition at line 629 of file UserController.cs.

```
00630
                   var user = await _userManager.FindByNameAsync(User.Identity?.Name);
00631
00632
00633
                  var verificationCode = viewModel.VerificationCode.Replace(" ", string.Empty).Replace("-",
      string.Empty);
00634
00635
                  var isTokenValid = await _userManager.VerifyTwoFactorTokenAsync(user,
      _userManager.Options.Tokens.AuthenticatorTokenProvider, verificationCode);
00636
                  if (isTokenValid)
00637
                       if(user.IsMfaForce && user.TwoFactorEnabled==false) {
00639
                           await _userManager.SetTwoFactorEnabledAsync(user, true);
00640
                           user.IsMfaForce = false;
00641
                           await _userManager.UpdateAsync(user);
00642
00643
                       TempData["RecoveryCodes"] = await
00644
       _userManager.GenerateNewTwoFactorRecoveryCodesAsync(user, 5);
00645
                   _logger.LogInformation("AUDIT: " + user.UserName + " successfully configured 2fa after
00646
       enforcement. Redirecting to action: EnforceTwoFactorResult");

return RedirectToAction("EnforceTwoFactorResult", "User");
00647
```

 ${\bf References}\ {\bf DotNetIdentity}. Models. View Models. Two Factor Authenticator View Model. Verification Code.$ 

## 6.43.3.7 EnforceTwoFactorResult()

```
async Task< IActionResult > DotNetIdentity.Controllers.UserController.EnforceTwoFactorResult (
) [inline]
```

controller action for view EnforceTwoFactorResult

#### Returns

view EnforceTwoFactorResult

```
Definition at line 654 of file UserController.cs.
```

```
00654 {
00655 await _signInManager.SignOutAsync();
00656 return View();
00657 }
```

#### 6.43.3.8 ForgotPassword() [1/2]

IActionResult DotNetIdentity.Controllers.UserController.ForgotPassword ( )

controller action for ForgotPassword view

Returns

view ForgotPassword

## 6.43.3.9 ForgotPassword() [2/2]

```
async Task< IActionResult > DotNetIdentity.Controllers.UserController.ForgotPassword ( ForgotPasswordViewModel viewModel ) [inline]
```

controller POST method for ForgotPassword view

#### **Parameters**

viewMod	lel	ForgotPasswordViewModel	
---------	-----	-------------------------	--

Returns

redirect to action Index

Definition at line 455 of file UserController.cs.

```
00456
00457
                  if (ModelState.IsValid)
00458
00459
                      var user = await _userManager.FindByEmailAsync(viewModel.Email);
00460
                      if (user != null)
00461
00462
                          var passwordResetToken = await _userManager.GeneratePasswordResetTokenAsync(user);
00463
                          var passwordLink = Url.Action("ResetPassword", "User", new
00464
00465
00466
                               userId = user.Id,
00467
                               token = passwordResetToken
                          }, HttpContext.Request.Scheme);
00468
00469
00470
                          await _emailHelper.SendAsync(new()
00471
00472
                               Subject = "Reset password",
00473
                               Body = $"Please <a href='{passwordLink}'>click</a> to reset your password.",
00474
                              To = user.Email
00475
                          });
                           _logger.LogWarning("AUDIT: " + user.UserName + " requested a password reset!");
00476
00477
                          return RedirectToAction("Index", "Home");
00478
00479
00480
00481
                          ModelState.AddModelError(string.Empty, _localizer["9"]);
00482
00483
00484
                  return View(viewModel);
00485
```

 $References\ Dot Net Identity. Models. View Models. For got Password View Model. Email.$ 

