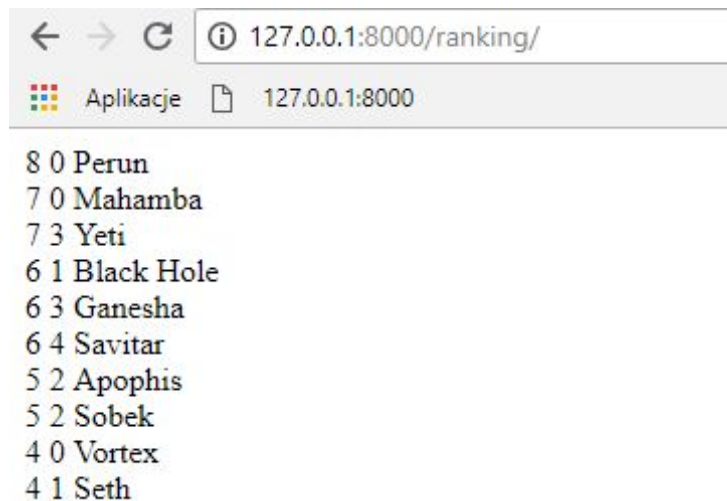
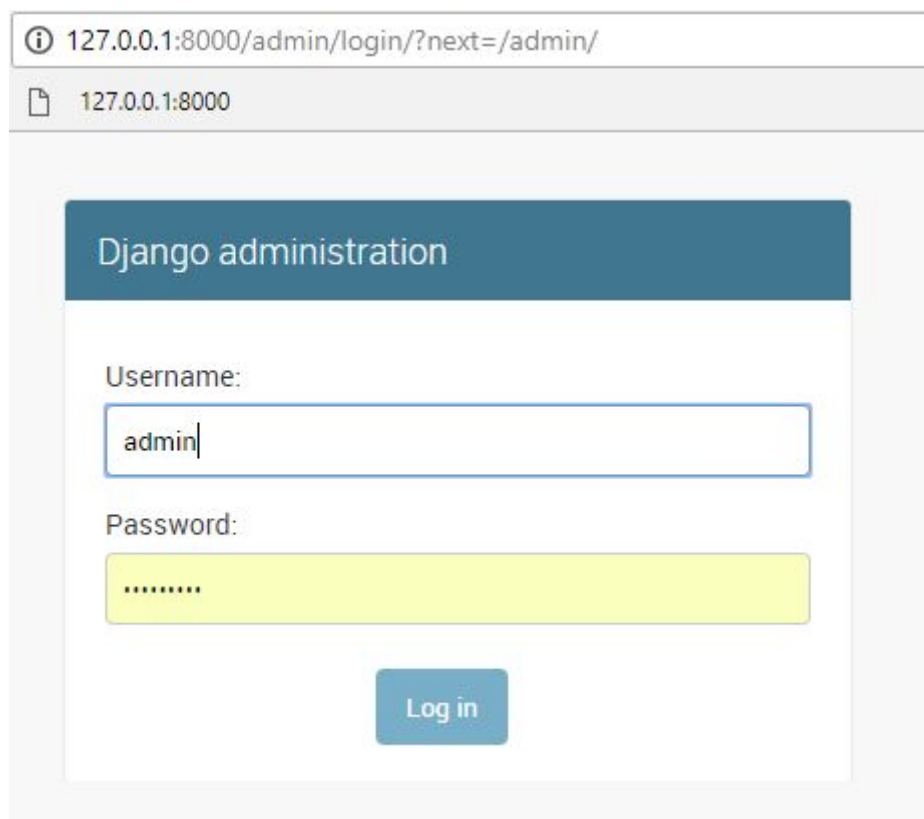


Test assignment for Summer Python Internship (solution).

