Namespace NBUCurrencyRatesService

Classes

[Worker](#)

Worker class responsible for continuously fetching currency rates from NBU (National Bank of Ukraine) API, and saving them to a specified file location.

Class Worker

Namespace: [NBUCurrencyRatesService](#)

Assembly: NBUCurrencyRatesService.dll

Worker class responsible for continuously fetching currency rates from NBU (National Bank of Ukraine) API, and saving them to a specified file location.

```
public class Worker : BackgroundService, IHostedService, IDisposable
```

Inheritance

[object](#) ← [BackgroundService](#) ← Worker

Implements

[IHostedService](#), [IDisposable](#)

Inherited Members

[BackgroundService.StartAsync(CancellationToken)](#) ,
[BackgroundService.StopAsync(CancellationToken)](#) , [BackgroundService.Dispose()](#) ,
[BackgroundService.ExecuteTask](#) , [object.Equals(object)](#) , [object.Equals(object, object)](#) ,
[object.GetHashCode()](#) , [object.GetType()](#) , [object.MemberwiseClone()](#) ,
[object.ReferenceEquals(object, object)](#) , [object.ToString()](#)

Constructors

Worker(ILogger<Worker>, IConfiguration)

Worker class responsible for continuously fetching currency rates from NBU (National Bank of Ukraine) API, and saving them to a specified file location.

```
public Worker(ILogger<Worker> logger, IConfiguration configuration)
```

Parameters

`logger` [ILogger](#) <[Worker](#)>

   Logger instance for logging messages.

`configuration` [IConfiguration](#)

Configuration instance for managing application settings.

Methods

ExecuteAsync(CancellationToken)

Executes the worker task asynchronously.

```
protected override Task ExecuteAsync(CancellationToken stoppingToken)
```

Parameters

`stoppingToken` [CancellationToken](⧉)

Cancellation token to stop the task.

Returns

[Task](⧉)

Namespace NBUCurrencyRatesService.API

Classes

[CurrencyRate](#)

Model representing a currency rate retrieved from the NBU (National Bank of Ukraine) API.

[NBUGrabber](#)

Class responsible for fetching currency rates from the NBU (National Bank of Ukraine) API.

[RatesWriter](#)

Class responsible for writing currency rates to various file formats.

Class CurrencyRate

Namespace: [NBUCurrencyRatesService](#).[API](#)

Assembly: NBUCurrencyRatesService.dll

Model representing a currency rate retrieved from the NBU (National Bank of Ukraine) API.

```
public class CurrencyRate
```

Inheritance

[object](#) ← CurrencyRate

Inherited Members

[object.Equals(object)](#) , [object.Equals(object, object)](#) , [object.GetHashCode()](#) , [object.GetType()](#) ,
[object.MemberwiseClone()](#) , [object.ReferenceEquals(object, object)](#) , [object.ToString()](#)

Properties

CurrencyCode

Alphabetic currency code.

```
[JsonProperty("cc")]
public string? CurrencyCode { get; set; }
```

Property Value

[string](#)

ExchangeDate

Date of the exchange rate.

```
[JsonProperty("exchangedate")]
public string? ExchangeDate { get; set; }
```

Property Value

[string](#)

FullName

Full name of the currency.

```csharp
[JsonProperty("txt")]
public string? FullName { get; set; }
```

Property Value

[string](#)

R030

Numeric code of the currency.

```csharp
[JsonProperty("r030")]
public int R030 { get; set; }
```

Property Value

[int](#)

Rate

Exchange rate of the currency.

```csharp
[JsonProperty("rate")]
public float Rate { get; set; }
```

Property Value

[float](#)

Class NBUGrabber

Namespace: [NBUCurrencyRatesService](#).[API](#)

Assembly: NBUCurrencyRatesService.dll

Class responsible for fetching currency rates from the NBU (National Bank of Ukraine) API.

```
public class NBUGrabber
```

Inheritance

[object](#) ← NBUGrabber

Inherited Members

[object.Equals(object)](#) , [object.Equals(object, object)](#) , [object.GetHashCode()](#) , [object.GetType()](#) , [object.MemberwiseClone()](#) , [object.ReferenceEquals(object, object)](#) , [object.ToString()](#)

Constructors

NBUGrabber(ILogger)

Class responsible for fetching currency rates from the NBU (National Bank of Ukraine) API.

```
public NBUGrabber(ILogger logger)
```

Parameters

`logger` [ILogger](#)

    Logger instance for logging messages.