#### 6.43.3.10 Login() [1/2]

Controller POST method for Login view

Todo Implement Ldap Login

Returns

Redirect to action

Definition at line 162 of file UserController.cs.

```
00164
                  if (ModelState.IsValid)
00165
                      var user = await _userManager.FindByNameAsync(viewModel.UserName);
00166
00167
                      if (user != null)
00168
00169
                          await _signInManager.SignOutAsync();
00170
00171
                         var result = await _signInManager.PasswordSignInAsync(user, viewModel.Password,
       viewModel.RememberMe, true);
00172
                          if(result.Succeeded && user.IsEnabled==false) {
00173
                             await _signInManager.SignOutAsync();
00174
                              _logger.LogWarning("AUDIT: " + user.UserName + " logged in successfully. But
       account is disabled!");
00175
                             ModelState.AddModelError(string.Empty, _localizer["1"]);
00176
00177
                          else if (result.Succeeded && user.IsMfaForce==true) {
                             await _userManager.ResetAccessFailedCountAsync(user);
await _userManager.SetLockoutEndDateAsync(user, null);
00178
00179
00180
                               _logger.LogInformation("AUDIT: " + user.UserName + " logged in successfully.
       But MFA is enforced. Redirecting to action: EnforceTwoFactorAuthenticator");
00181
                              return RedirectToAction("EnforceTwoFactorAuthenticator");
00182
00183
                         else if (result.Succeeded && user.IsMfaForce==false)
00184
                              await _userManager.ResetAccessFailedCountAsync(user);
00185
00186
                              await _userManager.SetLockoutEndDateAsync(user, null);
00187
                              _logger.LogInformation("AUDIT: " + user.UserName + " logged in
       successfully.");
00188
                              var returnUrl = TempData["ReturnUrl"];
00189
                              if (returnUrl != null)
00190
00191
                                  return Redirect(returnUrl.ToString() ?? "/");
00192
00193
                              return RedirectToAction("Index", "Admin");
00194
00195
                          else if (result.RequiresTwoFactor)
00196
                               logger.LogInformation("AUDIT: " + user.UserName + " logged in successfully.
00197
       But MFA is enabled. Redirecting to action: TwoFactorLogin");
00198
                              return RedirectToAction("TwoFactorLogin", new { ReturnUrl =
       TempData["ReturnUrl"] });
00199
00200
                          else if (result.IsLockedOut)
00201
00202
                              var lockoutEndUtc = await _userManager.GetLockoutEndDateAsync(user);
       00203
00204
00205
                              ModelState.AddModelError(string.Empty, _localizer["2",
       timeLeft.Minutes.ToString()]);
00206
00207
                          else if (result.IsNotAllowed)
00208
                          {
                               _logger.LogWarning("AUDIT: " + user.UserName + " logged in successfully. But
00209
       email is not confirmed!");
00210
                             ModelState.AddModelError(string.Empty, _localizer["3"]);
00211
                          else
00212
00213
                          {
                              _logger.LogWarning("AUDIT: " + user.UserName + " login in failed. Invalid
00214
       username or password!");
00215
                              ModelState.AddModelError(string.Empty, _localizer["4"]);
```

References DotNetIdentity.Models.ViewModels.SignInViewModel.Password, DotNetIdentity.Models.ViewModels.SignInViewModel.Read and DotNetIdentity.Models.ViewModels.SignInViewModel.UserName.

## 6.43.3.11 Login() [2/2]

Controller action for Login view

**Parameters** 

returnUrl

Returns

view Login

Definition at line 146 of file UserController.cs.

## 6.43.3.12 Logout()

```
async Task DotNetIdentity.Controllers.UserController.Logout ( )
```

controller action for Logout

Returns

#### 6.43.3.13 ping()

IActionResult DotNetIdentity.Controllers.UserController.ping ( )

Controller action for Ping view

Returns

view Ping

## 6.43.3.14 Profile() [1/2]

```
async Task< IActionResult > DotNetIdentity.Controllers.UserController.Profile ( ) [inline]
```

controller action for Profile view

Returns

view Profile

Definition at line 305 of file UserController.cs.

```
00306
00307
                    var me = await _userManager.FindByNameAsync(User.Identity?.Name);
00308
                    if (me == null)
00309
00310
                        await _signInManager.SignOutAsync();
00311
                        return RedirectToAction("Index", "Home");
00312
00313
                   var mod = new UpdateProfileViewModel();
00314
                   mod.Email = me.Email;
                   mod.BirthDay = me.BirthDay;
mod.UserName = me.UserName;
00315
00316
00317
                  mod.PhoneNumber = me.PhoneNumber;
                   mod.Gender = me.Gender;
//return View(me.Adapt<UpdateProfileViewModel>());
00318
00319
00320
                   return View (mod);
00321
```

