Parser Documentation 1.0

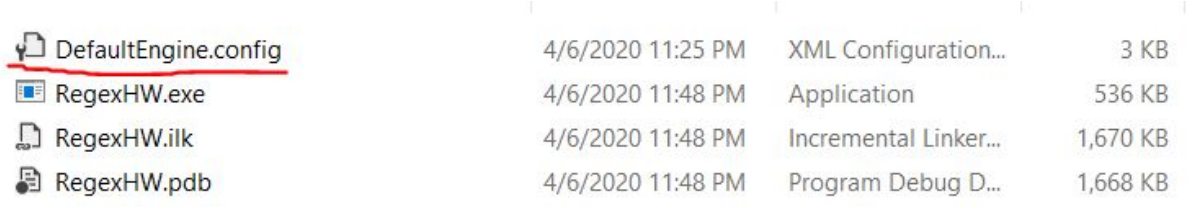
Contents

Introduction

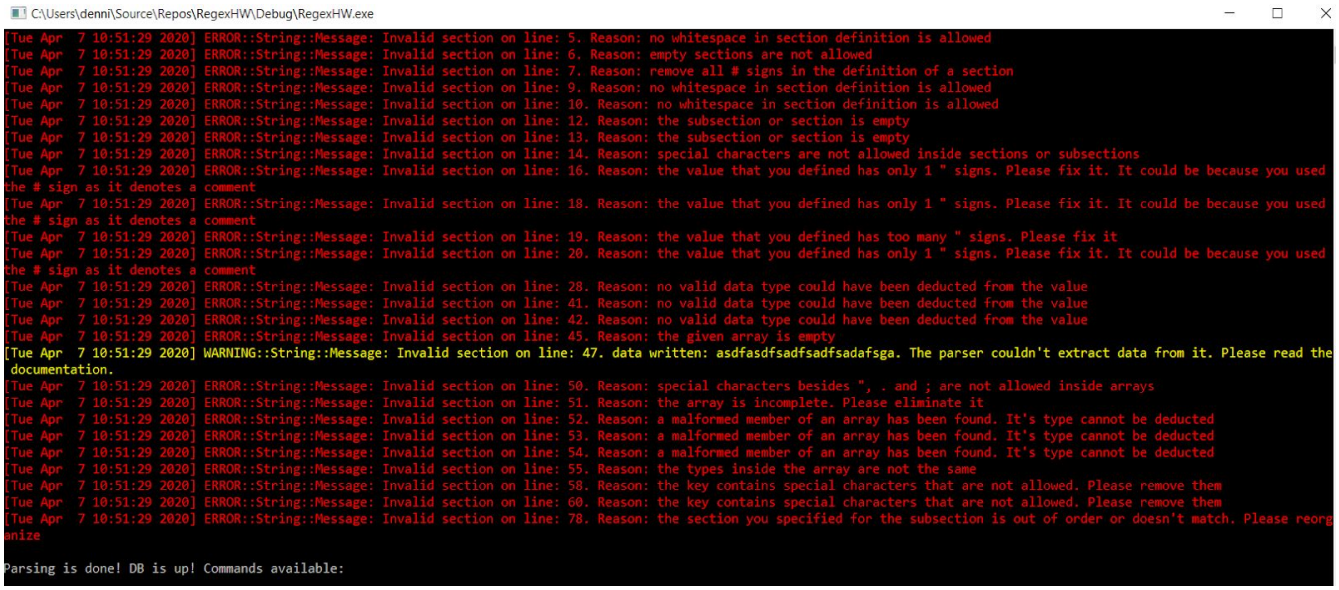
Welcome. This documentation is meant to help guide you how to use my parser.
At this point you should have these items:

- Program source code
- Program executable
- Provided default config file

Preliminaries: the program will look for a "**DefaultEngine.config**" file. If it's not present the program will exit out immediately. If you're using an executable, the folder structure should look like this:



Also, if the file is empty - the program will exit early.
If you decide to use the already existing config file - it includes a bunch of tests to make sure the parser executes correctly. Thus, your initial output would look something like this:



You can study the existing config file and some of the errors / warnings to understand better what the parser will and will not accept. For further details on the rules of the program please check the sections below.

Config file rules

The parser accepts only 3 types of data that would go into the database:

- [sections]
- [section:subsection]
- key=value

General:

- To create comments you can use the # sign
- Whitespace outside the parsed types will be ignored

Rules on sections and subsections:

- No whitespace inside the [ ] is allowed
- Empty sections (i.e [] or [:]) are invalid
- No special characters besides “:” are allowed inside the [ ]
- Unfinished subsections ([:something] or [something:]) are also invalid
- Putting a # inside the section will cause the the right side of the section to be commented out, but the parser will detect it and throw an error

Rules on key=value pairs:

- Any whitespaces between the pair (i.e key = value) will be ignored

- Putting values like “#” will cause an error as the comment is treated above the string value due to consistency. Thus including a # sign is not allowed inside strings and the parser will detect it sa an error
- Strings like this: “””” are not allowed due to the nesting issues. The parser will throw an error if it detects such a string
- Keys can’t include special characters (^,+” etc), but are allowed to include digits like this: key123=”something”
- Arrays also can’t include special character for parsing purposes besides “ as it denotes a string
- To enumerate members in the array you use ;. The parser will detect if you use an incorrect enumerator
- An array can hold only a single type of data. Mixing data types will cause the parser to throw an error

The order matters
When defining sections, sub sections and key=value pairs you should keep in mind the structure of the file.

- You cannot define a keyvalue pair unless there was a previously defined section or subsection
- You cannot define a subsection if there has not been defined a section that is used for the subsection. I.e:

[section]
[somethingelse:subsection]

Is invalid as instead of “somethingelse” it should be “section”

- Simply defining sub sections is also invalid unless there had been a section for it to go under.

Database interaction

To properly interact with the database I advise to follow the rules listed below.

- ListAllSections doesn’t require any params and is not case sensitive
- ListNamedSection requires a valid section parameter case sensitive
    - Besides giving a true/false section existence, it will list all of its subsections and key=value pairs (no key value pairs will be given in subsections though)
- ListSubsections requires a valid section parameter case sensitive

- ListKeyValuePairsInSection requires a valid section param or a subsection that is written like this: section:subsection
    - It is a special function for retrieving a list of key=value pairs under the specified section or subsection
- GetEntry requires a valid section param or a subsection param that is written like this: section:subsection and a valid key for an entry. The key is always the same as the key for the key=value pair
    - Params in get entry are comma separated. Example query:

    - Upon calling this function the entry is loaded in, which allows you to do extra things to it:
        - GetKey simply retrieves the key from the pair
        - GetValue returns the value
        - GetType returns the type of the value

Some misc:

- END denotes the end of the list

Extra

If you encounter any bugs with the application feel free to submit an issue or a PR for a bugfix here: https://github.com/DennisSSDev/SmorcEngineConfigParser