


Algorithmics	Student information	Date	Number of session
	UO: 294665	21/03	5
	Surname: Garcia Castro	 Escuela de Ingeniería Informática Universidad de Oviedo	
	Name: Gonzalo		



## Activity 1. [Pattern matching with texts]

**a)** Implement the algorithm in Java in such a way that it calculates for a specific text string whether the different patterns passed in the text file match the string.

Done in the algstudent.s5 package.

**b)** What is the time complexity of the algorithm? Do you think the design could be changed to improve complexity?

The time complexity of the algorithm is  $O(n^2)$  as it has two for loops anidated. Both for loops are for travel through all the matrix comparing previous results.

I think that it can be done better doing each subproblem and then combining the result but im not finding a way of doing it.