

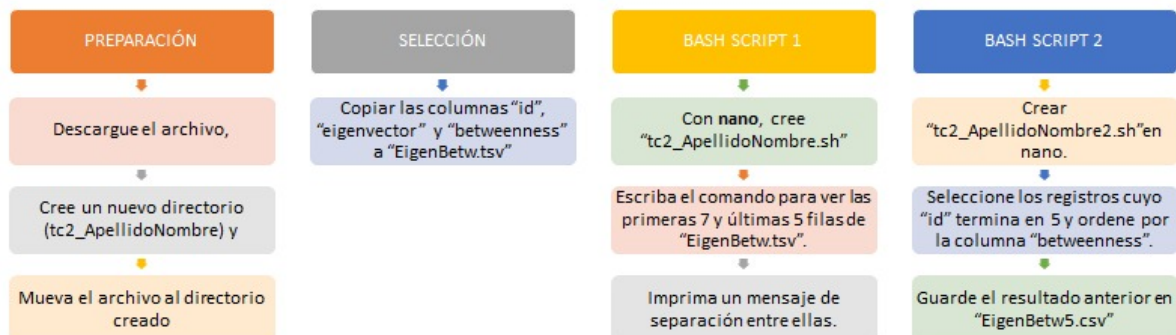
Tc2.Espin Pablo

☑ Completed	✓
📄 Class #	Bioinformatics
☰ Tags	Assignment
📅 Date	@November 9, 2022
📄 Progress	Ready to send
📎 Files	
🔗 URL	

REVISIÓN - EVALUACIÓN

1 MINUTE
ANSWER!

Ikiam
Universidad Regional Amazónica



PREPARACIÓN

```
danesp@LAPTOP-DGF0CJ8Q: ~/tc2_EspinPablo
danesp@LAPTOP-DGF0CJ8Q:~$ cd /mnt/c/Users/pablo/Documents/Universidad/'Semestre 6'/Bioinformatica
danesp@LAPTOP-DGF0CJ8Q:~/tc2_EspinPablo$ ls
AgGCN1.0_properties.csv  Bioinformatics.pdf  Clase 2.pdf  Clase 3.pdf  Clase 4.pdf  Clase 5.pdf  Clase 6.pdf
danesp@LAPTOP-DGF0CJ8Q:~/tc2_EspinPablo$ mv AgGCN1.0_properties.csv ~/tc2_EspinPablo/
danesp@LAPTOP-DGF0CJ8Q:~/tc2_EspinPablo$ cd ~/tc2_EspinPablo/
danesp@LAPTOP-DGF0CJ8Q:~/tc2_EspinPablo$ ls
AgGCN1.0_properties.csv
danesp@LAPTOP-DGF0CJ8Q:~/tc2_EspinPablo$
```

```
danesp@LAPTOP-DGF0CJ8Q: ~/tc2_EspinPablo
danesp@LAPTOP-DGF0CJ8Q:~$ cd /mnt/c/Users/pablo/Documents/Universidad/'Semestre 6'/Bioinformatica
danesp@LAPTOP-DGF0CJ8Q:~/tc2_EspinPablo$ ls
AgGCN1.0_properties.csv  Bioinformatics.pdf  Clase 2.pdf  Clase 3.pdf  Clase 4.pdf  Clase 5.pdf  Clase 6.pdf
danesp@LAPTOP-DGF0CJ8Q:~/tc2_EspinPablo$ mv AgGCN1.0_properties.csv ~/tc2_EspinPablo/
danesp@LAPTOP-DGF0CJ8Q:~/tc2_EspinPablo$ cd ~/tc2_EspinPablo/
danesp@LAPTOP-DGF0CJ8Q:~/tc2_EspinPablo$ ls
AgGCN1.0_properties.csv
danesp@LAPTOP-DGF0CJ8Q:~/tc2_EspinPablo$
```

SELECCIÓN

```
danesp@LAPTOP-DGF0CJ8Q: ~/tc2_EspinPablo
danesp@LAPTOP-DGF0CJ8Q:~/tc2_EspinPablo$ head -n 10 AgGCN1.0_properties.csv
id,Gene name,strength,eigenvector,close,betweenness,community,core4854,core6920,core7464
AGAP000002,,40.75,0.008787135,0.231913559,2.91E-05,3,,,
AGAP000005,,78.95,0.013750498,0.239440138,0.000171241,3,core4854,,
AGAP000007,IGL1,1.36,7.90E-06,0.190212304,0,1,,,
AGAP000008,,42.16,0.000383447,0.223760993,1.22E-06,8,,,
AGAP000009,,80.25,0.013802427,0.242451001,0.000654142,3,core4854,,
AGAP000010,,3.64,0.000101576,0.210887918,0,1,,,
AGAP000011,,126.3,0.028812269,0.244506032,7.34E-05,3,core4854,,
AGAP000012,TTRNA1,22.01,0.000156442,0.215810193,4.72E-05,1,,,
AGAP000013,,132.13,0.002796483,0.252337357,0.000830249,4,core4854,,
danesp@LAPTOP-DGF0CJ8Q:~/tc2_EspinPablo$ cut -d "," -f 1,4,6 AgGCN1.0_properties.csv >> EigenBetw.tsv
danesp@LAPTOP-DGF0CJ8Q:~/tc2_EspinPablo$ ls
AgGCN1.0_properties.csv  EigenBetw.tsv
danesp@LAPTOP-DGF0CJ8Q:~/tc2_EspinPablo$ head -n 15 EigenBetw.tsv
id,eigenvector,betweenness
AGAP000002,0.008787135,2.91E-05
AGAP000005,0.013750498,0.000171241
AGAP000007,7.90E-06,0
AGAP000008,0.000383447,1.22E-06
AGAP000009,0.013802427,0.000654142
AGAP000010,0.000101576,0
AGAP000011,0.028812269,7.34E-05
AGAP000012,0.000156442,4.72E-05
AGAP000013,0.002796483,0.000830249
AGAP000014,9.20E-05,1.04E-05
AGAP000015,0.000112631,4.18E-05
AGAP000016,1.88E-05,0.000198007
AGAP000017,0.005300176,0.000134618
AGAP000018,2.35E-06,2.88E-06
danesp@LAPTOP-DGF0CJ8Q:~/tc2_EspinPablo$
```

