

Algorithmics	Student information	Date	Number of session
	UO:		
	Surname:		
	Name:		

## Activity 1. VALIDATION RESULTS

My obtained results are:

Total num of songs: 10

id: 3ld4R7	seconds: 4:27	score:3475
id: 8j4gE3	seconds: 5:22	score:2834
id: 0fmvy3	seconds: 4:40	score:3842
id: 8id4R7	seconds: 4:27	score:3475
id: 9u4gE3	seconds: 6:59	score:2834
id: 2lsdf9	seconds: 3:22	score:3842
id: 3j4yQ6	seconds: 5:02	score:2834
id: 06rwq3	seconds: 4:48	score:3842
id: 87UKo2	seconds: 3:27	score:3475
id: 5rtZe9	seconds: 4:44	score:2834

Length of each block: 20:0

Total score: 27619

Total counters: 47246

Best Block A:

id: 0fmvy3	seconds: 4:40	score:3842
id: 2lsdf9	seconds: 3:22	score:3842
id: 06rwq3	seconds: 4:48	score:3842
id: 87UKo2	seconds: 3:27	score:3475

Total duration Block A: 977

Total score Block A: 15001

Best Block B:

id: 3ld4R7	seconds: 4:27	score:3475
id: 8j4gE3	seconds: 5:22	score:2834
id: 8id4R7	seconds: 4:27	score:3475
id: 3j4yQ6	seconds: 5:02	score:2834

Total duration Block B: 1158

Total score Block B: 12618

As you can see, the results are not exactly the same, as the obtained lists are different, but we know that the solutions is correct since the total sum of scores of both blocks is 27619, that is, the expected value. Also, the counter value is 47246, so we ensure that all cases are checked.

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Talking about its complexity, in every call 3 nodes are generated, because a new song can be added to block A, block B or any of them; so we can assume that the complexity is  $O(3^n)$ . I include here a small drawing of the tree of states for two levels, representing my implementations with two different lists and not a unique array:

