yaah

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yaah

1.1 Yet another AUR helper

yaah is an AUR helper written in c# capable of installing/updating AUR packages and their AUR dependencies

1.2 Features

- · Installing/Uninstalling AUR packages
- · Serializing graph for given packages

1.3 Installation/Cloning

1.3.1 Arch Linux based systems

sudo pacman -S --needed git base-devel dotnet-runtime-8.0; git clone https://github.com/inquaterni/yaah.git; cd ./yaah

1.3.2 On Windows through WSL 2

Check if $\operatorname{archlinux}$ is available

wsl -1 -0

If archlinux is in list, install it with wsl --install archlinux

Proceed to Arch Linux installation

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1.4 Usage

1.4.1 Basic

Print help

```
dotnet run --project ./Yaah.CLI/Yaah.CLI.csproj -- --help
```

Install/Update packages

```
dotnet run --project ./Yaah.CLI/Yaah.CLI.csproj -S <aur-package-name> <another-aur-package-name> ...
```

1.4.2 **Debug**

Enable debug logging level

dotnet run --project ./Yaah.CLI/Yaah.CLI.csproj -D <other options>

Serialize graph for given package (does not install package)

dotnet run --project ./Yaah.CLI/Yaah.CLI.csproj -Dg <aur-package-name> <output-path>

Namespace Index

2.1 Namespace List

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

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Class Index

4.1 Class List

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- 5.2 Yaah.CLI Namespace Reference

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- · class Program
- 5.3 Yaah.DReS Namespace Reference

Classes

- class Graph
- 5.4 Yaah.DReS.Optional Namespace Reference

Classes

- class FileDotEngine
- 5.5 Yaah.Infrastructure Namespace Reference
- 5.6 Yaah.Infrastructure.Alpm Namespace Reference

Classes

· class LibAlpm

5.7 Yaah.Infrastructure.Database Namespace Reference

Classes

· class DatabaseController

5.8 Yaah.Infrastructure.Errors Namespace Reference

Classes

· class ErrorTranslator

5.9 Yaah.Infrastructure.Errors.Exceptions Namespace Reference

5.10 Yaah.Infrastructure.Process Namespace Reference

Classes

class ShellRunner

5.11 Yaah.Infrastructure.Versioning Namespace Reference

Classes

· class VersionController

5.12 Yaah.Net Namespace Reference

5.13 Yaah.Net.InfoGathering Namespace Reference

Classes

· class PackageInspector

5.14 Yaah.Net.Models Namespace Reference

Classes

- class BasicPkgInfo
- class DetailedPkgInfo
- class InfoResult
- · class SearchResult

5.15 Yaah.Net.RPC Namespace Reference

Classes

class RpcEngine

Class Documentation

6.1 Yaah.Net.Models.BasicPkgInfo Class Reference

Properties

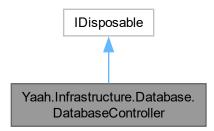
```
string Description [get, set]
ulong FirstSubmitted [get, set]
int Id [get, set]
ulong LastModified [get, set]
string Maintainer [get, set]
string Name [get, set]
int NumVotes [get, set]
long? OutOfDate [get, set]
string PackageBase [get, set]
int PackageBaseld [get, set]
double Popularity [get, set]
string Url [get, set]
string UrlPath [get, set]
string Version [get, set]
```

The documentation for this class was generated from the following file:

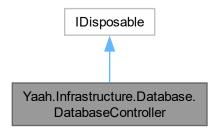
• Yaah.Net/Models/BasicPkgInfo.cs

6.2 Yaah.Infrastructure.Database.DatabaseController Class Reference

Inheritance diagram for Yaah.Infrastructure.Database.DatabaseController:



Collaboration diagram for Yaah.Infrastructure.Database.DatabaseController:



Public Member Functions

- void Dispose ()
- IntPtr GetLocalDb ()

Get pointer to local db struct.

- AlpmList< AlpmDbListNode > GetSyncDbs ()
- IntPtr RegisterSyncDb (string treename, int siglevel)

Static Public Member Functions

- static IntPtr **GetDbFromPackage** (IntPtr pkg)
- static string **GetDbName** (IntPtr dbHandle)
- static IntPtr GetPackage (IntPtr dbHandle, string name)

Get pointer to package struct.

