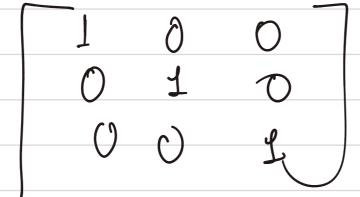
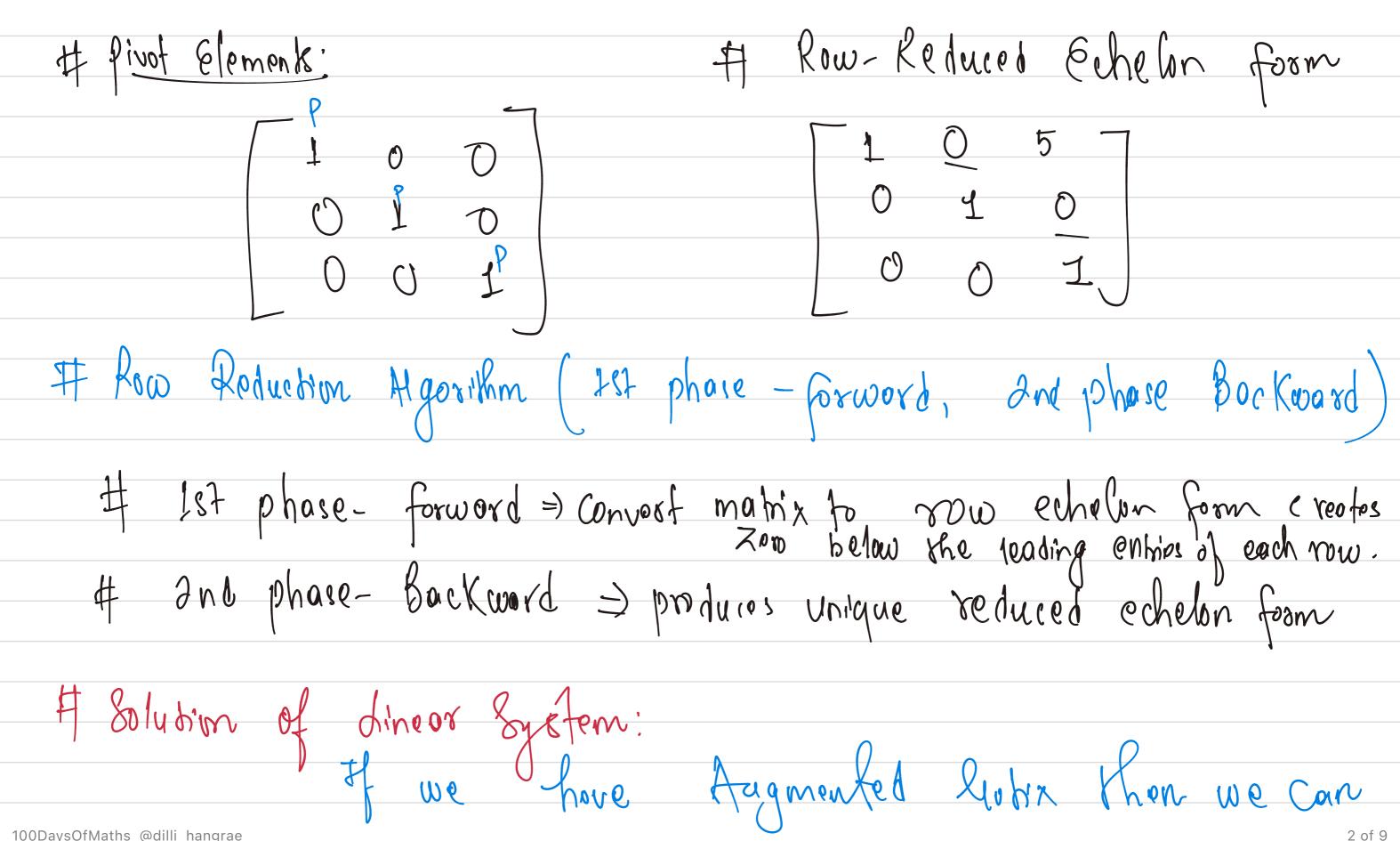
Doy-32, Dec-20, 2024 (Poveh 5, 2081 BS)

Echelon 1/10thix:



H Row-Euhelm form:

Row-Roluiel Erhelon form



0 SEOC'ated $\chi_2 + \chi_3 = 4$ Honco, general solution is.

thoosom: baistonce and Uniquenoss Thoosom. A direor system is consistent if ond only if on echelm form Of Augmented liohix has no now of the form to o b] with b \$0. If the system is consistent then the solution set contains either unique solution when there is no free variable or infinitely mong slutions when there is at least one free variable. Soluh'me Example: 2+4=5 and 2+y=3

0 2 Which 8 hows System 13 in consistence dust now belause Consistence because the Lost Row is not form of [006] Whore b to pand & one basic variable but no variables so has earsetly me solubination 400

Promple: I ne sow in echelm from of on augmented matrix
1°5 [0 0 0 5] then the associated dinear system is Inconsistent Given that on Augmented motive has a row of the form [0005], so the oussoulated equ. 0.21 + 0.22 + 0.23 = 5 0.000 = 5This is not possible this mans hos no solution.

Vector Egyptions: The position of notation plags a vital role as it can offsel the solution so the idea of vector is useful in the Study of dinear System. Vectors in R Rowt Column Vector: A matrix with only one Column is called a Column vertor R = [x112 . - - xn]

Equal Vectors entres are equal. Otherwise, the vectors are not comospording Ednos. R1 = [3] "R2 = [4] per k, and B2 One equal vectors.

R2 = [2 3] R2 = [2 3 5] Not Equal vectors. od Som of Obresponding entries of the vectors $u = \begin{bmatrix} u_1 \\ u_2 \end{bmatrix} = \begin{bmatrix} v_1 \\ v_2 \end{bmatrix}$

Scalor Multiple of Vector

If $u = [u_1]$ in R and C be scalar hen the multiplication of u by C is devoted by a and is defined