Methods

FetchRates()

Fetches currency rates from the NBU API.

```
public Task<List<CurrencyRate>?> FetchRates()
```

Returns

[Task](#) ↗ <[List](#) ↗ <[CurrencyRate](#)>>

List of currency rates fetched from the NBU API, or null if an error occurs.

Class RatesWriter

Namespace: [NBUCurrencyRatesService](#).[API](#)

Assembly: NBUCurrencyRatesService.dll

Class responsible for writing currency rates to various file formats.

```
public class RatesWriter
```

Inheritance

[object](#) ← RatesWriter

Inherited Members

[object.Equals(object)](#) , [object.Equals(object, object)](#) , [object.GetHashCode()](#) , [object.GetType()](#) , [object.MemberwiseClone()](#) , [object.ReferenceEquals(object, object)](#) , [object.ToString()](#)

Constructors

RatesWriter(ILogger)

Class responsible for writing currency rates to various file formats.

```
public RatesWriter(ILogger logger)
```

Parameters

`logger` [ILogger](#)

Logger instance for logging messages.

Methods

Save(IEnumerable<CurrencyRate>, string, string, OutputType)

Saves currency rates to a file in the specified format.

```csharp
public void Save(IEnumerable<CurrencyRate> rates, string path, string fileName,
OutputType fileType)
```

Parameters

rates [IEnumerable](#)⬀ <[CurrencyRate](#)>

    Collection of currency rates to save.

path [string](#)⬀

    Path where the output file will be saved.

fileName [string](#)⬀

    Name of the output file.

fileType [OutputType](#)

    Type of the output file format.

Namespace NBUCurrencyRatesService. Configuration

Classes

Config

Class responsible for managing service configuration settings.

Enums

OutputType

Enumeration defining the output types for saving currency rates.

Class Config

Namespace: [NBUCurrencyRatesService](#).[Configuration](#)

Assembly: NBUCurrencyRatesService.dll

Class responsible for managing service configuration settings.

```
public class Config
```

Inheritance

[object](#) ← Config

Inherited Members

[object.Equals(object)](#) , [object.Equals(object, object)](#) , [object.GetHashCode()](#) , [object.GetType()](#) , [object.MemberwiseClone()](#) , [object.ReferenceEquals(object, object)](#) , [object.ToString()](#)

Constructors

Config(IConfiguration, ILogger)

Initializes a new instance of the Config class with the specified configuration and logger.

```
public Config(IConfiguration configuration, ILogger logger)
```

Parameters

`configuration` [IConfiguration](#)

Configuration instance for managing service settings.

`logger` [ILogger](#)

Logger instance for logging messages.

Fields

FetchFrequency

Frequency at which currency rates are fetched, in milliseconds.

```
public int FetchFrequency
```

Field Value

[int↗](#)

FileType

Type of output file for saving currency rates.

```
public OutputType FileType
```

Field Value

[OutputType](#)

OutputFileName

Name of the output file for saving currency rates.

```
public string OutputFileName
```

Field Value

[string↗](#)

OutputPath

Path where the output file for saving currency rates is located.

```
public string OutputPath
```

Field Value

[string](#)↗

Methods

GetDefaultConfiguration()

Gets the default configuration settings.

```
public static IConfiguration GetDefaultConfiguration()
```

Returns

[IConfiguration](#)↗

Default configuration settings.

Reload()

Reloads the configuration settings.

```
public void Reload()
```

Enum OutputType

Namespace: [NBUCurrencyRatesService](#).[Configuration](#)

Assembly: NBUCurrencyRatesService.dll

Enumeration defining the output types for saving currency rates.

```
public enum OutputType
```

Fields

`csv = 1`

Output type for CSV format.

`json = 0`

Output type for JSON format.

`xml = 2`

Output type for XML format.