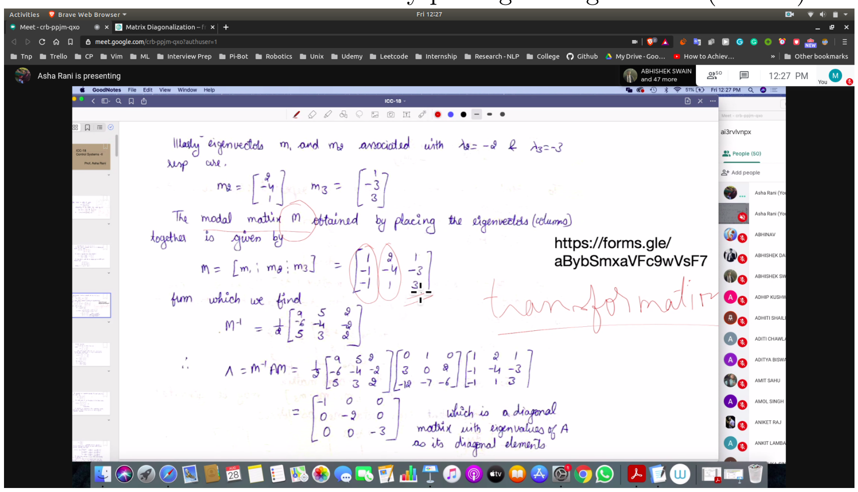
Diagnolization of the matrix

- We want to obtain the trans. mat (P) to diagnolize the matrix
- Find the eigen vectors of the matrix A
- then obtain the modal matrix M by placing the eigenvectors(colums)
- 

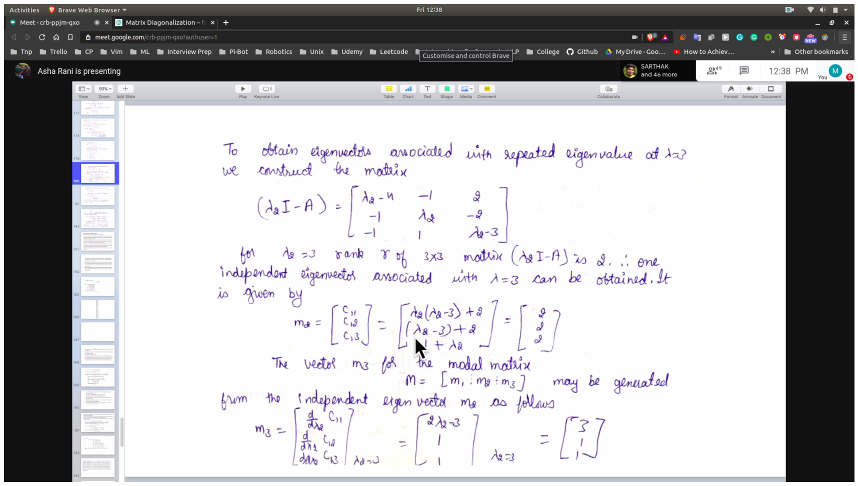
- then do P(inverse) * A * P to obtain the matrix

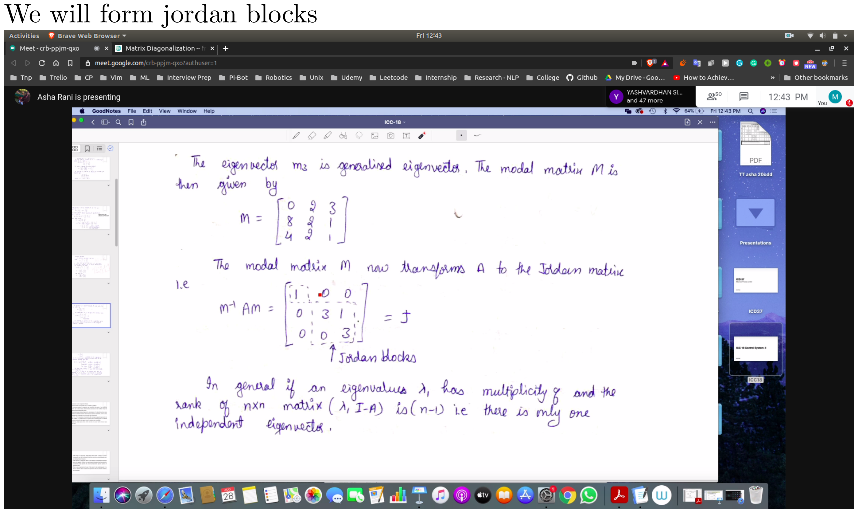
This is independent of the fact of multiplicity