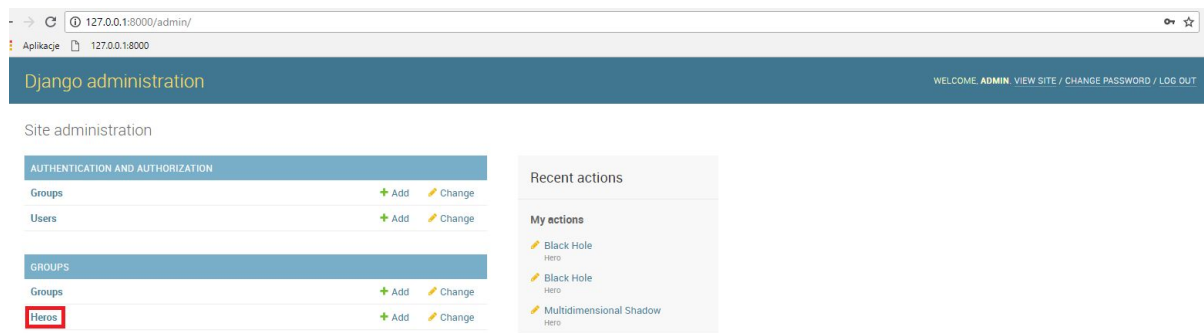
1. Clone or download [Test-Assignment](#) directory.
2. Install necessary libraries: **numpy**, **django**, **djangoRESTframework**.
3. Open directory with *manage.py* file and type in command prompt:
python manage.py runserver
4. Open web browser and go to <http://127.0.0.1:8000/ranking/>, you should see the ranking:



Go to <http://127.0.0.1:8000/admin/login/?next=/admin/>, and log in as admin user. The username is 'admin' and the password is the name of engine from planet Sakaar.



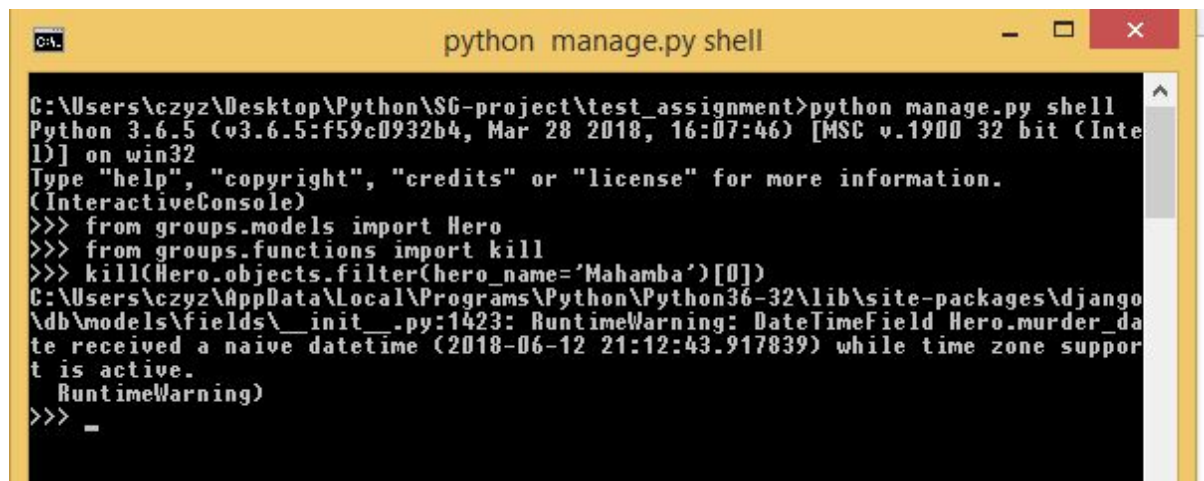
5. The admin interface look like this:



