Algorithmics	Student information	Date	Number of session
	UO:276824	17/03/2021	3.1
	Surname: García Fernández		
	Name: Pablo		

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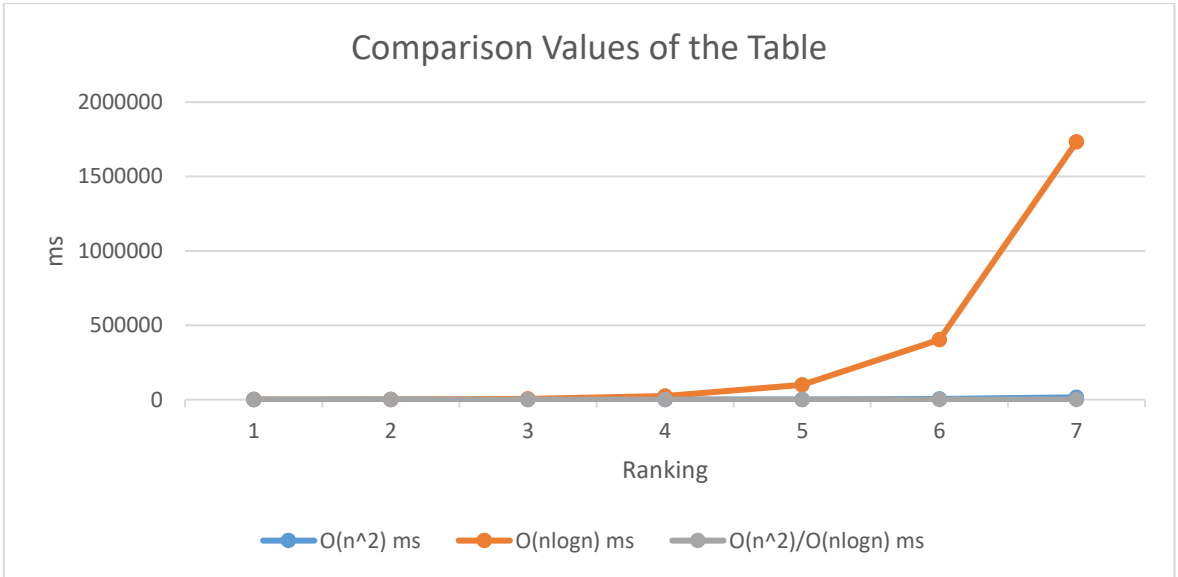
Activity 1. Counting inversions.

Make sure that your both algorithms obtain the same number of inversions (last column). Measure the times of both algorithms with the InversionsTimes.java (class that is provided to you and fill in the following table:

File	t $O(n^2)$	t $O(n * \log n)$	t $O(n^2)$/ $O(n * \log n)$	n inversions
Ranking1.txt	0	0	0	14.074.466
Ranking2.txt	1308	99	0,075688073	56.256.142
Ranking3.txt	5715	142	0,024846894	225.312.650
Ranking4.txt	23754	288	0,012124274	903.869.574
Ranking5.txt	98890	1157	0,011699869	3.613.758.061
Ranking6.txt	402368	4048	0,010060442	14.444.260.441
Ranking7.txt	1732671	15503	0,008947457	57.561.381.803



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The results are not just as expected to the complexity $O(n^2)$ because it is higher than it should be and $O(n * \log n)$ the theoretical values are perfect. You can see it in the table below.

File	t $O(n^2)$	t $O(n * \log n)$	t $O(n^2)/O(n * \log n)$	n inversions
Ranking1.txt	0	0	0	14.074.466
Ranking2.txt	1308	99	13,212121	56.256.142
Ranking3.txt	20981,6194	427,337428	49,098482	225.312.650
Ranking4.txt	91972,2092	610,796328	150,57754	903.869.574
Ranking5.txt	379702,419	1228,82983	308,99511	3.613.758.061
Ranking6.txt	1579882,73	4915,69709	321,39546	14.444.260.441
Ranking7.txt	6389917,27	17084,9333	374,00890	57.561.381.803