BASH SCRIPT 1

```
danesp@LAPTOP-DGFOC8Q: ~/tc2_EspinPablo
danesp@LAPTOP-DGFOC8Q:~/tc2_EspinPablo$ nano tc2_EspinPablo.sh
```

```
danesp@LAPTOP-DGFOC8Q: ~/tc2_EspinPablo
tc2_EspinPablo.sh
GNU nano 6.2
echo "Primeras 7 filas"
head -n 7 EigenBetw.tsv
echo "-----"
echo "Ultimas 5 filas"
tail -n 5 EigenBetw.tsv
echo "Final del archivo"

Primeras 7 filas
id,eigenvector,betweenness
AGAP000002,0.008767135,2.91E-05
AGAP000005,0.013750009,0.000171241
AGAP000007,7.50E-06,0
AGAP000008,0.000383447,1.22E-06
AGAP000009,0.013802427,0.000654142
AGAP000010,0.000101576,0
-----
Ultimas 5 filas
AGAP029781,0.000987921,1.49E-05
AGAP029784,3.45E-05,0.000155039
AGAP029786,0.000146935,5.04E-05
AGAP029787,9.99E-06,1.22E-07
AGAP029789,0.001757408,0.001160083
Final del archivo
danesp@LAPTOP-DGFOC8Q:~/tc2_EspinPablo$
```

BASH SCRIPT 2

```
danesp@LAPTOP-DGFOC8Q: ~/tc2_EspinPablo
danesp@LAPTOP-DGFOC8Q:~/tc2_EspinPablo$ nano tc2_EspinPablo2.sh
```

```
danesp@LAPTOP-DGFOC8Q: ~/tc2_EspinPablo
tc2_EspinPablo2.sh
GNU nano 6.2
cut -d ',' -f 1,3 EigenBetw.tsv | tr ',' ' ' | sort -n -k 2 | cut -d ' ' -f 1 | grep '5$' >> EigenBetw5.csv
```

Cortamos la columna 1 "id" y la 3 "betweenness"

Al tener ahora dos columnas, la columna "betweenness" es la número 2, y elegimos ordenar a modo de la columna 2

Al ya tener ordenado en función de la columna "betweenness", volvemos a cortar para quedarnos únicamente con la columna "id"

Con el grep seleccionamos únicamente los datos que en su id terminen en el dígito 5, y eso lo guardamos en el documento EigenBetw5.csv

```
danesp@LAPTOP-DGFOCIBQ: ~/tc2_EspinPablo
danesp@LAPTOP-DGFOCIBQ:~/tc2_EspinPablo$ nano tc2_EspinPablo2.sh
danesp@LAPTOP-DGFOCIBQ:~/tc2_EspinPablo$ bash tc2_EspinPablo2.sh
danesp@LAPTOP-DGFOCIBQ:~/tc2_EspinPablo$ ls
EigenBetw5.csv  EigenBetw.tsv  tc2_EspinPablo.sh  tc2_EspinPablo2.sh
danesp@LAPTOP-DGFOCIBQ:~/tc2_EspinPablo$ head -n 15 EigenBetw5.csv
AGAP011165
AGAP005775
AGAP008635
AGAP001035
AGAP001825
AGAP001675
AGAP008045
AGAP013405
AGAP004575
AGAP010805
AGAP012295
AGAP007015
AGAP012835
AGAP003545
AGAP005165
danesp@LAPTOP-DGFOCIBQ:~/tc2_EspinPablo$ cut -d "," -f 1,3 EigenBetw.tsv | tr "," " " | sort -n -k 2 | cut -d " " -f 1 | grep '$$' | head -n 15
AGAP011165
AGAP005775
AGAP008635
AGAP001035
AGAP001825
AGAP001675
AGAP008045
AGAP013405
AGAP004575
AGAP010805
AGAP012295
AGAP007015
AGAP012835
AGAP003545
AGAP005165
danesp@LAPTOP-DGFOCIBQ:~/tc2_EspinPablo$
```