

Analysis Class Design Document

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freq_of_lang Method Design

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- Define a method `freq_of_lang()` with one parameter.
- The parameter is `self` of datatype class instance.
- Define a local variable `language_freq`.
- Assign an empty dictionary to the variable `language_freq`.
- Use a `for` loop to iterate through the list of dictionaries `self.devs` using an iterator variable `dict` of datatype dictionary.
 - Define a local variable `language`.
 - Assign the value associated with the key "LanguageAdmired" in the dictionary `dict` to the variable `language`.
 - Define another local variable `lang_list`.
 - Assign, the `list` produced by using the `split` method on the variable `language` with `;` as the delimiter, to the variable `lang_list`.
 - Use another `for` loop to iterate `lang_list` using the iterator variable `lang` of datatype `string`.
 - If `lang` is not "NA":
 - If `lang` is not in the dictionary `language_freq`:
 - Initialize the value associated with the key `lang` in the dictionary `language_freq` with `0`.
 - Increment the value associated with the key `lang` in the dictionary `language_freq` by `1`.
- Return the dictionary `language_freq`.

lang_histogram Method Design

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- Define a method `lang_histogram` with one parameter.
- The parameter is `self` of datatype class instance.
- Define a local variable `language_hist`.
- Assign an empty dictionary to the variable `language_hist`.
- Define another local variable `lang_freq`.
- Call the method `freq_of_lang()` on the instance of the class `self` and assign its return value to the variable `lang_freq`.
- Use the `items()` method on the dictionary `lang_freq`.
- Use a `for` loop to iterate through the list `lang_freq.items()` with `lang`, `freq` as the iterator variables with `list` and `int` as datatypes respectively.
 - If `freq` is not in the dictionary `language_hist`:
 - Initialize the value associated with the key `freq` in the dictionary `language_hist` with an empty list.

- Append `lang` to the list(value) associated with the key `freq` in the dictionary `language_hist`.
- Return the dictionary `language_hist`.

write_lang_popularity Method Design

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- Define a method `write_lang_histogram` with one parameter.
- The parameter is `self` of datatype class instance.
- Define a local variable `language_hist`.
- Call the method `lang_histogram()` on the instance of the class `self` and assign its return value to the variable `language_hist`.
- Using the `with` statement open the file `pop.csv` as `csv_file` in `write` mode using `utf-8` encoding with `newline` parameter with as `""`.
 - Define a local variable `file_writer`.
 - Use the `writer()` method in/from the package `csv` with `csv_file` as the parameter, assign this to the variable `file_writer`.
 - Use the `writerow()` method on the variable `file_writer` with the parameter as the list of `"Frequency"` and `"Language"`.
 - Use a `for` loop to iterate through the list `language_hist.items()` using the iterator variables `freq`, `Languages` with `int` and `list` as datatypes respectively.
 - Define a variable `langs`.
 - Use the `join()` method with `languages` as the parameter with `;` as the delimiter and assign this to the variable `langs`.
 - Use the method `writerow()` on the variable `file_writer` with the parameters as the list of `freq`, `langs`.