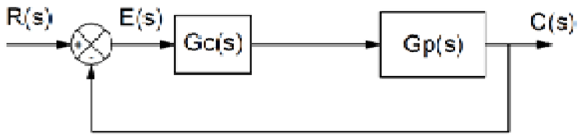
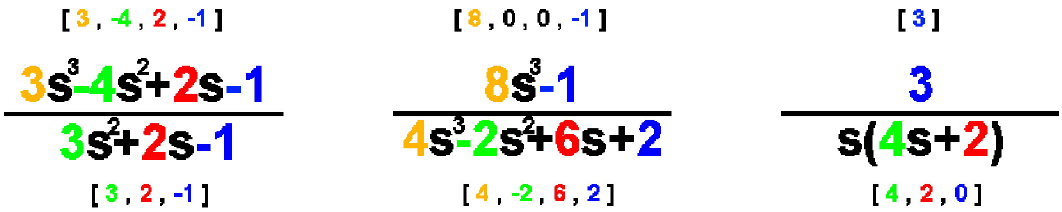
Given a system function of transfer $Gp(s)$ and the controller one, $Gc(s)$, the application draws the Bode graphs of the compensated system and of the system without compensating, as well as the root locus* *(this primitive versión only works with those functions in which the order of the $Gc(s) \cdot Gp(s)$ denominator is three or less (only in the root locus))* and the Nyquist graphs.

The system must be:

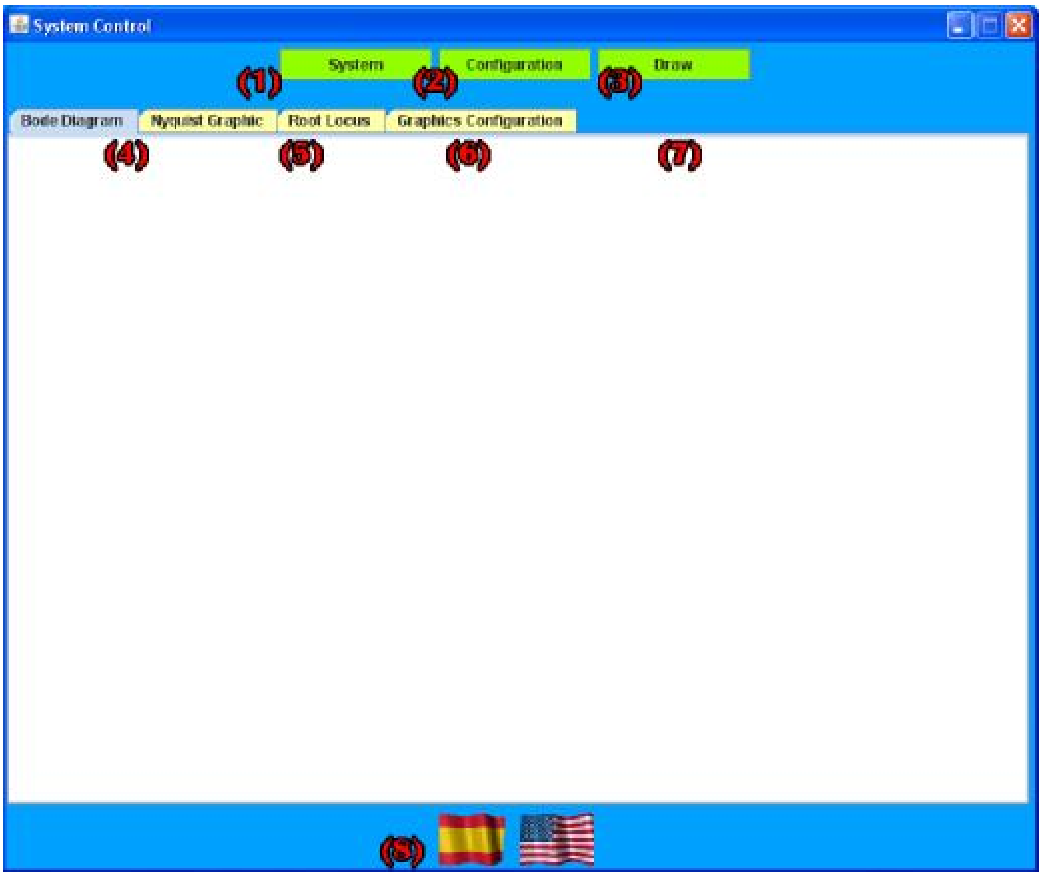


Where the feedback is unitary. The functions of transfer must be written using a specific "nomenclature". For example, let be the $Gp(s)$ numerator $(s-1)(s+2)(s-3)^2$, firstly you must expand it: $s^4 - 5s^3 + s^2 + 21s - 18$, and we should write: $[1,-5,1,21,-18]$.