#### 6.43.3.15 Profile() [2/2]

controller POST methood for Profile view

**Parameters** 

```
viewModel type UpdateProfileViewModel
```

Returns

redirect to action Index

Definition at line 330 of file UserController.cs.

```
00332
                   if (ModelState.IsValid)
00333
00334
                       var me = await _userManager.FindByNameAsync(User.Identity?.Name);
00335
                       if (me != null)
00336
00337
                           if (me.PhoneNumber != viewModel.PhoneNumber && _userManager.Users.Any(a =>
       a.PhoneNumber == viewModel.PhoneNumber))
00338
00339
                               ModelState.AddModelError(string.Empty, _localizer["6"]);
00340
00341
                           else
00342
00343
                               if(viewModel.ProfilePicture!=null) {
00344
                                   using (var memoryStream = new MemoryStream())
00345
00346
                                        await viewModel.ProfilePicture.CopyToAsync(memoryStream);
00347
00348
                                        // Upload the file if less than 2 MB
00349
                                        if (memoryStream.Length < 2097152)
00350
                                            var format = "image/png";
var Content = memoryStream.ToArray();
00351
00352
00353
                                            var imageData =
       $"data:{format};base64,{Convert.ToBase64String(Content)}";
00354
                                            me.ProfilePicture = imageData;
00355
00356
00357
                                       else
00358
00359
                                            ModelState.AddModelError("File", _localizer["7"]);
00360
00361
00362
                               } else {
                                   me.ProfilePicture = null;
00363
00364
00365
00366
                               me.UserName = viewModel.UserName;
00367
                               me.Email = viewModel.Email;
00368
                               me.PhoneNumber = viewModel.PhoneNumber;
                               me.Gender = viewModel.Gender;
00369
                               me.BirthDay = viewModel.BirthDay;
00370
00371
                               //me.Department = viewModel.Department.ToString();
00372
                               var result = await _userManager.UpdateAsync(me);
00373
00374
                               if (result.Succeeded)
00375
                                   await _userManager.UpdateSecurityStampAsync(me);
00376
00377
                                   await _signInManager.SignOutAsvnc();
00378
                                   await _signInManager.SignInAsync(me, true);
00379
00380
                                    _logger.LogInformation("AUDIT: " + me.UserName + "successfully updated own
       user profile");
00381
00382
                                   return RedirectToAction("Index", "Home");
00384
                               result.Errors.ToList().ForEach(f => ModelState.AddModelError(string.Empty,
       f.Description));
00385
00386
00387
                       else
00388
00389
                           await _signInManager.SignOutAsync();
00390
                           return RedirectToAction("Index", "Home");
00391
00392
                   return View(viewModel);
00393
00394
```

References DotNetIdentity.Models.ViewModels.UpdateProfileViewModel.BirthDay, DotNetIdentity.Models.ViewModels.UpdateProfileViewModel.BirthDay, DotNetIdentity.Models.ViewModels.UpdateProfileViewModel.PhDotNetIdentity.Models.ViewModels.UpdateProfileViewModel.ProfilePicture, and DotNetIdentity.Models.ViewModels.UpdateProfileViewModels.UpdatePr

## 6.43.3.16 Register() [1/2]

IActionResult DotNetIdentity.Controllers.UserController.Register ( )

Controller action for Register view

#### Returns

view Register

#### 6.43.3.17 Register() [2/2]

```
\label{eq:controllers.UserController.Register (SignUpViewModel viewModel)} In the controller of the
```

