Algorithmics	Student information	Date	Number of session
	UO:276903	15/04/2021	6
	Surname: Garriga Suárez		
	Name: Carlos		

Activity 1. Validation Results

```
Number of songs: 10


List of songs:
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


Lenght of the blocks: 20:00
Total score: 27619
Total counter: 47246
Best block A:

ID: 3ld4R7,      Seconds: 4:27,   Score: 3475
ID: 0fmvy3,      Seconds: 4:40,   Score: 3842
ID: 8id4R7,      Seconds: 4:27,   Score: 3475
ID: 2lsdf9,      Seconds: 3:22,   Score: 3842
Best block B:

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
```

The complexity of the algorithm is calculated by divide and conqueror by subtraction where a = 3 as we do three calls to the same method, b = 1 as we reduce the size of the problem in one unit and k = 0 as the number of iterations in our case would be 3, as it is a fixed number it would be n^0.

So as a > 1 then the complexity is something like $O(a^{n \ div \ b})$, so we get $O(3^n)$.

Also as we have three different possibilities for a song to be in, our tree will have for each node three child, therefore our tree will grow exponentially with base 3.

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