Lab assignment 11

For the following exercises, use standard Scilab functions wherever possible.

1. Startup exercises in Scilab:
    1. Declare two 5x5 matrices A and B. Compute their sum and product.
    2. Create a new matrix 2x2 C which has its values the elements A(2:3,3:4).
    3. Compute the determinant of A and B.
    4. Compute the LU decomposition of A and B.
2. Plot the functions y=x, y = x^2, y = x^5, for the range x = (-50,20). Plot all the functions in the same graph, each using a different colour.
3. Define the polynomial x^2+10x+25. Find its roots. Plot the polynomial.
4. Create a uniformly distributed random vector of size 10,000. Plot its histogram. Repeat for a normally distributed random vector.

References:

- Scilab documentation: https://www.scilab.org/resources/documentation
- http://www.scilab.in/files/workshops/13-09-2010-bangalore/madhu-RV.pdf
- https://p2pu.org/he/groups/getting-started-with-scilab/content/syllabus-for-getting-started-with-scilab/