

Veri Yapıları ve Algoritmalar

Dönem Projesi

Soru1-

CSV dosyasının okunması ve graf şeklinde yüklenmesi

```
C:\Users\maver\OneDrive\Masaüstü\vy-proje\Projev5.exe

1570 id li kullanıcının takip listesi :
head -> 84481-> 7579-> 33523-> 39041-> 20044-> 90056-> 144589-> 171317-> 26393-> 24452-> 6569-> 174689-> 49146-> 11917-> 32872-> 28117-> 84539-> 61272-> 7585-> 72711-> 14424-> 7182-> 75393-> 1569-> 352-> 64977-> 25789-> 60904-> 6821-> 50653-> 7547-> 171313-> 11957-> 37207-> 171678-> 35886-> 32206-> 1564-> 34539-> 22848-> 34638-> 82907-> 23540-> 30355-> 33018-> 24562-> 15445-> 41223-> 148568-> 14922-> 171312-> 1063-> 61024-> 218630-> 7504-> 9266-> 17642-> 1565-> 81599-> 28328-> 391-> 5995-> 135978-> 171323-> 1567-> 13395-> 10005-> 14963-> 166126-> 91801-> 158856-> 11914-> 28106-> 4140-> 45703-> 2556-> 22390-> 170787-> 1563-> 2159-> 171316-> 13256-> 9236

9236 id li kullanıcının takip listesi :
head -> 11917-> 1564-> 30355-> 10005-> 45703-> 13256-> 1570

13256 id li kullanıcının takip listesi :
head -> 144589-> 109144-> 11917-> 32872-> 1934-> 1569-> 14613-> 1564-> 41223-> 14922-> 28464-> 1565-> 1567-> 10005-> 11914-> 28106-> 4140-> 22390-> 1563-> 1570-> 9236

171316 id li kullanıcının takip listesi :
head -> 14613-> 91801-> 45703-> 170787-> 1563-> 96349-> 1570-> 9236

96349 id li kullanıcının takip listesi :
head -> 14284-> 59216-> 14922-> 4567-> 45703-> 2159

2159 id li kullanıcının takip listesi :
head -> 367456-> 2146-> 29235-> 119819-> 7547-> 1564-> 3914-> 4907-> 63240-> 36872-> 14006-> 158856-> 1563-> 96349-> 1570-> 52402

52402 id li kullanıcının takip listesi :
head

1563 id li kullanıcının takip listesi :
```

Soru 2-a

En çok bağlantısı olan 10 kullanıcı

```
Select C:\Users\maver\OneDrive\Masaüstü\vy-proje\Projev5.exe

id -> 2907   Baglanti Sayisi -> 166
id -> 2556   Baglanti Sayisi -> 195
id -> 1563   Baglanti Sayisi -> 202
id -> 3892   Baglanti Sayisi -> 172
id -> 1564   Baglanti Sayisi -> 188
id -> 7580   Baglanti Sayisi -> 279
id -> 41223  Baglanti Sayisi -> 165
id -> 465    Baglanti Sayisi -> 187
id -> 9236   Baglanti Sayisi -> 167
id -> 1570   Baglanti Sayisi -> 344

-----
Process exited after 2.271 seconds with return value 3221225477
Press any key to continue . . .
```

Soru 2-b

Bağlantıların ortalama ve Medyanı -> Ortalama:13.165898 Medyan:5

```
C:\Users\maver\OneDrive\Masaüstü\vy-proje\Projev5.exe
Average : 13.165898
Median : 5
-----
Process exited after 0.2965 seconds with return value 0
Press any key to continue . . .
```

Soru3

Düğüm arası en kısa yollar

Örnek:8135 id'li düğümden diğer düğümlere olan en kısa yollardan kesit

```
C:\Users\maver\OneDrive\Masaüstü\vy-proje\Projev5.exe
id:8135 's path length to id:22596 is 3
id:8135 's path length to id:12000 is 3
id:8135 's path length to id:9001838 is 3
id:8135 's path length to id:78040 is 4
id:8135 's path length to id:44990 is 3
id:8135 's path length to id:265434 is 4
id:8135 's path length to id:82280 is 4
id:8135 's path length to id:236036 is 3
id:8135 's path length to id:190370 is 4
id:8135 's path length to id:7900 is 3
id:8135 's path length to id:89323 is 3
id:8135 's path length to id:238943 is 3
id:8135 's path length to id:7549 is 3
id:8135 's path length to id:125760 is 4
id:8135 's path length to id:160493 is 3
id:8135 's path length to id:271087 is 4
id:8135 's path length to id:934892 is 4
id:8135 's path length to id:18054 is 4
id:8135 's path length to id:57714 is 3
id:8135 's path length to id:10002749 is 3
id:8135 's path length to id:24165 is 4
id:8135 's path length to id:14113 is 3
id:8135 's path length to id:220626 is 3
id:8135 's path length to id:37222 is 3
id:8135 's path length to id:48388 is 4
id:8135 's path length to id:292039 is 4
id:8135 's path length to id:92932 is 3
id:8135 's path length to id:84481 is 2
id:8135 's path length to id:331048 is 3
id:8135 's path length to id:240298 is 3
```