Redis Assignment

In this assignment, you will access a redis server and user redis commands to find out answers. The redis server is at *lab.aimet.tech*. You also have to authenticate as username 'hw' with password 'hw'.

The populated data in the redis database is similar to the example "simple social network" in the class. Answer all questions in mycourseville assignment.

Note that this user can only use "read" commands e.g. "get", "lrange", "llen", "scan", etc.

```
# we will have to install redis in colab
import sys
IN_COLAB = 'google.colab' in sys.modules
if IN_COLAB:
  !pip install redis
```

```
Collecting redis
  Downloading redis-5.0.3-py3-none-any.whl (251 kB)
     ━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━ 251.8/251.8 kB 6.7 MB/s eta 0:00:00
Requirement already satisfied: async-timeout>=4.0.3 in /usr/local/lib/python3.10/dist
Installing collected packages: redis
Successfully installed redis-5.0.3
```

```
import redis


rd = redis.Redis(host='lab.aimet.tech', charset="utf-8", decode_responses=True)
rd.auth(username='hw', password='hw')
```

```
True
```

What is the username of user id "600"?

```
rd.get('user:600:name')
```

```
'cautiousCrackers9'
```

What is the id of username "excitedPie4" ?

```
rd.get('username:excitedPie4')
```

```
'567'
```

How many users that "excitedPie4" follows ?

```
print(rd.scard('user:567:follows'))
```

```
9
```

How many users are there in the database?

```
len(rd.keys('user:*:name'))
```

```
200
```

What is the average number of follows per user?

```
cursor = 0
count = 0
while True:
  cursor,keys = rd.scan(cursor=cursor, match='user:*:follows')
  for key in keys :
    count += rd.scard(key)
  if cursor == 0:
    break
print(count/200)
```

```
8.605
```

How many users follows between 5-10 users?

```
cursor = 0
count = 0
while True:
  cursor,keys = rd.scan(cursor=cursor, match='user:*:follows')
  for key in keys :
    if rd.scard(key) >= 5 and rd.scard(key) <= 10 :
      count += 1
  if cursor == 0:
    break
print(count)
```

```
60
```

Which account has the most followers?

```
cursor = 0
max = 0
user = None
while True:
  cursor,keys = rd.scan(cursor=cursor, match='user:*:followed_by')
  for key in keys :
    id =key.split(':')[1]
    n = rd.scard(key)
    if n >= max :
      max = n
      user = id
  if cursor == 0:
    break
print(user)
```

```
630
```