#### Controller POST method for Register view

#### **Parameters**

viewModel

#### Returns

Redirect to action Login

```
Definition at line 98 of file UserController.cs.
```

```
00099
                  if (ModelState.IsValid)
00100
00101
00102
                      var user = new AppUser
00103
00104
                          FirstName = viewModel.FirstName,
00105
                          LastName = viewModel.LastName,
                          UserName = viewModel.UserName,
00106
00107
                          Email = viewModel.Email,
                          Gender = viewModel.Gender,
00108
00109
                          BirthDay = viewModel.BirthDay,
00110
                          Department = viewModel.Department.ToString(),
00111
                          TwoFactorType = Models.TwoFactorType.None,
00112
                          CreatedOn = DateTime.UtcNow,
                          IsEnabled = true
00113
00114
                      };
00115
00116
                      var result = await _userManager.CreateAsync(user, viewModel.Password);
00117
                      if (result.Succeeded)
00118
                          await _userManager.AddToRoleAsync(user, "User");
00119
00120
                          var confirmationToken = await
       _userManager.GenerateEmailConfirmationTokenAsync(user);
00121
                          var confirmationLink = Url.Action("ConfirmEmail", "User", new
00122
00123
                               userId = user.Id,
00124
                               token = confirmationToken
00125
                          }, HttpContext.Request.Scheme);
00126
00127
                          await _emailHelper.SendAsync(new()
00128
                           {
00129
                               Subject = "Confirm e-mail",
                               Body = $"Please <a href='{confirmationLink}'>click</a> to confirm your e-mail
00130
       address.",
00131
                               To = user.Email
00132
                          });
00133
                          _logger.LogInformation("AUDIT: " + "registered successfully new user: " +
       user.UserName);
00134
                          return RedirectToAction("Login");
00135
                      result.Errors.ToList().ForEach(f => ModelState.AddModelError(string.Empty,
00136
       f.Description));
00137
00138
                  return View(viewModel);
00139
```

References DotNetIdentity.Models.ViewModels.SignUpViewModel.BirthDay, DotNetIdentity.Models.ViewModels.SignUpViewModel.DotNetIdentity.Models.ViewModels.SignUpViewModel.Email, DotNetIdentity.Models.ViewModels.SignUpViewModel.FirstName,

DotNetIdentity.Models.ViewModels.SignUpViewModel.Gender, DotNetIdentity.Models.ViewModels.SignUpViewModel.LastName, DotNetIdentity.Models.ViewModels.SignUpViewModel.UserName, and DotNetIdentity.Models.ViewModels.SignUpViewModel.UserName, DotNetIdentity.Models.ViewModels.SignUpViewModel.UserName, DotNetIdentity.Models.ViewModels.SignUpViewModel.UserName, DotNetIdentity.Models.ViewModels.SignUpViewModel.UserName, DotNetIdentity.Models.ViewModels.SignUpViewModel.UserName, DotNetIdentity.Models.ViewModels.SignUpViewModel.UserName, DotNetIdentity.Models.ViewModels.SignUpViewModels.S

#### 6.43.3.18 ResetPassword() [1/2]

```
\label{eq:async} {\tt Task} < {\tt IActionResult} > {\tt DotNetIdentity.Controllers.UserController.ResetPassword} \ \ ( \\ {\tt ResetPasswordViewModel} \ viewModel \ viewModel} \ ) \ \ [inline]
```

controller POST method for ResetPassword view

#### **Parameters**

viewModel	type ResetPasswordViewModel
-----------	-----------------------------

#### Returns

redirect to action Login

Definition at line 513 of file UserController.cs.

```
00515
                    if (ModelState.IsValid)
00516
00517
                        var user = await _userManager.FindByIdAsync(viewModel.UserId);
                        if (user != null)
00518
00519
00520
                             var result = await _userManager.ResetPasswordAsync(user, viewModel.Token,
       viewModel.Password);
00521
                             if (result.Succeeded)
00522
                                 await _userManager.UpdateSecurityStampAsync(user);
_logger.LogInformation("AUDIT: " + user.UserName + "successfully resetted own
00523
00524
       password.");
00525
                                 return RedirectToAction("Login", "User");
00526
00527
                            else
00528
00529
                                 result.Errors.ToList().ForEach(f => ModelState.AddModelError(string.Empty,
       f.Description));
00530
00531
00532
00533
                            ModelState.AddModelError(string.Empty, "User not found.");
00534
00535
00536
00537
                    return View(viewModel);
00538
```

References DotNetIdentity.Models.ViewModels.ResetPasswordViewModel.Password, DotNetIdentity.Models.ViewModels.ResetPasswordViewModel.UserId.

