FireApp – Domain Objects

This file contains a short description of the objects that are needed to interact with the FireApp-API

*Table of contents*

[FireEvent 2](#_Toc522801870)

[FireEventId 3](#_Toc522801871)

[EventTypes 3](#_Toc522801872)

[FireAlarmSystem 4](#_Toc522801873)

[UserGroup 4](#_Toc522801874)

[FireBrigade 4](#_Toc522801875)

[ServiceGroup 4](#_Toc522801876)

[User 5](#_Toc522801877)

[UserTypes 5](#_Toc522801878)

[UserLogin 5](#_Toc522801879)

# FireEvent

/// <summary>

/// Is an abstract version of a message that was sent by a fire alarm system.

/// </summary>

public class FireEvent

{

// A composite primary key consisting of sourceId and eventId.

public FireEventId Id { get; set; }

// Time when the FireEvent accored.

public DateTime TimeStamp { get; set; }

// Name of the Fire detector (e.g. MG 13/5).

public string TargetId { get; set; }

// Description/location of the fire detector (e.g. Melder Büro).

public string TargetDescription { get; set; }

// Type of the event that ocurred.

public EventTypes EventType { get; set; }

}

# FireEventId

/// <summary>

/// This class is needed because liteDB can not create a composite key itself.

/// </summary>

public class FireEventId

{

public FireEventId() { }

public FireEventId(int sourceId, int eventId)

{

this.SourceId = sourceId;

this.EventId = eventId;

}

// Id of the FireAlarmSystem.

public int SourceId { get; set; }

// This id distinguishes this FireEvent from FireEvents

// of the same FireAlarmSystem.

public int EventId { get; set; }

}

# EventTypes

/// <summary>

/// Makes it easier to determine the type of a FireEvent.

/// </summary>

public enum EventTypes

{

alarm = 1,

disfunction = 2,

test = 3,

reset = 4,

info = 5,

deactivated = 6,

prealarm = 7,

activation = 8

};

# FireAlarmSystem

/// <summary>

/// This class represents a fire alarm system.

/// </summary>

public class FireAlarmSystem

{

// Identifier of the FireAlarmSystem.

public int Id { get; set; }

// Name of the company that owns the FireAlarmSystem.

public string Company { get; set; }

// Short description of the FireAlarmSystem.

public string Description { get; set; }

// Country where the FireAlarmSystem is installed.

public string Country { get; set; }

// City where the FireAlarmSystem is installed.

public string City { get; set; }

// Postal code of the city where the FireAlarmSystem is installed.

// Not an integer becaus it may contain characters (e.g. A-4020).

public string PostalCode { get; set; }

// Address of the building where the FireAlarmSystem is installed.

public string Address { get; set; }

// List of the identifiers of FireBrigades

// that should have access to certain information.

public HashSet<int> FireBrigades { get; set; }

// List of the identifiers of ServiceGroups

// that should have access to certain information.

public HashSet<int> ServiceGroups { get; set; }

}

# UserGroup

public class UserGroup

{

public int Id { get; set; }

public string Name { get; set; }

}

# FireBrigade

/// <summary>

/// This class is used as a link between Users and FireAlarmSystems.

/// </summary>

public class FireBrigade : UserGroup

{

}

# ServiceGroup

/// <summary>

/// This class is used as a link between Users and FireAlarmSystems.

/// </summary>

public class ServiceGroup : UserGroup

{

}

# User

/// <summary>

/// This class represents a user of this application.

/// </summary>

public class User

{

private string token;

public string Id { get; set; }

public string Password { get; set; }

public UserTypes UserType { get; set; }

// This property is a set, because a User can be part of

// several institutions of the same type (fire brigade, service group, ...).

public HashSet<int> AuthorizedObjectIds { get; set; }

public string FirstName { get; set; }

public string LastName { get; set; }

public string Email { get; set; }

// Is used to identify the user when sending an request to the API.

public string Token

{

get { return token; }

set { this.token = value; TokenCreationDate = DateTime.Now; }

}

public DateTime TokenCreationDate { get; set; }

}

# UserTypes

/// <summary>

/// Helps to distinguish the different types of users.

/// </summary>

public enum UserTypes

{

unauthorized = -1,

admin = 0,

fireSafetyEngineer = 1,

fireFighter = 2,

servicemember = 3

}

# UserLogin

/// <summary>

/// This class is used to transfer the login credentials between two systems.

/// </summary>

public class UserLogin

{

public string Username { get; set; }

public string Password { get; set; }

}