PES University, Bangalore

UE18MA251- Linear Algebra (Jamuna S Murthy)

Session: Jan 2020 – May 2020

Scilab Assignment 2

1. Write a Sci-lab Program to span Column Space of any 3*3 matrix given as user input using input() function.

   Procedure: Given a matrix A, we reduce it to an upper triangular form using Gaussian Elimination. The columns that contain the pivots span the column space of A.

2. Write a Sci-lab Program to find Four Fundamental Subspaces for any 3*3 matrix given as user input using input() function.

   Procedure: Given a matrix A, we reduce it to row reduced form and find its rank by identifying the columns that contain the pivots. We then find the four fundamental subspaces viz, the column space C(A), the row space C(AT), the null space N(A) and the left null space N(AT).