These three images may be helpful:



When you run the application, you see:



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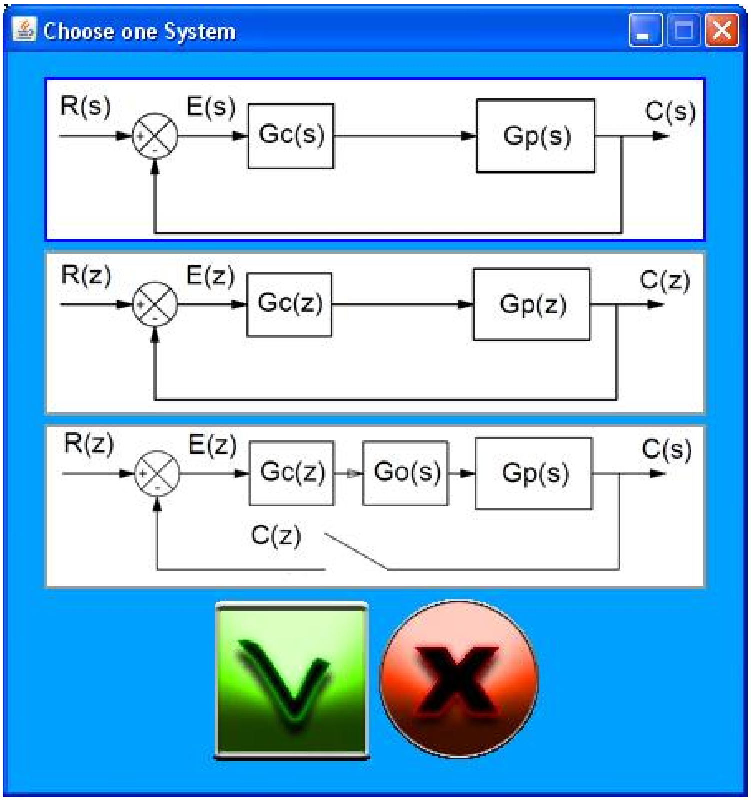
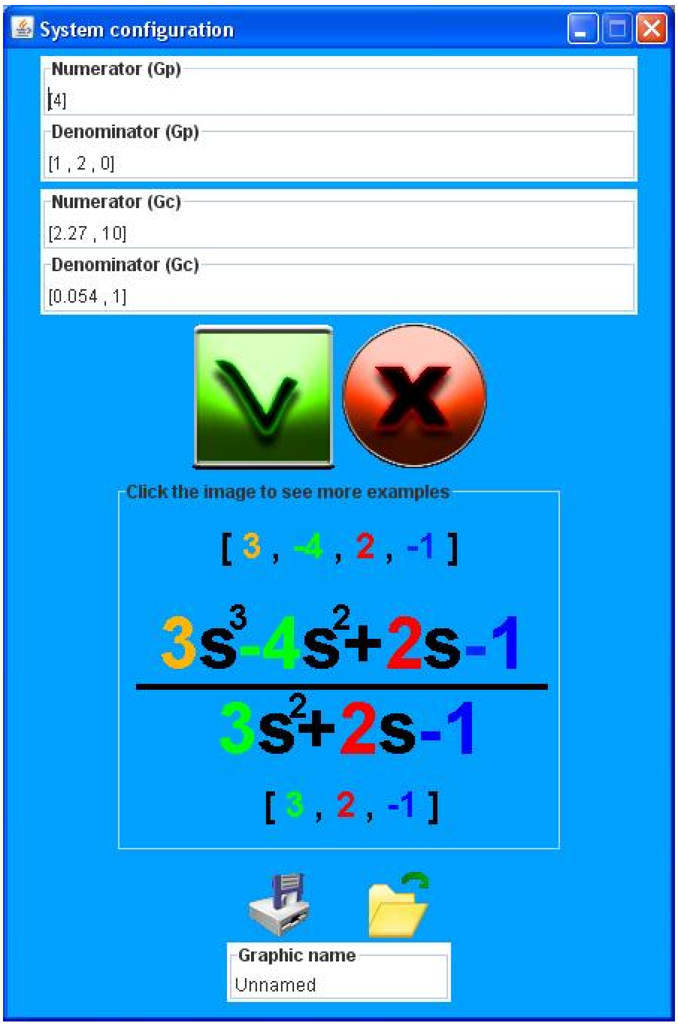
(1): If you press System button, a new frame appears, and there you can choose one System. In this primitive version, only the first one works out.



