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.

In [2]:
```
!pip install redis
```

```
Requirement already satisfied: redis in /home/keerati/.conda/envs/dsde-cedt/lib/python3.10/site-packages (7.0.1)
Requirement already satisfied: async-timeout>=4.0.3 in /home/keerati/.conda/envs/dsde-cedt/lib/python3.10/site-packages (from redis) (5.0.1)
```

In [3]:
```
import redis
```

In [4]:
```
rd = redis.Redis(host='lab.aimet.tech', decode_responses=True)
rd.auth(username='hw', password='hw')
```

Out[4]: True

What is the username of user id "600"?

In [5]:
```
rd.get('user:600:name')
```

Out[5]: 'cautiousCrackers9'

What is the id of username "excitedPie4" ?

In [6]:
```
# rd.type("username:excitedPie4")
rd.get("username:excitedPie4")
```

Out[6]: '567'

How many users that "excitedPie4" follows ?

In [7]:
```
# rd.type("user:567:follows")
len(rd.smembers("user:567:follows"))
```

Out[7]: 9

How many users are there in the database?

In [8]:
```
number_user = len(rd.scan(cursor=0,match="user:*:name",count=rd.dbsize())[1])
number_user
```

Out[8]: 200

What is the average number of follows per user?

In [9]:
```
total_number_follow = 0
for key in rd.scan_iter(match="user:*:follows"):
    total_number_follow += rd.scard(key)
total_number_follow / number_user
```

Out[9]: 8.605

How many users follows between 5-10 users?

In [10]:
```
user_follow_5_10 = 0
for key in rd.scan_iter(match="user:*:follows"):
    number_user_follow = rd.scard(key)
    if 5 <= number_user_follow <= 10:
        user_follow_5_10 += 1
user_follow_5_10
```

Out[10]: 60

Which account has the most followers?

In [11]:
```
most_followers = -9999999
global account_most
for key in rd.scan_iter(match="user:*:followed_by"):
    number_user_followers = rd.scard(key)
    if most_followers < number_user_followers:
```

```
        most_followers = number_user_followers
        account_most = key.split(":")[1]
account_most
```

Out[11]: '630'