Links generation in Canopsis

this document defines the specifications of the Links generation feature of Canopsis 2.xx

Goal

this feature aims to provide a standard interface for building HyperText links based on configuration and informations gained from the Context-graph included in Canopsis.

User requirements

- As a Canopsis user, I want to find links to procedures for a resource and/or component, in order to help me resolve an alert on these resources
- As a Canopsis user, I want to find links to screenshots uploaded in Canopsis and linked with an alert on a resource and/or component, in order to help me understand the alert

Technical requiremennts

- for all users, Canopsis should be able to generate hypertext links based on a static url and 1 variable stored in the Context-graph
- for some specific use-cases, more complex transformations should be applied to the generated links.
- for each use case, 1 or several links can be returned.
- If no link is needed, the link generation code should return an empty array.
- this feature should work on an HA environment

Implementation

2 features will be implemented :

- Configuration management which stores the configuration for each Canopsis instance.
- Links management which builds links when required by the configuration management

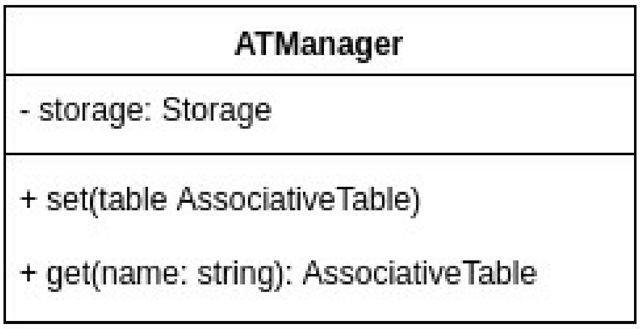
Configuration management

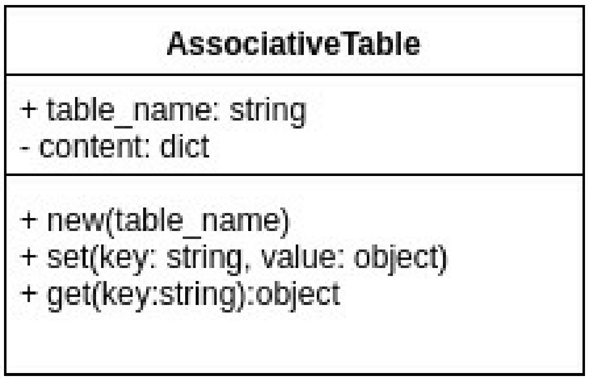
The configuration of the LinksManager is stored in a collection called AssociativeTables.

storage representation : each document of the collection is structured as follows :

```
{
  "name": "name of a configuration item",
  "content": [
    "key1": "value",
    "key2": "value2"
  ]
}
```

To access these documents, 2 classes will be created :

