

# 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.

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

Property Value

[string](#)

## R030

Numeric code of the currency.

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

Property Value

[int](#)

## Rate

Exchange rate of the currency.

```
[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.

```
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.