(updated:May 16, 2019) We work on Matrix and Array operations for this lab.

1. For matrix operations, the operators +, -, *, and^are interpreted in matrix sense.
   - Type in `A=[1 2 3;4 5 6; 7 8 9]`, and `I = eye(3)`, see what you get with `A-3*I`
   - Compute A^2 with `Asq = A^2`
   - Let `b = [0;1;-1]` and `B=[0;1;-1;0]`. Type in `Ab = A * b`, and `AB = A * B` respectively. Copy and paste what you get.
   - This problem studies two types of transpose of matrices. Let `c = [1 i 3*i-2]`, type in `ct = transpose(c)` and `cp = c'`. Compare the results, copy and paste them here.
   - Make two random square matrices `D, E` of the same dimension, then compute `diff = D*E'-(E*D')'`. List the matrix computation rule that is justified by your code.
   - The backslash \, is used to solve linear systems of equations. Type in `x = A\b`, copy and paste your reults here. Then type in `res = b-A*x`, copy and paste your result.
2. In this problem, we study array operations. pg 20, Section 2.4.
   - Compute a Bessel function of the second kind
   - Test the primality of 482023487
   - Plot a vector field (Note: do not copy and paste examples you find online, but make your own based on the examples.)
   - Report current date and time
3. We have made a lot of variables for this assignement. Type in `who` and paste what you see here.