**Task Report**

***State-Space Analysis and Control System Design***

**Fall 2023**

**CSE-310L Control Systems**

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Class Section: **B**

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## Tasks:

First we check the stability of a system.

After checking the stability we knew that the system is unstable.

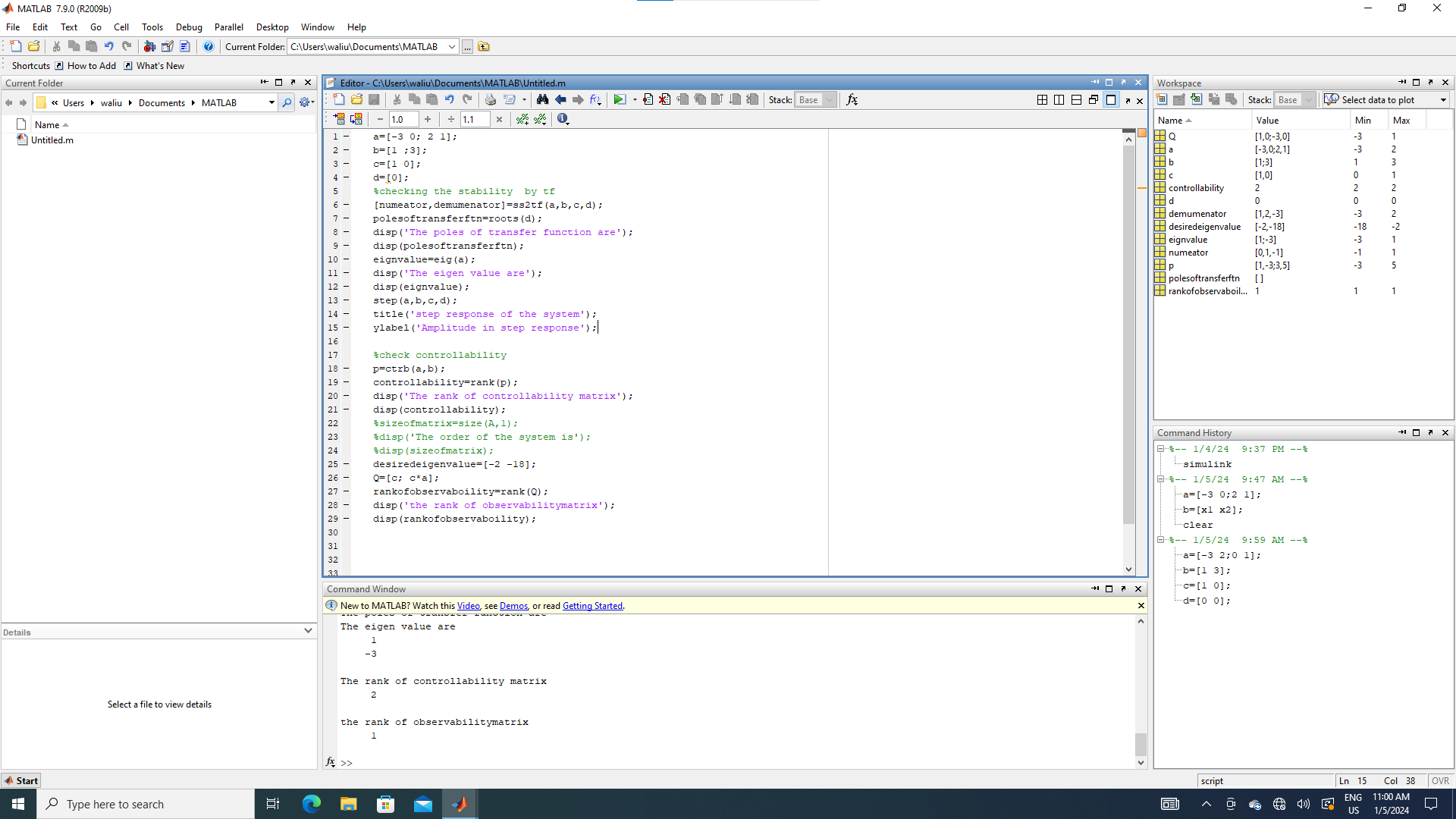
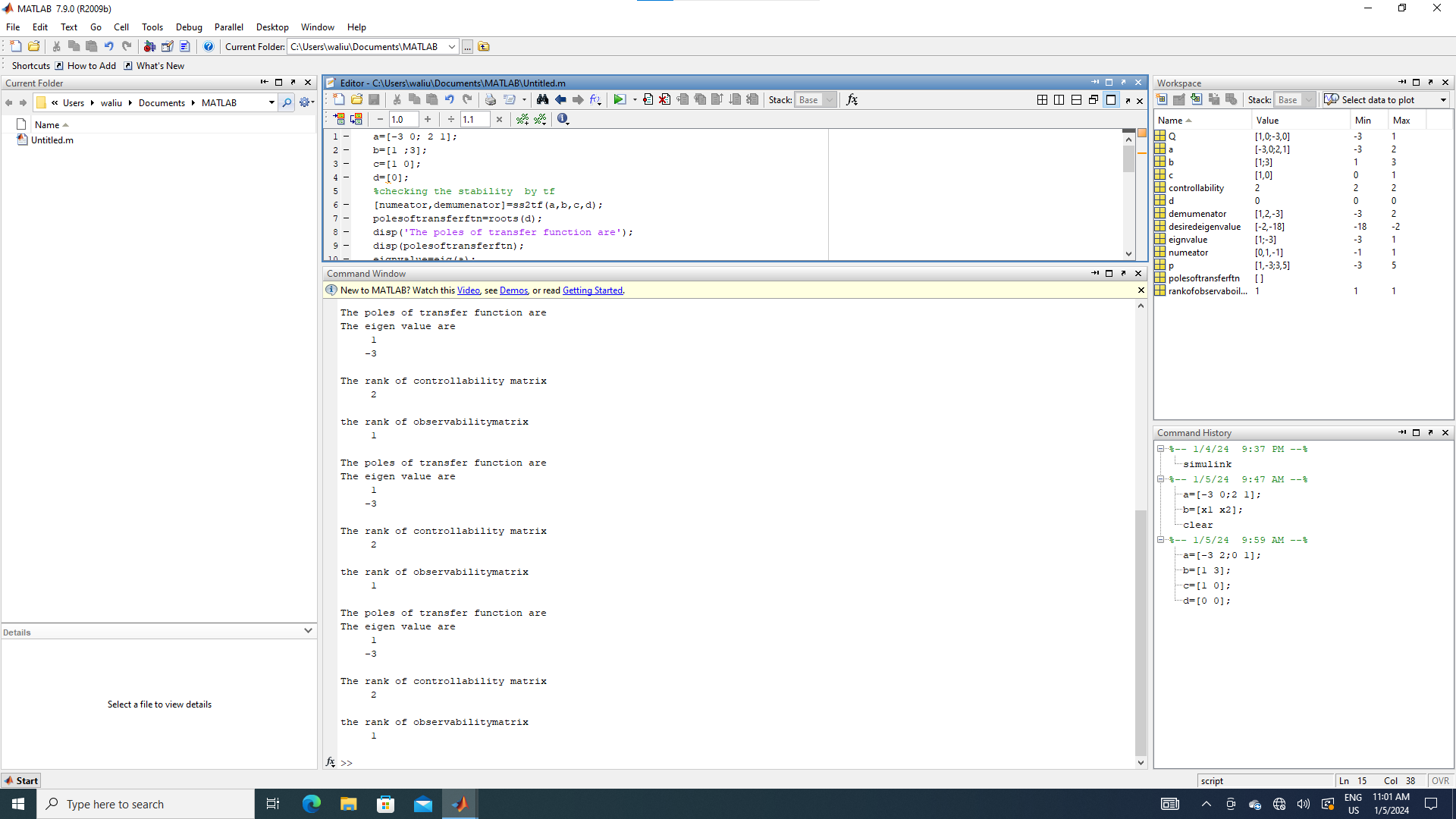


