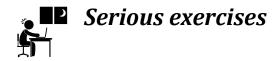


Exercise 1:

- Watch this tutorial and learn how to use Matplotlib



Exercise 2:

Connect to our class's Mongo Database with this URI:

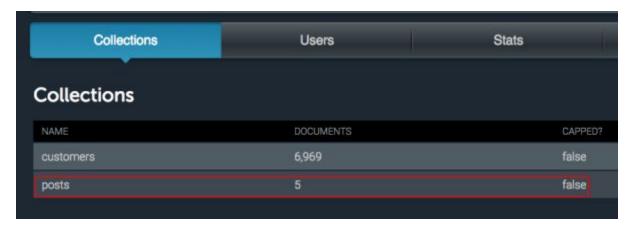
mongodb://admin:admin@ds021182.mlab.com:21182/c4e

Inside this database, there are 2 collections, posts and customers which, respectively, will be used in **Exercise 3** and **4**



Exercise 3:

Open this blog, you will see the posts are read and displayed from posts collections:





Tôi buồn

by Mâi Yêu Em

Tôi buổn thổi khúc tiêu xa. Nhờ cơn gió hạ mang qua bên nàng. Trăng thanh điệp khúc ngân vang. Nụ hoa đua nở cung đàn bay cao. Tôi bay lơ lửng vút vào thình không. Ngân hà ngơ ngẫn dòng...

Hà Huyền Chi

by TA

Khi vui hạc múa có đôi. Hạc buồn thả tiếng buồn rơi xé lòng. Tôi vui tay có tay không. Lại như nước lã ra sông khi buồn. Có em nhẹ gánh còn cũng thôi. Buồn vui gì vẫn mình tôi. Cái tâm muốn...

Lỡ hen

by Phương Vương

Mưa buồn nhớ bóng dáng ai. Yêu nhau đã lỡ, đêm nay tủi buồn. Để mình ôm lấy nỗi buồn. Thâu đêm suy ngẫm, ai ruồng bỏ ta. Thưở nào ấm, dù là mưa giông. Bây giờ ai biết nhớ không. Tình ta đã...

Now, it's your job to **add** a post to this collection. Do it and refresh the blog, if your adding works, you should see your new post in the refreshed page.

Note: Leave your mark in your post, your name, what you think of our class and especially what you want to say to the next C4E classes to come :)

Exercise 4:

Inside customers collection is the data of 6969 customers of a marketing database.



```
"$oid": "5a01a55b9f10831fe40444a6"
},
    "name": "Michael Barber",
    "age": 20,
    "address": "382 Erickson Light Suite 670\nNorth Larrybury, VI 12209-8953",
    "ref": "events"
}

    "$oid": "5a01a55b9f10831fe40444a7"
},
    "name": "Jorge Young",
    "age": 23,
    "address": "883 Adam Meadows\nPort Barbaraport, WY 00965-5999",
    "ref": "wom"
}

    "_id": {
        "$oid": "5a01a55c9f10831fe40444a8"
},
        "name": "Alexa Riley",
        "age": 20,
        "address": "40970 Coleman Roads Suite 917\nPort Victorborough, SC 57689-8413",
        "ref": "ads"

    **Gold***

**Gold**

**Gold***

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**Go
```

It includes name, age, address and especially refs (references) - where the customers are acquired from: events held by the organization, advertisements or word of mouth.

- Count the number of customers group by refs

| - | Use MatPlotLib to draw a pie chart showing how much percentage of each reference | | | | | |
|---|-----------------------------------------------------------------------------------------|--|--|--|--|--|
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