- static AlpmList< AlpmPkgListNode > GetPackageCache (IntPtr dbHandle)
- static string GetPackageName (IntPtr pkg)
- static string GetPackageVersion (IntPtr pkg)

6.2.1 Member Function Documentation

6.2.1.1 GetLocalDb()

IntPtr Yaah.Infrastructure.Database.DatabaseController.GetLocalDb () [inline]

Get pointer to local db struct.

Returns

Pointer to local db

Exceptions

https://man.archlinux.org/man/libalpm_databases.3.en

6.2.1.2 GetPackage()

```
static IntPtr Yaah.Infrastructure.Database.DatabaseController.GetPackage ( IntPtr \ dbHandle, \\ string \ name) \ \ [inline], \ [static]
```

Get pointer to package struct.

Parameters

dbHandle	Pointer to local db
name	Package name

Returns

Pointer to package struct

Exceptions

DatabaseException	Occurs when alpm_db_get_pkg fails (e.g. attempt to get nonexisting package)	
ArgumentNullException	Occurs when dbHandle is NULL	

6.2.1.3 GetPackageCache()

Parameters

dbHandle

Returns

Exceptions

ArgumentNullException	Occurs when dbHandle is NULL
DatabaseException	Occurs when alpm_db_get_pkgcache fails

6.2.1.4 GetPackageName()

Parameters

pkg Pointer to package struct	:
-------------------------------	---

Returns

Package name

Exceptions

ArgumentNullException	Occurs when pointer is NULL
-----------------------	-----------------------------

6.2.1.5 GetPackageVersion()

Parameters

pkg Pointer to package struct

Returns

Package version

Exceptions

The documentation for this class was generated from the following file:

Yaah.Infrastructure/Database/DatabaseController.cs

6.3 Yaah.Net.Models.DetailedPkgInfo Class Reference

Properties

```
• string?[] CheckDepends [get, set]

    string[] CoMaintainers [get, set]

• string[] Conflicts [get, set]
string?[] Depends [get, set]
• string Description [get, set]
ulong FirstSubmitted [get, set]
• string[] Groups [get, set]
• int ld [get, set]
• string[] Keywords [get, set]
• ulong LastModified [get, set]
• string[] Licence [get, set]

    string Maintainer [get, set]

• string?[] MakeDepends [get, set]
• string Name [get, set]
• int NumVotes [get, set]
• string?[] OptDepends [get, set]
• long? OutOfDate [get, set]
• string PackageBase [get, set]
• int PackageBaseId [get, set]

    double Popularity [get, set]

• string[] Provides [get, set]
• string[] Replaces [get, set]
• string Submitter [get, set]
• string Url [get, set]
• string UrlPath [get, set]
• string Version [get, set]
```

The documentation for this class was generated from the following file:

Yaah.Net/Models/DetailedPkgInfo.cs

6.4 Yaah.Infrastructure.Errors.ErrorTranslator Class Reference

Static Public Member Functions

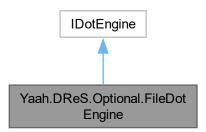
- static int GetErrorFromHandle (IntPtr handle)
- static string **TranslateAlpmError** (int errCode)
- static string **TranslateAlpmError** (IntPtr handle)

The documentation for this class was generated from the following file:

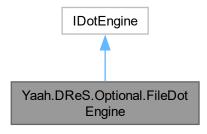
· Yaah.Infrastructure/Errors/ErrorTranslator.cs

6.5 Yaah.DReS.Optional.FileDotEngine Class Reference

Inheritance diagram for Yaah.DReS.Optional.FileDotEngine:



Collaboration diagram for Yaah.DReS.Optional.FileDotEngine:



Public Member Functions

• string **Run** (GraphvizImageType imageType, string dot, string outputFileName)

The documentation for this class was generated from the following file:

· Yaah.DReS/Serialization/FileDotEngine.cs

6.6 Yaah.DReS.Graph Class Reference

Static Public Member Functions

- static AdjacencyGraph< string, Edge< string > > BuildFor (IEnumerable< string > pkgExplicit, Hashtable table)
 - Build graph for given AUR packages pkqExplicit.
- static AdjacencyGraph
 string, Edge
 string >> BuildFor (string pkgExplicit, Hashtable table)
 Build graph for given AUR package pkgExplicit.
- static IEnumerable< string > GetInstallOrder (AdjacencyGraph< string, Edge< string > > graph)

6.6.1 Member Function Documentation

6.6.1.1 BuildFor() [1/2]

Build graph for given AUR packages pkgExplicit.

