Assignment 1 (10 pt)

This assignment is built to familiarize with the matrix notation of this course, and to apply to simple matrices the different methods to do matrix products.

The answer can be either submitted in Blackboard (pictrue of the work done or directly as a text document) or given to the professor in class.

Consider the formula 2.3 in the book regarding the product between matrices:

$$AB = \begin{bmatrix} | & & | \\ Ab^1 & \dots & Ab^p \\ | & & | \end{bmatrix} = \begin{bmatrix} — \ a_1' B \ — \\ \vdots \\ — \ a_m' B \ — \end{bmatrix} \tag{1}$$

Given

$$A = \begin{bmatrix} 2 & 1 & 3 \\ 4 & 0 & -2 \end{bmatrix} \qquad \text{and} \qquad B = \begin{bmatrix} 4 & 0 \\ -1 & 1 \\ 1 & 1 \end{bmatrix}$$

- Find, and write explicitly:

$$b^1\,,\ b^2\,,\ a_1'\,,\ a_2'\,,\ Ab^1\,,\ Ab^2\,,\ a_1'B\,,\ a_2'B$$

- Verify that the two formulas of equation (1) give the same solution.