#### 6.43.3.19 ResetPassword() [2/2]

```
IActionResult DotNetIdentity.Controllers.UserController.ResetPassword ( string \ userId, \\ string \ token \ ) \ [inline]
```

controller action for ResetPassword view

#### **Parameters**

user⊷	the user id
ld	
token	the reset token

#### Returns

view ResetPassword

#### Definition at line 493 of file UserController.cs.

```
00495
                  if (userId == null || token == null)
00496
                      return RedirectToAction("Login", "User");
00497
00498
                  }
00499
00500
                  return View(new ResetPasswordViewModel
00501
                  {
00502
                      UserId = userId,
00503
                      Token = token
00504
                  });
00505
```

## 6.43.3.20 TwoFactorAuthenticator() [1/2]

```
async Task< IActionResult > DotNetIdentity.Controllers.UserController.TwoFactorAuthenticator (
) [inline]
```

controller action for view TwoFActorAuthenticator

#### Returns

view TwoFActorAuthenticator

## Definition at line 663 of file UserController.cs.

```
00664
00665
                  var user = await _userManager.FindByNameAsync(User.Identity?.Name);
00666
                  if (user.TwoFactorEnabled && user.TwoFactorType == Models.TwoFactorType.Authenticator)
00667
                      var authenticatorKey = await _userManager.GetAuthenticatorKeyAsync(user);
00668
                      if (authenticatorKey == null)
00669
00670
00671
                          await _userManager.ResetAuthenticatorKeyAsync(user);
00672
                          authenticatorKey = await _userManager.GetAuthenticatorKeyAsync(user);
00673
00674
00675
                      return View(new TwoFactorAuthenticatorViewModel
00676
00677
                          SharedKey = authenticatorKey,
00678
                          AuthenticationUri = _twoFactorAuthService.GenerateQrCodeUri(user.Email,
       authenticatorKev)
00679
                      });
00680
                  return RedirectToAction("Index", "Home");
00682
```

## 6.43.3.21 TwoFactorAuthenticator() [2/2]

```
\label{eq:async_task} \mbox{ async Task< IActionResult > DotNetIdentity.Controllers.UserController.TwoFactorAuthenticator (} \\ \mbox{ TwoFactorAuthenticatorViewModel } viewModel \ viewModel \ ) \ \ [inline]
```

controller POST method for view TwoFActorAuthenticator

#### **Parameters**

viewModel type TwoFactorAuthenticatorViewModel

#### Returns

redirect to action TwoFactorType

Definition at line 690 of file UserController.cs.

```
00691
                  var user = await _userManager.FindByNameAsync(User.Identity?.Name);
00692
00693
00694
                  var verificationCode = viewModel.VerificationCode.Replace(" ", string.Empty).Replace("-",
      string.Empty);
00695
00696
                  var isTokenValid = await _userManager.VerifyTwoFactorTokenAsync(user,
       _userManager.Options.Tokens.AuthenticatorTokenProvider, verificationCode);
00697
                  if (isTokenValid)
00698
                  {
00699
                      if(user.IsMfaForce && user.TwoFactorEnabled==false) {
00700
                          await _userManager.SetTwoFactorEnabledAsync(user, true);
00701
                          user.IsMfaForce = false;
00702
                          await _userManager.UpdateAsync(user);
00703
                      }
00704
00705
                      TempData["RecoveryCodes"] = await
       _userManager.GenerateNewTwoFactorRecoveryCodesAsync(user, 5);
00706
00707
                  _logger.LogInformation("AUDIT: " + user.UserName + " successfully configured 2fa!");
00708
                  return RedirectToAction("TwoFactorType", "User");
00709
```

References DotNetIdentity.Models.ViewModels.TwoFactorAuthenticatorViewModel.VerificationCode.

