

The objective of the FOSS Control System Toolbox project is to enhance the existing Scilab Control Systems (Computer Aided Control Systems Design) toolbox. Apart from Control Systems concepts, this test will help us evaluate your coding and testing skills.

**Coding:**

Use Scilab to implement any 2 of the following:

1. Random binary sequence generator
2. Padé approximation of models with time delays
3. Conversion of a 1 DOF controller to a 2 DOF controller

**Testing:** For the coding test above, you would have implemented 2 functions using Scilab. Next, write 3 test cases for any 1 of these 2 functions and explain the results.

**Code and report submission:**

1. Discuss the algorithms, program flow and test cases briefly in a report. The report should not be more than 3 pages.
2. Please upload your codes (.sce and .sci files) and report (.pdf) through a bitbucket account and share it with inderpreetarora. Your repository must be private.
3. Once you do so, fill up and submit your details through this google form:

<https://goo.gl/forms/pxhpA8IgL8JDZxOs1>

**References:** You may use any material available online or offline. However, please cite all the references in your report. Some references:

<http://www.scilab.org/>

<http://scilab.in/>

<http://spoken-tutorial.org/>

<http://in.mathworks.com/help/control/functionlist.html>

<http://in.mathworks.com/help/ident/ref/idinput.html>

**Note:**

1. You may want to give suitable names to your files and mention them in your report.
2. In case you have any questions, please get in touch with us only through FOSSEE forum.