Parameters

pkgExplicit	AUR explicit package names
table	Hashtable with gathered packages data

Returns

Dependency Graph

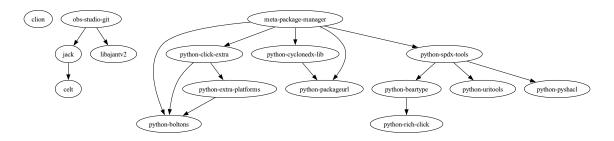


Figure 6.1 Example graph for meta-package-manager, obs-studio-git and clion packages

6.6.1.2 BuildFor() [2/2]

```
static AdjacencyGraph<br/>< string, Edge<br/>< string >> Yaah.DReS.Graph.BuildFor ( string pkgExplicit, Hashtable table) [inline], [static]
```

Build graph for given AUR package pkgExplicit.

Parameters

pkgExplicit	AUR explicit package name
table	Hashtable with gathered packages data

Returns

Dependency Graph

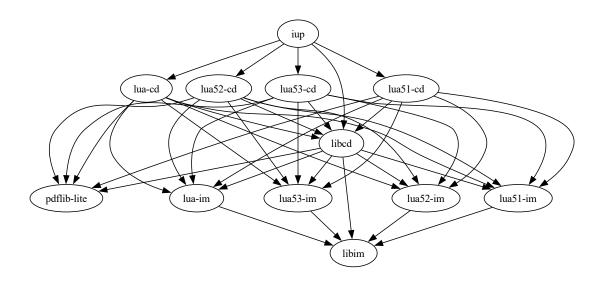


Figure 6.2 Example graph for iup package

The documentation for this class was generated from the following file:

· Yaah.DReS/Graph.cs

6.7 Yaah.Net.Models.InfoResult Class Reference

Properties

```
int ResultCount [get, set]
DetailedPkgInfo[] Results [get, set]
string Type [get, set]
int Version [get, set]
```

The documentation for this class was generated from the following file:

· Yaah.Net/Models/InfoResult.cs

6.8 Yaah.Infrastructure.Alpm.LibAlpm Class Reference

Static Public Member Functions

- static partial string alpm_db_get_name (IntPtr db)
- static partial IntPtr alpm_db_get_pkg (IntPtr db, [MarshalAs(UnmanagedType.LPStr)] string name)
- static partial IntPtr alpm_db_get_pkgcache (IntPtr db)
- static partial int alpm_errno (IntPtr handle)

- static partial IntPtr alpm_get_localdb (IntPtr handle)
- static partial IntPtr alpm_get_syncdbs (IntPtr handle)
- static partial IntPtr alpm_list_next (IntPtr list)
- static partial IntPtr alpm_pkg_get_db (IntPtr pkg)
- static partial string alpm_pkg_get_name (IntPtr pkg)
- static partial string alpm_pkg_get_version (IntPtr pkg)
- static partial int alpm_pkg_vercmp ([MarshalAs(UnmanagedType.LPStr)] string a, [MarshalAs(Unmanaged←
 Type.LPStr)] string b)
- static partial IntPtr **alpm_register_syncdb** (IntPtr handle, [MarshalAs(UnmanagedType.LPStr)] string treename, int siglevel)
- static partial int alpm release (IntPtr handle)
- static partial IntPtr alpm_strerror (int err)

The documentation for this class was generated from the following file:

Yaah.Infrastructure/Alpm/LibAlpm.cs

6.9 Yaah.Net.InfoGathering.PackageInspector Class Reference

Public Member Functions

- async Task< Hashtable > GatherPackageInfo (IEnumerable< string > aurExplicit)
 Gather packages information.
- async Task< Hashtable > GatherPackageInfo (string aurExplicit)
 Gather package information.
- PackageInspector (IntPtr db)

6.9.1 Member Function Documentation

6.9.1.1 GatherPackageInfo() [1/2]

```
async Task<br/>< Hashtable > Yaah.Net.InfoGathering.PackageInspector.GatherPackageInfo (<br/> IEnumerable<br/>< string > aurExplicit) [inline]
```

Gather packages information.

Parameters

aurExplicit	Explicit AUR packages names
-------------	-----------------------------

6.9.1.2 GatherPackageInfo() [2/2]

Gather package information.