## 6.43.3.22 TwoFactorLogin() [1/2]

Controller action for view TwoFactorLogin

### **Parameters**

returnUrl optional return url as string

#### Returns

view TwoFactorLogin

Definition at line 232 of file UserController.cs.

```
00233
00234
                  if (returnUrl != null)
00235
                  {
00236
                      TempData["ReturnUrl"] = returnUrl;
00237
00238
00239
                  var user = await _signInManager.GetTwoFactorAuthenticationUserAsync();
00240
00241
                  if(user.TwoFactorType == DotNetIdentity.Models.TwoFactorType.Email) {
00242
                      var token = await _userManager.GenerateTwoFactorTokenAsync(user, "Email");
00243
                      await _emailHelper.SendAsync(new()
```

```
00244
                             {
                                 Subject = "Your 2fa code",
Body = $"Please use this " + token + " 2fa code to verify your login.",
00245
00246
00247
                                 To = user.Email
00248
                             });
00249
                              _logger.LogInformation("AUDIT: send otp code to " + user.Email);
00250
00251
00252
                    return View(new TwoFactorLoginVieWModel
00253
00254
                         TwoFactorType = user.TwoFactorType,
00255
                    });
00256
```

References DotNetIdentity.Models.ViewModels.TwoFactorLoginVieWModel.TwoFactorType.

#### 6.43.3.23 TwoFactorLogin() [2/2]

```
\label{eq:async} {\tt async Task} < {\tt IActionResult} > {\tt DotNetIdentity.Controllers.UserController.TwoFactorLogin} \ ( \\ {\tt TwoFactorLoginVieWModel} \ vieWModel \ ) \ [inline]
```

controller POST method for TwoFactorLogin view

#### **Parameters**

vieWModel	tyle TwoFactorLoginVieWModel
-----------	------------------------------

#### Returns

rediret to return url

#### Definition at line 264 of file UserController.cs.

```
00266
                var user = await _signInManager.GetTwoFactorAuthenticationUserAsync();
00267
00268
                if (user.TwoFactorType == Models.TwoFactorType.Authenticator)
00269
                {
00270
                    var result = vieWModel.IsRecoveryCode ? await
      _signInManager.TwoFactorAuthenticatorSignInAsync(vieWModel.VerificationCode, true, false);
00271
                    if (result.Succeeded)
00272
                       _logger.LogInformation("AUDIT: " + user.UserName + "Authenticator 2fa verified
00273
      successfully");
00274
                       return Redirect(TempData["ReturnUrl"]?.ToString() ?? "/");
00275
00276
                    logger.LogWarning("AUDIT: " + user.UserName + "Authenticator 2fa verification failed.
      Invalid otp code");
00277
                   ModelState.AddModelError(string.Empty, _localizer["5"]);
00278
                else if (user.TwoFactorType == Models.TwoFactorType.Email)
00280
00281
                    var result = vieWModel.IsRecoveryCode ? await
      _signInManager.TwoFactorSignInAsync("Email", vieWModel.VerificationCode, true, false);
00282
                    if (result.Succeeded)
00283
00284
                       _logger.LogInformation("AUDIT: " + user.UserName + "Email 2fa verified
      successfully");
00285
                       return Redirect(TempData["ReturnUrl"]?.ToString() ?? "/");
00286
                    _logger.LogWarning("AUDIT: " + user.UserName + "Email 2fa verification failed. Invalid
00287
      otp code");
00288
                   ModelState.AddModelError(string.Empty, _localizer["5"]);
00289
00290
                return View(vieWModel);
00291
00292
```

 $References\ Dot Net Identity. Models. View Models. Two Factor Login Vie WModel. Verification Code.$ 

#### 6.43.3.24 TwoFactorType() [1/2]

```
async Task< IActionResult > DotNetIdentity.Controllers.UserController.TwoFactorType ( ) [inline]
controller action for view TwiFactorType
```

Returns

view TwoFactorTaype

Definition at line 566 of file UserController.cs.

