Speech to text translation

# Program purpose

Translate speech to human-readable English.  
Mapping is provided by Scientists.

# Input, output

Input : Mapping, Interpreted speech  
Output : Translated human-readable English from interpreted speech

# User

Scientist

# Assumptions

* No different meaning between uppercase and lowercase
* Valid speech characters: <space>, <!>, <?>
* Words before “:” in speech text denotes the name of dolphin
* Words after “:” in speech text denotes the speech of dolphin
* There could be more than 2 dolphins conversing
* Words before “=” in mapping text denotes the dolphin pattern
* Words after “=” in mapping text denotes the translated human-readable English
* Only <space> is a valid separator
* Dolphin patterns are not limited to the mappings provided

# Special handling

* Inconsistency in uppercase and lowercase
* Words in speech text that are not available for translation
* Injected characters

# Other considerations

* Expandable mappings after new discovery by Scientists

> Scientist can easily type in Mapping text file instead of asking the programmer to include in code

* User of program (Scientist) are not comfortable with command prompt to run program

> Graphic User Interface

* Include percentage of accuracy in output file for reference

# Versions

v1 : Basic translator  
v2 : Basic translator, with result only containing translated text and separator  
v2 : Translator that consider injections of invalid characters  
v3 : Translator that consider injections of valid characters  
v4 : GUI instead of running from command prompt

# Sample input

# Logic

1. Remove all invalid characters
2. Replace speech with translated text
3. Find speech with injections to translate
4. Provide accuracy percentage
5. Compare speech and translated text to remove un-translated text

The resulting output will contain only translated speech, without the bugs