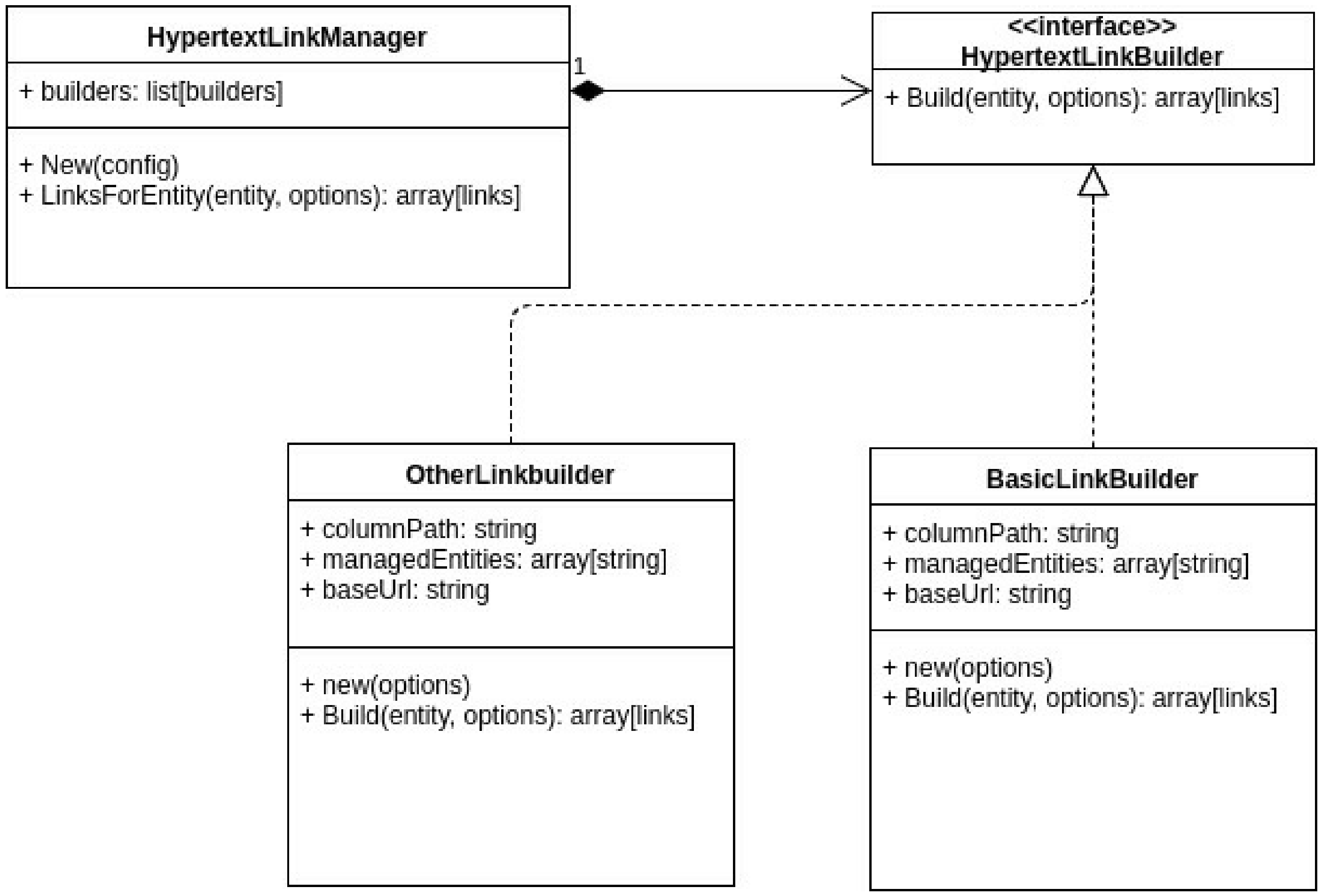

ATManager
- storage: Storage
+ set(table AssociativeTable)
+ get(name: string): AssociativeTable



- class **AssociativeTable**:
    - Responsibility: value object that encapsulates values from the mongoDB collection
- class **ATManager**:
    - Responsibility: simple DataMapper that interacts with the storage driver

Links Management

This part of the feature is structured as described in the following image :



HypertextLinkManager
+ builders: list[builders]
+ New(config)
+ LinksForEntity(entity, options): array[links]
1
<<interface>>
HypertextLinkBuilder
+ Build(entity, options): array[links]
OtherLinkbuilder
+ columnPath: string
+ managedEntities: array[string]
+ baseUrl: string
+ new(options)
+ Build(entity, options): array[links]
BasicLinkBuilder
+ columnPath: string
+ managedEntities: array[string]
+ baseUrl: string
+ new(options)
+ Build(entity, options): array[links]

class **HypertextLinkManager** :

- Responsibility :
  - load the configuration and instanciate all the required builders on instanciation
  - ask all instanciated builders for the generated links based on the entity sent to links_for_entity(entity, options)

abstract class **HypertextLinkBuilder** :

- Responsibility : provide a standard interface for creating new builders, compatible with the HypertextLinkManager

class **BasicLinkBuilder** :

- Responsibility :
  - replaces a placeholder value form a URL with 1 data extracted from the entity
  - return an array with all the generated links