

# Documentação - PsalmsEfCoreRepository

## Overview

The ``PsalmsEfCoreRepository`` is a generic implementation of the Repository pattern for Entity Framework Core.

It provides common CRUD and query methods, keeping data access logic separated from business logic.

This repository does not automatically execute ``SaveChangesAsync``, allowing transaction control to be managed by a Unit of Work.

## Installation and Configuration

1. Add the package or project reference containing ``PsalmsEfCoreRepository``.
2. Register it in the dependency injection container, usually in ``Program.cs`` or ``Startup.cs``:

```
services.AddScoped<IPsalmsEfCoreRepository, PsalmsEfCoreRepository>();
```

## Usage Example

```
public class ProductService
{
    private readonly IPsalmsEfCoreRepository _repository;

    public ProductService(IPsalmsEfCoreRepository repository)
    {
        _repository = repository;
    }

    public async Task CreateProductAsync(Product product)
    {
        await _repository.CreateAsync(product);
        // SaveChangesAsync will be called by the Unit of Work
    }

    public async Task<Product?> GetByIdAsync(int id)
    {
        return await _repository.GetByIdAsync<Product>(id);
    }
}
```

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```
}  
}
```

### Available Methods

- CreateAsync<T>(T entity): Adds a new entity.
- DeleteAsync<T>(int id): Removes an entity by its ID.
- GetByIdAsync<T>(int id): Retrieves an entity by its ID.
- GetByAsync<T>(Expression<Func<T, bool>> predicate): Retrieves the first entity matching the predicate.
- ExistsAsync<T>(Expression<Func<T, bool>> predicate): Checks if any entity matches the predicate.
- GetAllAsync<T>(): Returns all entities of the specified type.
- GetCollectionFromEntityAsync<TEntity, TCollection>(...): Retrieves a related collection from an entity.

### Important Notes

- Always use the repository in combination with a Unit of Work to ensure changes are persisted correctly.
- Using `AsNoTracking` in queries prevents EF Core from tracking objects that won't be updated, improving performance.
- The GetCollectionFromEntityAsync method expects the entity to have an "Id" property for identification.