(2): Here you can write the numerator and the denominator of both functions of tranfer. You can also save one configuration or load it. In this version, some functions described in Ogata are included.



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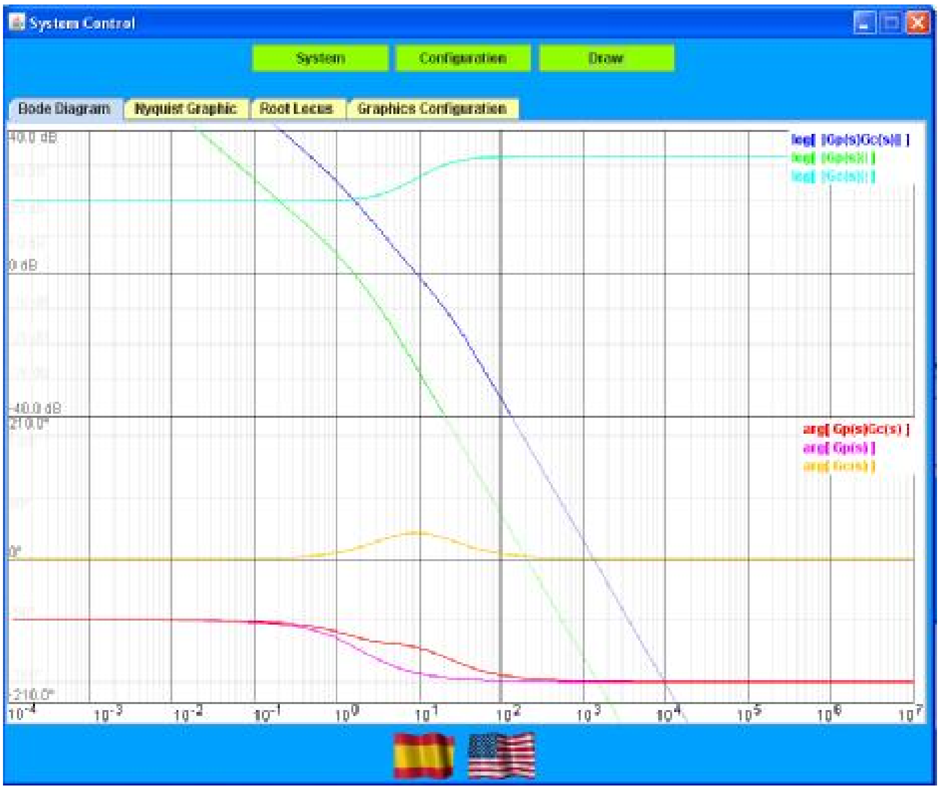
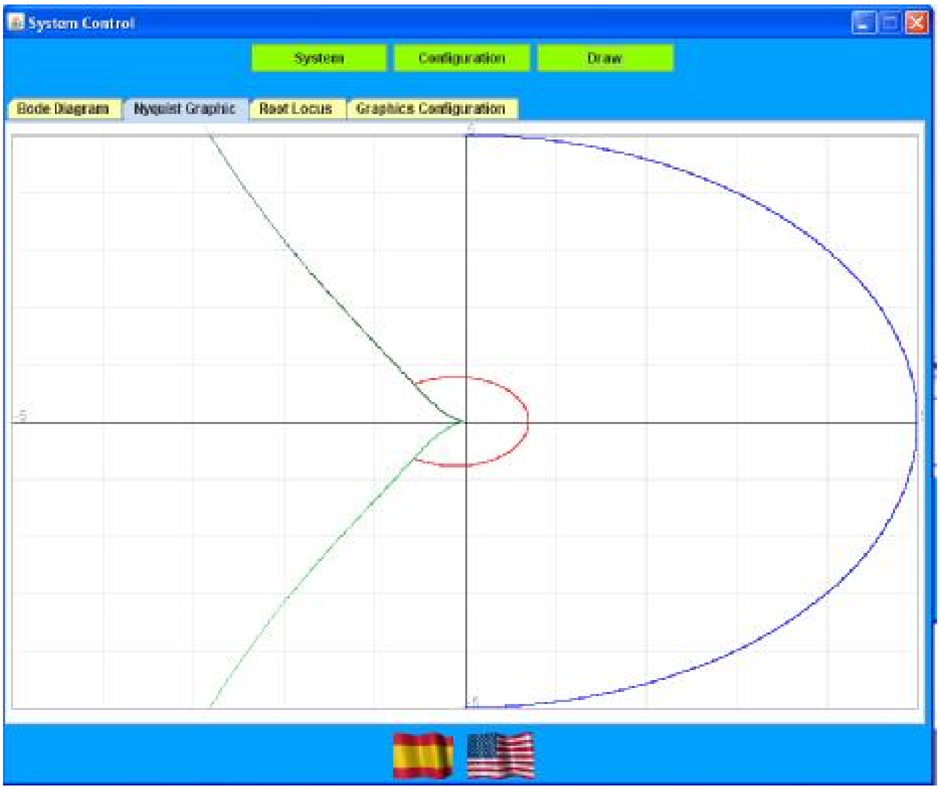
(3): If you press draw, the application draws the graph loaded/written in System configuration.

