Algorithmics	Student information	Date	Number of session
	UO:276244		7
	Surname: Beltran		
	Name: Martin		

Escuela de Ingeniería Informática
Universidad de Oviedo

Universidad de Oviedo
Universidá d'Uviéu
University of Oviedo

Activity 1. Implementation

I have implemented two diffenrent heuristic:

1 – The first heuristic is based on seeing how many remaining songs can be added to any of the two blocks and sum their total score, the heuristic value would be this sum in negative.

2 – The second heuristic I developed is just adding the value of the two current blocks and returning it in negative.

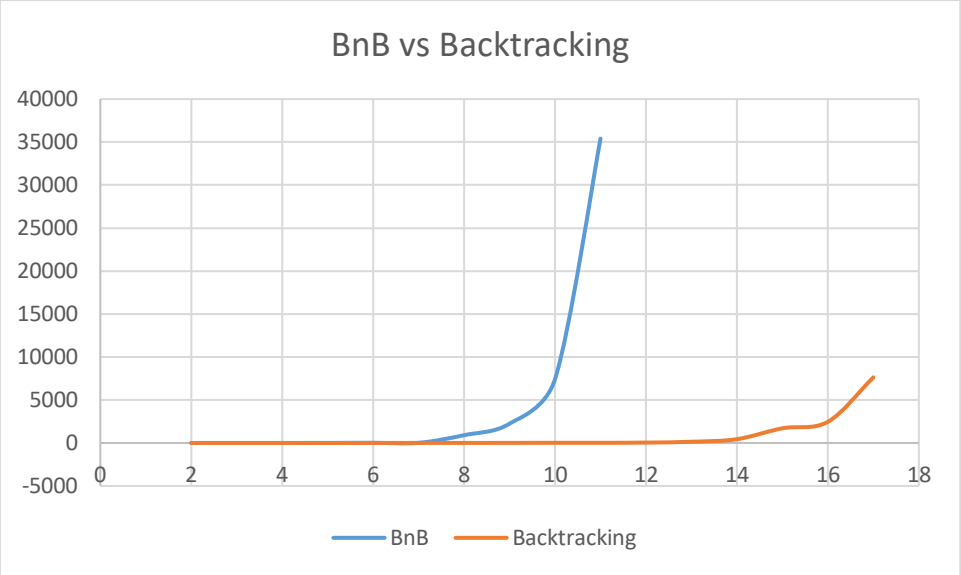
Activity 2. Measurements: comparison with Backtracking

I found this practice the most difficult one, and despite of having of what I think is a good implementation of Branch and Bound and Backtracking, the measurements do not support what I know from theory. I obtained the following results:

n	BnB	Backtracking
2	1	0
3	2	0
4	4	0
5	8	1
6	21	2
7	18	9
8	906	6
9	2248	8
10	7427	20
11	35395	18
12		45
13		140
14		441
15		1709

Algorithmics	Student information	Date	Number of session
	UO:276244		7
	Surname: Beltran		
	Name: Martin		

16		2460
17		7630



As you can see, the times measured are not realistic, perhaps my implementation of Branch and Bound is not efficient at all. I did not measured with the specified number of songs (25, 50, 100…) because it was taking too much time to execute BnB. The expected result would be a significant difference in execution time, being Backtracking the algorithm that takes the longest to finish, and BnB could not give as an exact result as Backtracking, since with BnB we do not visit all the cases, but we do so in Backtracking.

Anyway, as I'm thinking on going to June's exam in order to increment my mark in lab, if you can, could you have a look at my BnB implementation and give me any recommendation to improve it?