Figure : task1

Output



**Reason :**

So we cannot design controller in this case because rank of matrix A is not equal to rank of Matrix Q

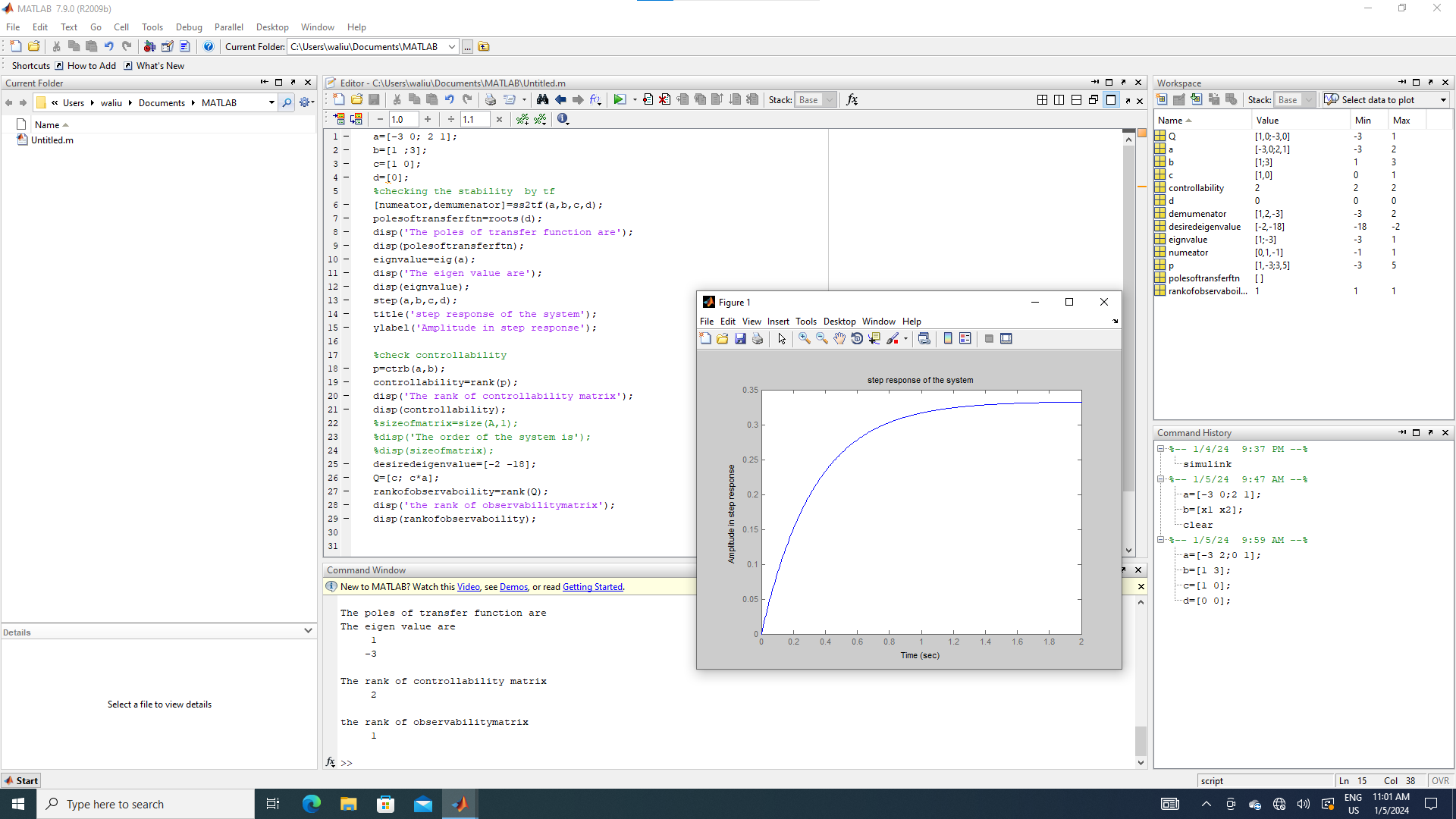


Figure : workspace output