#### 6.43.3.25 TwoFactorType() [2/2]

```
\label{localized} {\tt async Task< IActionResult > DotNetIdentity.Controllers.UserController.TwoFactorType (} \\ {\tt TwoFactorTypeViewModel \ viewModel \ } \\ {\tt [inline]}
```

controller POST method for view TwoFactorType

### **Parameters**

viewModel TwoFactorTypeViewMode
---------------------------------

Returns

rediorect to action TwoFactorType

Definition at line 583 of file UserController.cs.

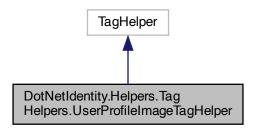
```
00585
                  var user = await _userManager.FindByNameAsync(User.Identity?.Name);
00586
                  user.TwoFactorType = viewModel.TwoFactorType;
                  await _userManager.UpdateAsync(user);
00587
00588
                  await _userManager.SetTwoFactorEnabledAsync(user, user.TwoFactorType !=
      Models.TwoFactorType.None);
00590
                  if (viewModel.TwoFactorType == Models.TwoFactorType.Authenticator)
00591
                  {
                      _logger.LogInformation("AUDIT: " + user.UserName + " set authenticator as 2fa method.
00592
      Redirecting to action: TwoFactorAuthenticator");
                     return RedirectToAction("TwoFactorAuthenticator", "User");
00593
00594
                  _logger.LogInformation("AUDIT: " + user.UserName + " set " + user.TwoFactorType.ToString()
       + " as 2fa method.");
00596
                  return RedirectToAction("TwoFactorType", "User");
00597
```

References DotNetIdentity.Models.ViewModels.TwoFactorTypeViewModel.TwoFactorType.

## 6.44 DotNetIdentity.Helpers.TagHelpers.UserProfileImageTagHelper Class Reference

html taghelper class

Inheritance diagram for DotNetIdentity.Helpers.TagHelpers.UserProfileImageTagHelper:



## **Public Member Functions**

- UserProfileImageTagHelper (UserManager < AppUser > userManager)
   class contsructor
- override async Task ProcessAsync (TagHelperContext context, TagHelperOutput output)
   override ProcessAsync

## **Properties**

```
• string UserId = default! [get, set]

html attribute definition
```

## 6.44.1 Detailed Description

html taghelper class

Definition at line 12 of file UserProfileImageTagHelper.cs.

## 6.44.2 Constructor & Destructor Documentation

## 6.44.2.1 UserProfileImageTagHelper()

```
\label{lem:dentity:helpers.TagHelpers.UserProfileImageTagHelper.UserProfileImageTagHelper ( \\ UserManager < AppUser > userManager ) [inline]
```

class contsructor

#### **Parameters**

userManager	type UserManager
-------------	------------------

Definition at line 23 of file UserProfileImageTagHelper.cs.

#### 6.44.3 Member Function Documentation

#### 6.44.3.1 ProcessAsync()

#### override ProcessAsync

#### **Parameters**

context	type TagHelperContext
output	type TagHelperOutput

#### Returns

TagHelperOutput

## Definition at line 41 of file UserProfileImageTagHelper.cs.

```
00042
00043
                  var user = await _userManager.FindByIdAsync(UserId);
00044
00045
                  var sb = new StringBuilder();
00046
                  if(user.ProfilePicture==null) {
00047
                      sb.Append($"<img src='/assets/images/faces/user.png' height='32'/>");
00048
                      sb.Append($"<img src='" + user.ProfilePicture + "' height='32'/>");
00049
00050
                  }
00051
00052
                  output.Content.SetHtmlContent(sb.ToString());
```

References DotNetIdentity.Helpers.TagHelpers.UserProfileImageTagHelper.UserId.