(4): Here the Bode graphs are drawn:



(5): Nyquist graphs:



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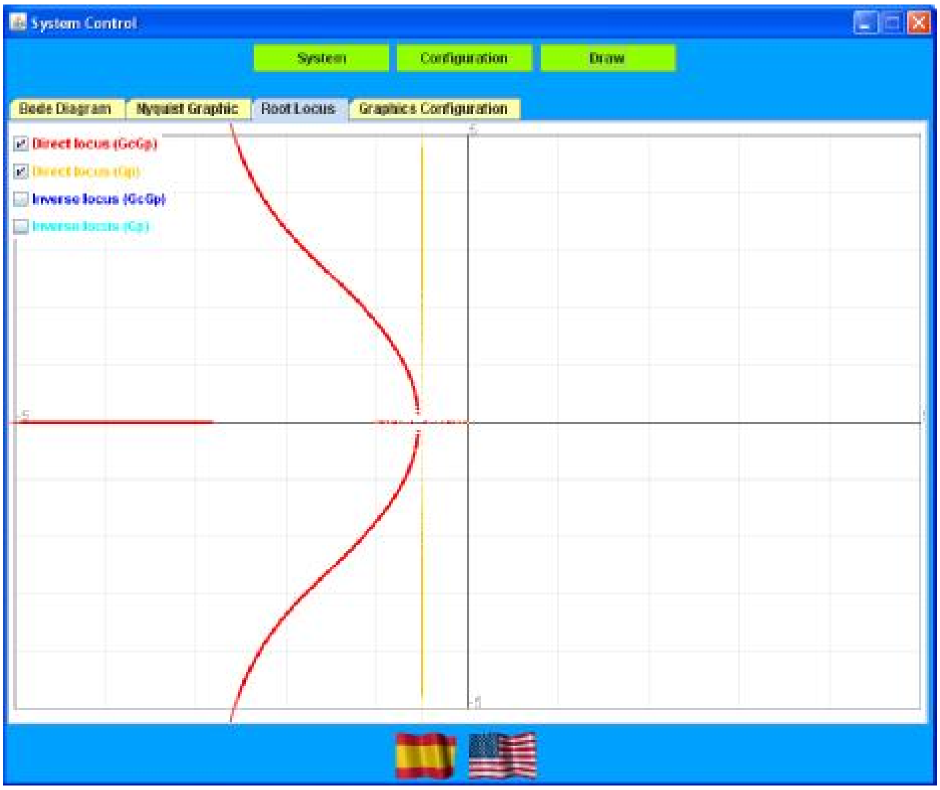
(6): Root locus:



(7): Here you can change the margins of the graph, its color, and you can even choose the highest K value the application should reach when drawing the root locus.

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Systems Control. (Primitive version).

This application is not perfect, the Bode graphs are drawn almost perfectly, and the root locus is truly well simulated, but, on the other hand, Nyquist graphs are only useful to see whether the graphic made by the user is correct or not, since it doesn't draw the graph orientation.

Apart from that, I have discovered some bugs (and I have fixed them) but there may be some others I haven't detected yet.

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