6. Here you can add/delete heroes or change their attributes.

7. Open second command prompt in manage.py path and type:
python manage.py shell

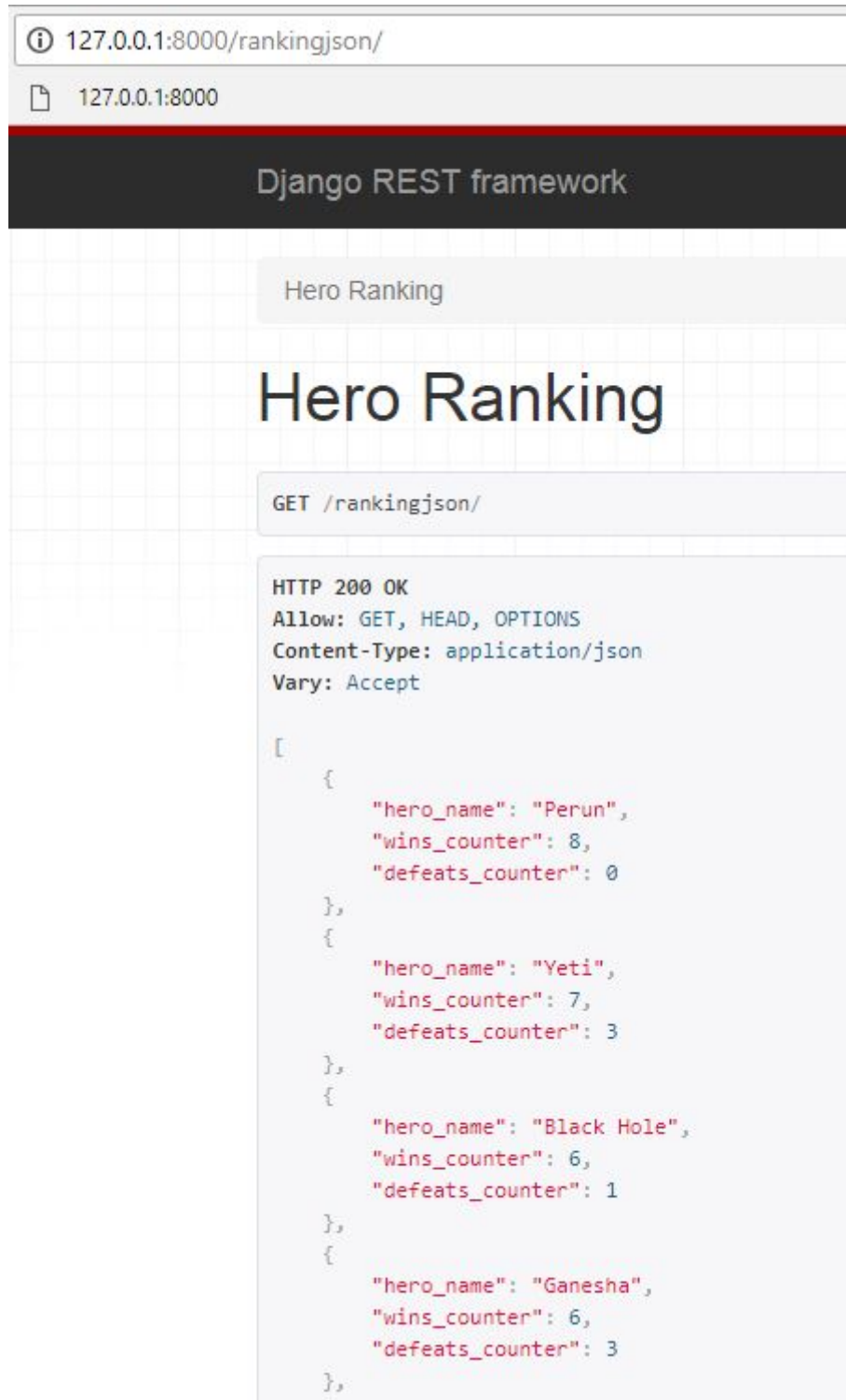
8. Import Hero class and kill function from groups.models and groups.functions files.



Killed heroes does not figure in the ranking.

Refresh <http://127.0.0.1:8000/ranking/> page.

