## Wikipedia API: Abstract Data Type

**WikiResponse** – the abstract data type, that will be used to make the user interface with program more intuitive and easier. (User will only need to know its behavior, and not how it works, as with any abstract data type)

The class is responsible for collecting all the data, that is received after sending requests to the Wikipedia API on the internet (most likely using the WikiRequest class), storing it inside itself, while trying to use up the least storage possible and the most organized way of storing data inside it, without user needing to know how it all works under the hood. The class also provides ability to manually save all the data to file or automatically perform this action after a certain amount of data was received and successfully stored.

**The user interface includes**:

1. Update function – which is used to retrieve data from the query and store it as specified in the response table.
2. Show function – to retrieve all the saved data from all the queries, so that it can be used with print function to be displayed or saved to separate file.
3. Save function – to save all the data, as specified in the file attribute (file attribute holds the file name). Alternatively, file attribute can be changed before saving, in order to save to a different file. Note, that in this case the previous file, where everything was saved won’t be deleted and won’t be updated with all the possible new data received. All the automatic saves (every [save\_every] times) will now be with the new specified file.

Also note, that changing the attribute won’t retrieve data from the new file, but only overwrite data with the new. To append data to file, instead of overwriting it, the file needs to be specified on the initialization process (as file argument to constructor). Then all the data from it will be stored.

1. Count attribute – to get the amount of queries, that were handled by the WikiResponse object.

**Exceptions**

Class also eliminates the need for user to worry about the possibility of finding any server (or request) errors in the response page returned from the web, as functions, while processing the information will find all the errors (like query error or warnings) and raise one of the available WikiException subclasses corresponding to the current type of error to user with all the required information to solve the problem or try resending if user wants to.

Possible Exceptions Raised:

|  |  |
| --- | --- |
| **ValueError / TypeError** | Wrong value supplied in the initialization process. Has nothing to do with the response received from the Wikipedia API itself. |
| **WikiWrapperWarning** | Exceptions, that represent exact problems with values supplied to the wrapper. |
| **WikiResponseTableError** | Exception, representing, that an error occurred while reading response\_table parameter, most likely because some value is of wrong type or not appropriate. |
| **WikiDataMissing** | Some data is missing in the response received. |
| **WikiPageError** | Page should be in response but is missing. Has extra information about the pageid or page title, if any supplied. |
| **WikiPageError** | Representing the ‘error’ attribute in the response JSON object |
| **WikiTimeout** | Server connection timed out |
| **QueryWarnigns** | Representing the ‘warnings’ attribute in the query object |
| **QueryErrors** | Representing the ‘errors’ attribute in the query object |

## Wiki Response UI functionality visual representation

