Data Science Survival Skills

Homework 5

Description of the Homework

Welcome to our fifth homework. With this activity, you will:

- Setup a GitHub repository
- Work with your repository
- Make your repository pip installable

Homework 5: Tasks 1/4

- Create your first GitHub repository with a name of your choice. We recommend always writing a short description, it helps everyone who checks your work (and yourself) to identify the contents of your repo.
- Make sure it is publicly available so we can check the repo.
- You should tick the “Add a README file” cell, use a .gitignore template for Python and a license, e.g., Apache License.

➜ **Slide: Link to your GitHub repository.**

Homework 5: Task 2/4

- Clone your repository to your local machine.
- Copy&Paste the "let_it_snow.py" or "let_it_snow.ipynb" file (depending on whether you want to work with an IDE such as PyCharm or Jupyter Notebook) that we provided to you via StudOn to your repository folder.
- Add, commit and push the file on the main branch.

Homework 5: Task 3/4

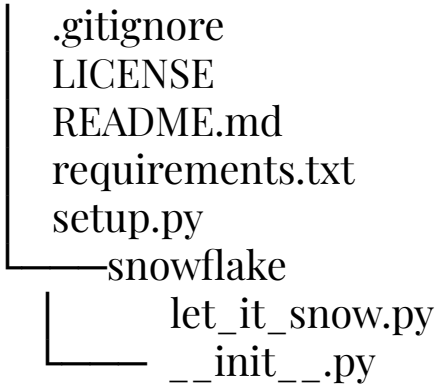
- Create a new branch called “feature_more_colors”. Checkout to this branch and modify the “let_it_snow.py”/”let_it_snow.ipynb” file in such a way that it uses a randomly chosen color for each snowflake.
- Add, commit and push the file.
- Checkout to the main branch again and merge your “feature_more_colors” branch to the main branch.

➜ **Slide: Screenshot of the Turtle window with multiple snowflakes in different colors.**

➜ **Slide: Screenshot of the output after running “git merge” command**

Homework 5: Task 4/4

- Make your repository pip installable. Therefore, you need the following structure. Add all of the missing files to your repository with a meaningful commit message.



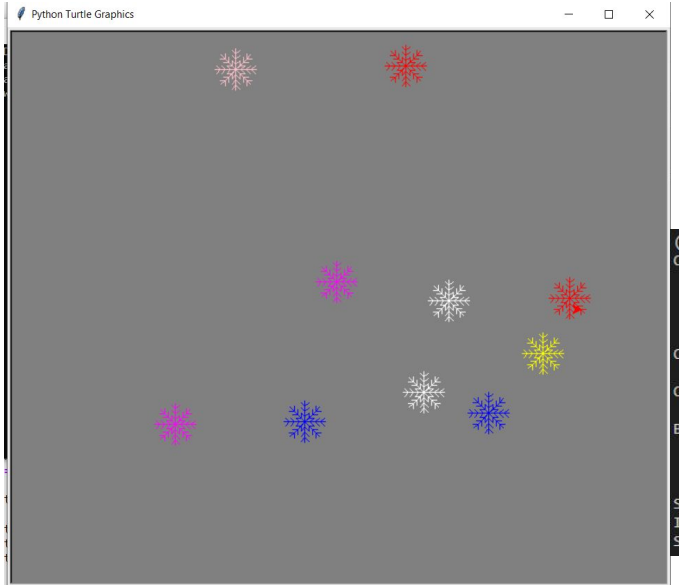
- Run “pip install git+<link-to-repository.git>”. After that, import the main function of “let_it_snow” and run it. We will check if this works.

➜ **Slide: Screenshot of terminal output of pip install git.**

➜ **Slide: Screenshot of your code where you import the function and run it**

Homework 5: Example

https://github.com/<your-github-name>/<your-repository-name>




```
$ git merge your_branch_name_here
Updating 5a56b60..b9b90d5
Fast-forward
 let_it_snow.py | 77 +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
 1 file changed, 77 insertions(+)
```

```
(dsss_ex5) C:\Users\luisa\Documents\Master\exercise5>pip install git+https://github.com/neuluna/exercise5.git
Collecting git+https://github.com/neuluna/exercise5.git
  Cloning https://github.com/neuluna/exercise5.git to c:\users\luisa\appdata\local\temp\pip-req-build-w0dv5klf
  Running command git clone --filter=blob:none --quiet https://github.com/neuluna/exercise5.git 'C:\Users\luisa\AppData\Local\Temp\pip-req-build-w0dv5klf'
  Resolved https://github.com/neuluna/exercise5.git to commit 93d9a5532fdeb52bfc54829b6f032fddeff0d82e
  Preparing metadata (setup.py) ... done
Collecting numpy
  Using cached numpy-1.23.5-cp38-cp38-win_amd64.whl (14.7 MB)
Collecting turtles
  Using cached turtles-1.0.0-py3-none-any.whl (2.8 kB)
Building wheels for collected packages: snowflake
  Building wheel for snowflake (setup.py) ... done
  Created wheel for snowflake: filename=snowflake-0.1-py3-none-any.whl size=6304 sha256=c4c2ba0c2c9e1aad5ac177cde3e665e9a900c83ffef8ef4509bdd2daa4e47d61
  Stored in directory: C:\Users\luisa\AppData\Local\Temp\pip-ephem-wheel-cache-umuxvlpg\wheels\1e\01\d6\6e5765e3556b6f74161db430a0092c7cd76cc44727b45bfebf
Successfully built snowflake
Installing collected packages: turtles, numpy, snowflake
Successfully installed numpy-1.23.5 snowflake-0.1 turtles-1.0.0
```

```python
import snowflake

snowflake.let_it_snow.main(3, "black")

```

Homework: Requirements

You must complete **all** homework assignments (**unless otherwise specified**) following these guidelines:

- **One** slide/page.
- **PDF** file format only.
- It has to contain your **name** and **student** (**matriculation**) **number** in the down-left corner.
- Font: **Arial,** Font-size: **> 10 Pt.**
- Answer **all** the questions and solve all the tasks requested.
- Be careful with **plagiarism**. Repeated solutions will not be accepted!

And we are done!

Thank you