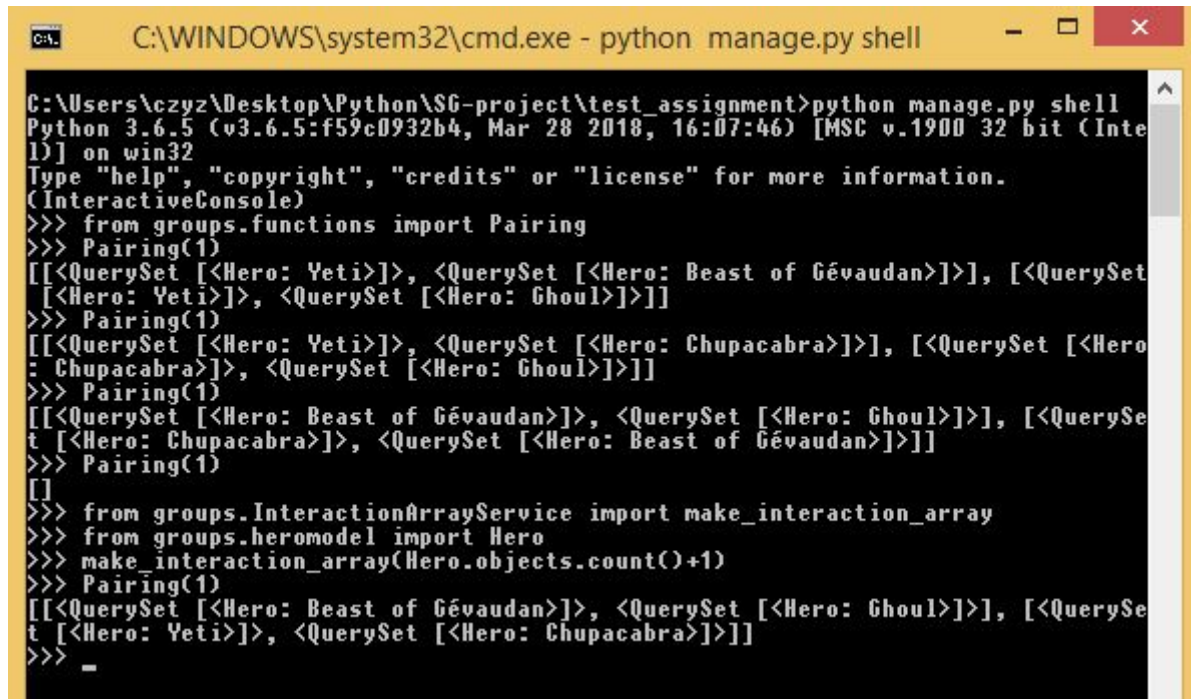
It is possible to display the ranking (<http://127.0.0.1:8000/rankingjson/>) or list of defeated heroes (<http://127.0.0.1:8000/defeatedheroeslist/>) in *json* format as admin user.



9. Every hero has a `group_id` attribute which indicates group membership.

10. There is a *Pairing* function which enables to make pairs from groups with no repetition. The function takes *group_id* argument.

For example: 1 is for 'Cryptids'.



```
C:\WINDOWS\system32\cmd.exe - python manage.py shell

C:\Users\czyz\Desktop\Python\SG-project\test_assignment>python manage.py shell
Python 3.6.5 (v3.6.5:f59c0932b4, Mar 28 2018, 16:07:46) [MSC v.1900 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license" for more information.
(InteractiveConsole)
>>> from groups.functions import Pairing
>>> Pairing(1)
[[<QuerySet [<Hero: Yeti>]>, <QuerySet [<Hero: Beast of Gévaudan>]>], [<QuerySet [<Hero: Yeti>]>, <QuerySet [<Hero: Ghoul>]>]]
>>> Pairing(1)
[[<QuerySet [<Hero: Yeti>]>, <QuerySet [<Hero: Chupacabra>]>], [<QuerySet [<Hero: Chupacabra>]>, <QuerySet [<Hero: Ghoul>]>]]
>>> Pairing(1)
[[<QuerySet [<Hero: Beast of Gévaudan>]>, <QuerySet [<Hero: Ghoul>]>], [<QuerySet [<Hero: Chupacabra>]>, <QuerySet [<Hero: Beast of Gévaudan>]>]]
>>> Pairing(1)
[]
>>> from groups.InteractionArrayService import make_interaction_array
>>> from groups.heromodel import Hero
>>> make_interaction_array(Hero.objects.count()+1)
>>> Pairing(1)
[[<QuerySet [<Hero: Beast of Gévaudan>]>, <QuerySet [<Hero: Ghoul>]>], [<QuerySet [<Hero: Yeti>]>, <QuerySet [<Hero: Chupacabra>]>]]
>>> _
```

There is 4 heroes in this group that are able to pair so there is only 6 unique pairs.

Make_interaction_array reset all pairing history.