In MediaWiki, and by proxy, the extensions built on its platform, the design expected by developers is to have all configurable values stored in configuration files and not stored within a database. This allows for easier and consistent administration, especially from a command line perspective.

There are presently three separate places where we are storing configurable values within the NASA\_EVA\_Gamification extension. The first configurable file is the “en.json” file within the “i18n” localization folder. In addition to being used for localization for text being displayed on the screen, such as the title of the User Gamification Profile page, an admin is able to specify what the name of each rank is called, how many ranks there are, what the name for badges should be (in both singular and plural form), as well as naming the badges earned. This is important to keep in the localization file because these values can change from one language to the next.

The lowest rank presently in the system is gamification-rank-1 which allows for an admin to add an infinite amount of higher ranks as each rank increments by 1. In the case of the NASA\_EVA\_Gamification extension, we went with NASA-themed wording. For example, we called the ranks “Astronaut” (“gamification-rank-1”), “Spacewalker” (“gamification-rank-2”), and “Moonwalker” (“gamification-rank-3”) in order of least to greatest prestige where being an astronaut is a great achievement, but walking out in space is even more prestigious. In kind, being able to walk on the moon brings with it even more prestige than walking out in space. We decided to stick with the naming convention of calling the badges badge(s) (“gamification-badge-display-plural”/”gamification-badge-display-singular”), but they can very easily be switched to achievement(s), trophy(ies), etc. Lastly, the badges awarded are given configurable names. The email verification badge (“gamification-badge-emailverification”), earned when a user verifies their email on their profile, was again kept NASA-themed with “Spacesuit Verified.”

The other items listed in this “en.json” file are strictly for display on the User Gamification Profile page (the “SpecialUserGamificationProfile.php” file within the “specials” folders). The “usergamificationprofile” value is used in the link that is displayed on the Special Pages page within MediaWiki. It is important that each item listed in the “en.json” file has matching representation in the “qqq.json” file which is used to store the description of each item used. The naming convention in use (minus the one exception), is having a “gamification-” before every item listed and separating major words with dashes.

The second configurable file is the “ext.gamification.foo.css” file within the “modules” script folder. This folder is meant to hold JavaScript and CSS files that are pertinent to the extension. There is no purpose for the “foo” that is seen in the file names other than a default name provided by MediaWiki documentation. The intent of the CSS file is primarily for styling purposes, but the main reason it is of importance from a configuration perspective is images are not easy to implement in MediaWiki for security purposes and one of the methods provided for using images is to use them as background images; this is done via CSS for added configurability, allowing for expandability if more ranks are added, keeping the naming convention the same as what is currently in use. For example, the “Moonwalker” image on the User Gamification Profile page is displayed in a div which has a class of “.ext-gamification-foo-rank-3-image” where if there was a fourth rank, all one would need to do would be to add a new style and change the 3 to a 4. The naming convention in use is having a “ext-gamification-foo-“ before every style used and separating words with dashes.

The third and final configurable file is the “extension.json” file located in the root folder of the NASA\_EVA\_Gamification extension. The primary purpose of this file is to store information needed by MediaWiki such as where to find the script files, which MediaWiki hooks are being called, the localization files directory, etc., but the “config” section of this document is where developers can place global variables to be used in code. The only two global variables in use in this file are “NASA\_EVA\_GamificationGamesToRankMapping” and “NASA\_EVA\_GamificationMaxNumberOfRanks.” The first variable is used to set what rank badge a user would get if they complete the email verification badge. The intent of this is it allows admins to decide what rank a badge should be as different admins may have different opinions as to what badges should be ranked as, especially when implementing more than the standard three ranks. The second variable specifies how many ranks are in use; this is used to dynamically display data on the User Gamification Profile so that no additional work needs to be done to add display information for additionally added ranks, creating less worries for admins.

Images in use in the website for this extension are stored within the “images” folder and can be referenced via CSS by using “background-image: url("../images/astronaut.jpg");” for example.

There are many files within the NASA\_EVA\_Gamification extension that are customized in order to make the extension work as designed, but some items are part of MediaWiki which have not and cannot be altered. These files are the following:

* composer.json
* Gruntfile.js
* package.json
* phpcs.xml