## 6.44.4 Property Documentation

## 6.44.4.1 UserId

string DotNetIdentity.Helpers.TagHelpers.UserProfileImageTagHelper.UserId = default! [get],
[set]

html attribute definition

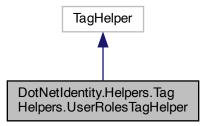
Definition at line 33 of file UserProfileImageTagHelper.cs. 00033 { get; set; } = default!;

Referenced by DotNetIdentity.Helpers.TagHelpers.UserProfileImageTagHelper.ProcessAsync().

## 6.45 DotNetIdentity.Helpers.TagHelpers.UserRolesTagHelper Class Reference

html tag helper class

Inheritance diagram for DotNetIdentity.Helpers.TagHelpers.UserRolesTagHelper:



## **Public Member Functions**

- UserRolesTagHelper (UserManager < AppUser > userManager)
   class constructor
- override async Task ProcessAsync (TagHelperContext context, TagHelperOutput output)
   method to override ProcessAsync

## **Properties**

• string UserId = default! [get, set] attribute definition

## 6.45.1 Detailed Description

html tag helper class

Definition at line 12 of file UserRolesTagHelper.cs.

## 6.45.2 Constructor & Destructor Documentation

#### 6.45.2.1 UserRolesTagHelper()

class constructor

**Parameters** 

userManager

Definition at line 23 of file UserRolesTagHelper.cs.

```
00024 {

00025 __userManager = userManager;

00026 }
```

#### 6.45.3 Member Function Documentation

## 6.45.3.1 ProcessAsync()

### method to override ProcessAsync

#### **Parameters**

context	type TagHelperContext
output	type TagHelperOutput

### Returns

TagHelperOutput

## Definition at line 41 of file UserRolesTagHelper.cs.

References DotNetIdentity.Helpers.TagHelpers.UserRolesTagHelper.UserId.

## 6.45.4 Property Documentation

#### 6.45.4.1 UserId

```
string DotNetIdentity.Helpers.TagHelpers.UserRolesTagHelper.UserId = default! [get], [set]
attribute definition
```

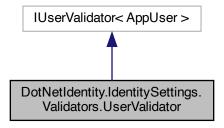
```
Definition at line 33 of file UserRolesTagHelper.cs. 00033 { get; set; } = default!;
```

Referenced by DotNetIdentity.Helpers.TagHelpers.UserRolesTagHelper.ProcessAsync().

## 6.46 DotNetIdentity.IdentitySettings.Validators.UserValidator Class Reference

class to validate IdentityUser

Inheritance diagram for DotNetIdentity.IdentitySettings.Validators.UserValidator:



## **Public Member Functions**

Task< IdentityResult > ValidateAsync (UserManager< AppUser > manager, AppUser user)
 Task to validate IdentityUser

## 6.46.1 Detailed Description

class to validate IdentityUser

Definition at line 9 of file UserValidator.cs.

## 6.46.2 Member Function Documentation

## 6.46.2.1 ValidateAsync()

Task to validate IdentityUser

#### **Parameters**

manager	UserManager
user	AppUser

#### Returns

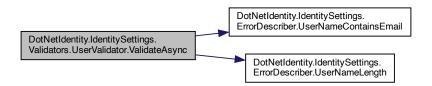
Task of type IdentiyResult

## Definition at line 17 of file UserValidator.cs.

```
00018
                   var errors = new List<IdentityError>();
00020
00021
                   if (user.UserName.Length < 6)</pre>
00022
00023
                       errors.Add(ErrorDescriber.UserNameLength());
00024
00025
                   if (user.Email.Substring(0, user.Email.IndexOf("@")) == user.UserName)
00026
00027
                       errors.Add(ErrorDescriber.UserNameContainsEmail());
00028
00029
00030
                   if (errors.Any())
00031
00032
                       return Task.FromResult(IdentityResult.Failed(errors.ToArray()));
00033
00034
                   return Task.FromResult(IdentityResult.Success);
00035
```

References DotNetIdentity.IdentitySettings.ErrorDescriber.UserNameContainsEmail(), and DotNetIdentitySettings.ErrorDescriber.UserNameContainsEmail(), and Do

Here is the call graph for this function:



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