`- if that comes out to be zero   - then use the second row   - if that comes out to be zero   - then use the third row`

Case when eig vector are same

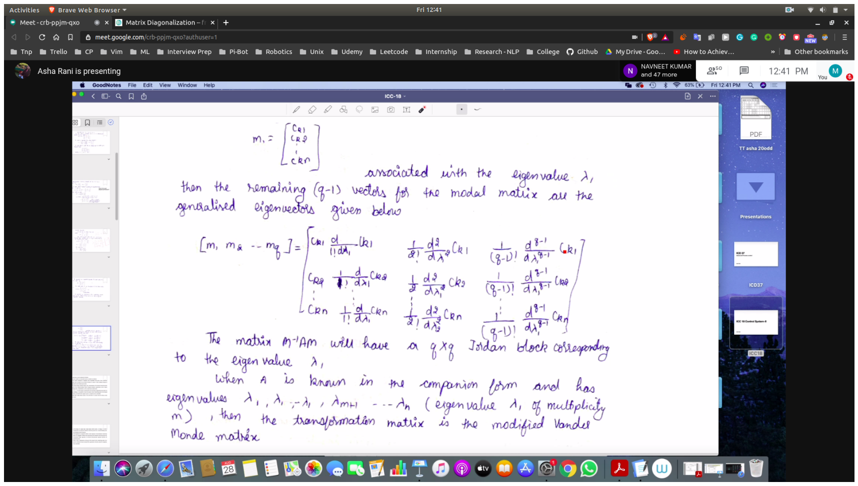
- say lambda_1 (lambda_2==lambda_3)
- find the eigen vector with lambda1
- find the eigen vector with lambda2
- Now to obtain the third eigen factors
  - differenciate the elements in co-factors matrix of 2 to get the third vector

- 

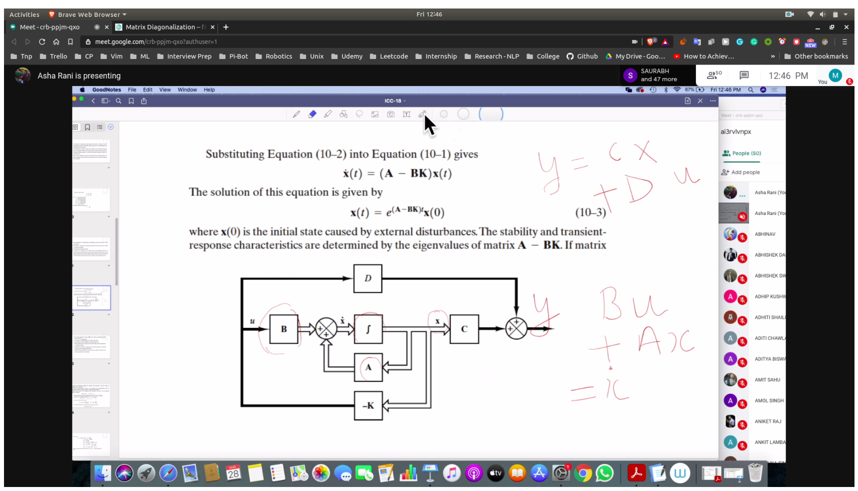
- Then put the value [lambda1 | lambda2 | lambda 3]
- We will not be able to form full diagnol
- We will form jordan blocks
- 

When multiplicity > 2

- matrix can be obtained as follows

- 

State Model Using Intergrator Circuit

- 

Pole Placement

What are poles?

- in TF put Den to zero to obtain char. eqn
- char eqn. cna be obtained using |lamda * I - A| = 0
  - A is the state space model of the function
  - Why?
  - Explained by the method using
  - siminusa

- Poles define the behaviour of the system
  - They define the dynamics of the sytem
  - like fast or slow
  - like rise time etc