Parameters

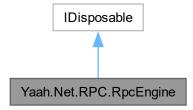
aurExplicit Explicit AUR package name

The documentation for this class was generated from the following file:

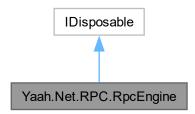
· Yaah.Net/InfoGathering/PackageInspector.cs

6.10 Yaah.Net.RPC.RpcEngine Class Reference

Inheritance diagram for Yaah.Net.RPC.RpcEngine:



Collaboration diagram for Yaah.Net.RPC.RpcEngine:



Public Member Functions

- void **Dispose** ()
- async Task < InfoResult? > Info (IEnumerable < string > arg, CancellationToken token=default)
 Multi package lookup.
- async Task < InfoResult? > Info (string arg, CancellationToken token=default)
 Single package lookup.

- async Task< SearchResult?> Search (string arg, string by="name-desc", CancellationToken token=default)
 Single-term search.
- async Task< string[]?> Suggest (string arg, CancellationToken token=default)
 Package name search (starts-with)
- async Task < string[]? > SuggestPkgbase (string arg, CancellationToken token=default)
 Package base search (starts-with)

6.10.1 Member Function Documentation

6.10.1.1 Info() [1/2]

Multi package lookup.

Parameters

arg | Provide one or more package names in the arg parameter.

Returns

Get detailed information for multiple packages

Parameters

token Cancellation token

6.10.1.2 Info() [2/2]

Single package lookup.

Parameters

arg | Provide a package name in the arg parameter.

Returns

Get detailed information for a single package

Parameters

token Cancellation token

6.10.1.3 Search()

Single-term search.

Parameters

arg	Provide your search-term in the arg parameter.
by	The by parameter lets you define the field that is used in the search query. If not defined, name-desc is used. For name and name-desc a contains-like lookup is performed whereas all other fields require an exact value.
token	Cancellation token

Returns

Search for packages with a single term returning basic package information

6.10.1.4 Suggest()

Package name search (starts-with)

Parameters

arg	Provide your search-term in the arg parameter	
token	Cancellation token	

Returns

Returns a list of package-names starting with arg (max 20 results)

6.10.1.5 SuggestPkgbase()

Package base search (starts-with)

Parameters

arg	Provide your search-term in the arg parameter.	
token	Cancellation token	

Returns

Returns a list of package-base-names starting with arg (max 20 results)

The documentation for this class was generated from the following file:

· Yaah.Net/RPC/RpcEngine.cs

6.11 Yaah.Net.Models.SearchResult Class Reference

Properties

```
uint ResultCount [get, set]
BasicPkgInfo[] Results [get, set]
string Type [get, set]
int Version [get, set]
```

The documentation for this class was generated from the following file:

· Yaah.Net/Models/SearchResult.cs

6.12 Yaah.Infrastructure.Process.ShellRunner Class Reference

Static Public Member Functions

• static void Run (string cmd)

The documentation for this class was generated from the following file:

Yaah.Infrastructure/Process/ShellRunner.cs

6.13 Yaah.Infrastructure.Versioning.VersionController Class Reference

Static Public Member Functions

- static ? Match GetVersionMatch (string pkg)
- static int VersionComparison (string a, string b)

Compare two version strings and determine which one is 'newer'. Returns a value comparable to the way strcmp works. Returns 1 if a is newer than b, 0 if a and b are the same version, or -1 if b is newer than a. Different epoch values for version strings will override any further comparison. If no epoch is provided, 0 is assumed. Keep in mind that the pkgrel is only compared if it is available on both versions handed to this function. For example, comparing 1.5-1 and 1.5 will yield 0; comparing 1.5-1 and 1.5-2 will yield -1 as expected. This is mainly for supporting versioned dependencies that do not include the pkgrel.

6.13.1 Member Function Documentation

6.13.1.1 VersionComparison()

```
static int Yaah.Infrastructure.Versioning.VersionController.VersionComparison ( string a, string b) [inline], [static]
```

Compare two version strings and determine which one is 'newer'. Returns a value comparable to the way strcmp works. Returns 1 if a is newer than b, 0 if a and b are the same version, or -1 if b is newer than a. Different epoch values for version strings will override any further comparison. If no epoch is provided, 0 is assumed. Keep in mind that the pkgrel is only compared if it is available on both versions handed to this function. For example, comparing 1.5-1 and 1.5 will yield 0; comparing 1.5-1 and 1.5-2 will yield -1 as expected. This is mainly for supporting versioned dependencies that do not include the pkgrel.

https://man.archlinux.org/man/libalpm_packages.3.en

The documentation for this class was generated from the following file:

• Yaah.Infrastructure/Versioning/VersionController.cs

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