Memo

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To:

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Installation of the Aerospace Conceptual Design Environment SUAVE

This memo should explain the installation of the software "Stanford University Aerospace Vehicle Environment" SUAVE which is programmed in Python.

SUAVE can be used e.g. with the program Anaconda or with Google Colab. SUAVE can be used on Windows, Mac and Linux. For installing and using SUAVE a good knowledge in Python is recommened. For running SUAVE, Python 3.6 or higher is required.

Two installation methods for Windows are shown below:

A) Installation via Anaconda:

1. Download "standard install" file from https://suave.stanford.edu/download.html.
2. Unzip the downloaded zip-file.
3. Follow the installation guide from this website:
    https://suave.stanford.edu/download/standard_install.html.

B) Installation using Google Colab:

This comand downloads SUAVE-Code from website.

```
[ ]    1 !git clone https://github.com/suavecode/SUAVE.git

    Cloning into 'SUAVE'...
    remote: Enumerating objects: 431, done.
    remote: Counting objects: 100% (431/431), done.
    remote: Compressing objects: 100% (237/237), done.
    remote: Total 60852 (delta 268), reused 279 (delta 185), pack-reused 60421
    Receiving objects: 100% (60852/60852), 377.77 MiB | 20.49 MiB/s, done.
    Resolving deltas: 100% (42552/42552), done.
    Checking out files: 100% (1098/1098), done.
```

This comand goes into the folder SUAVE/trunk/ and installs the setup.

```
[ ]    1 %cd SUAVE/trunk/
       2 !python setup.py install
       3 %cd ../../
```

Import SUAVE.

```
    1 import SUAVE
```

For test, the tutorial from SUAVE can be used. This comand downloads the required code.

```
    1 !git clone https://github.com/suavecode/Tutorials
    2

    Cloning into 'Tutorials'...
    remote: Enumerating objects: 69, done.
    remote: Counting objects: 100% (69/69), done.
    remote: Compressing objects: 100% (46/46), done.
    remote: Total 724 (delta 38), reused 44 (delta 23), pack-reused 655
    Receiving objects: 100% (724/724), 621.99 KiB | 885.00 KiB/s, done.
    Resolving deltas: 100% (460/460), done.
```

For both installation possibilities errors appeared and the program could not be used.

For the first installation path the installation failed because modules could not be found. For the second installation path, the installation was correct but after the download and import of the program, an error message for the tutorials occurred that the SUAVE modules were not installed. An additional check revealed that the installation of the modules was successful. Afterwards, it was found that the modules, which were correctly installed before, were not installed anymore. A reinstallation of the modules did not solve the issue. Further detailed investigation is necessary to identify the failure cause.

References

STANFORD AEROSPACE DESIGN LAB: *SUAVE,* 2020. – URL: https://suave.stanford.edu (2020-10-16)