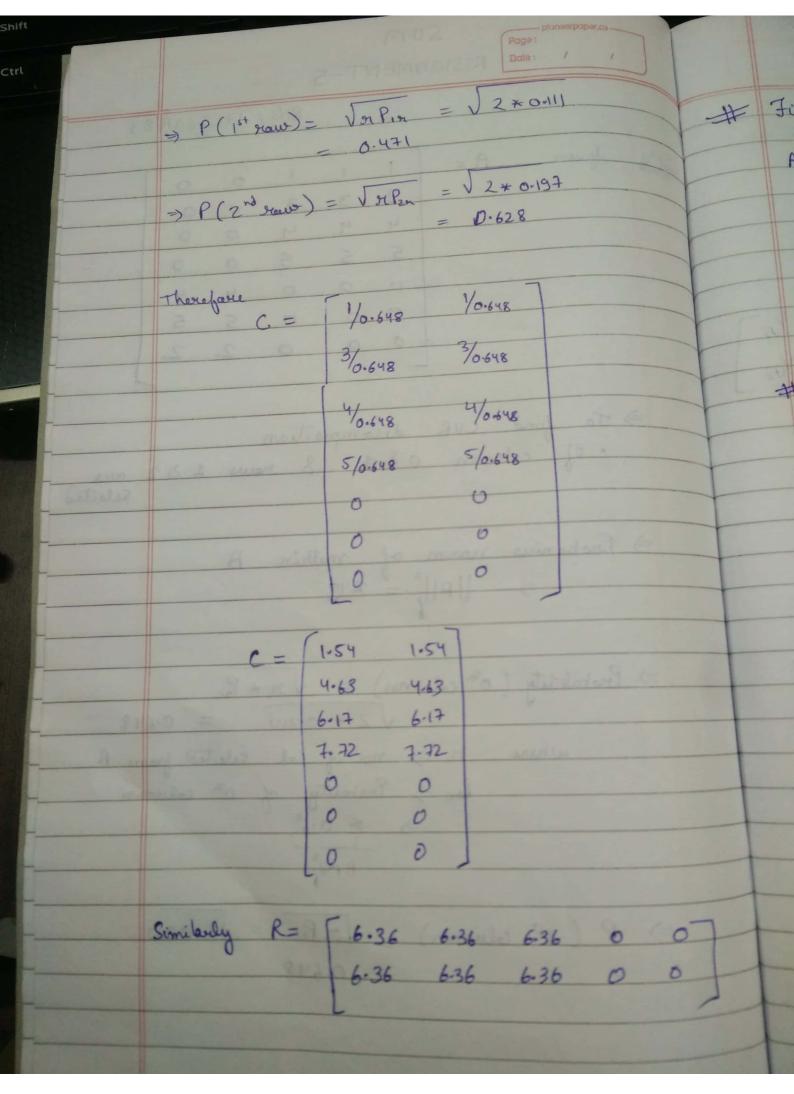
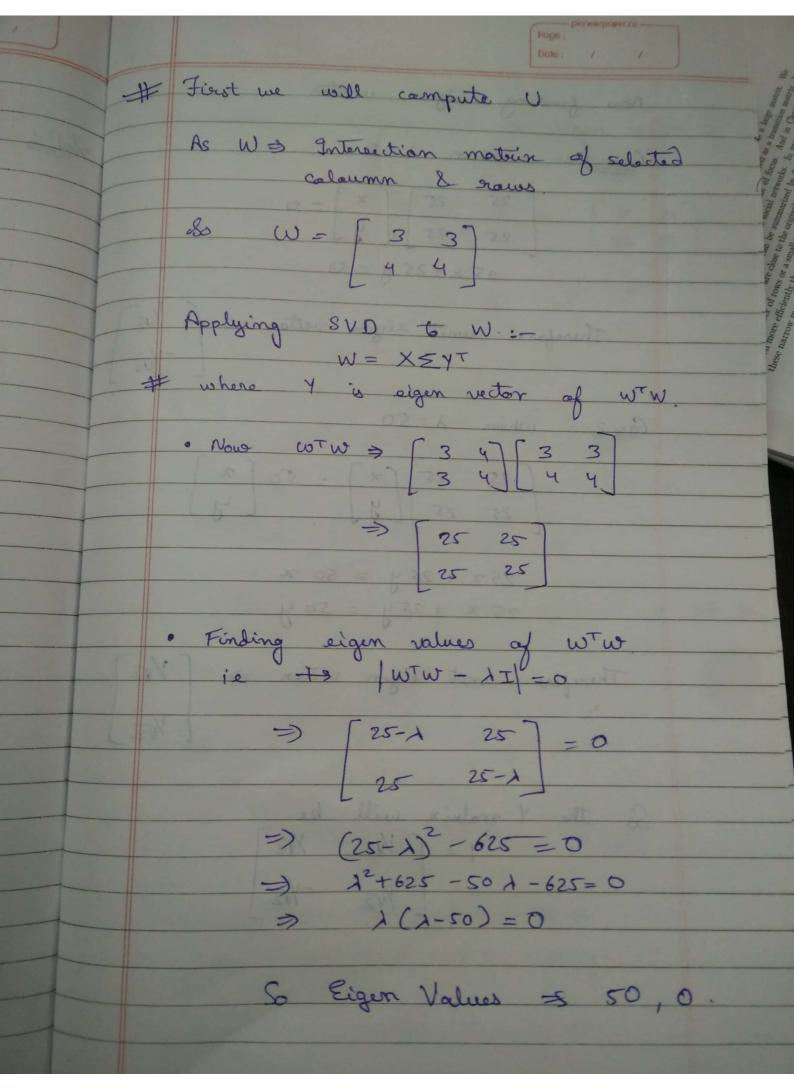
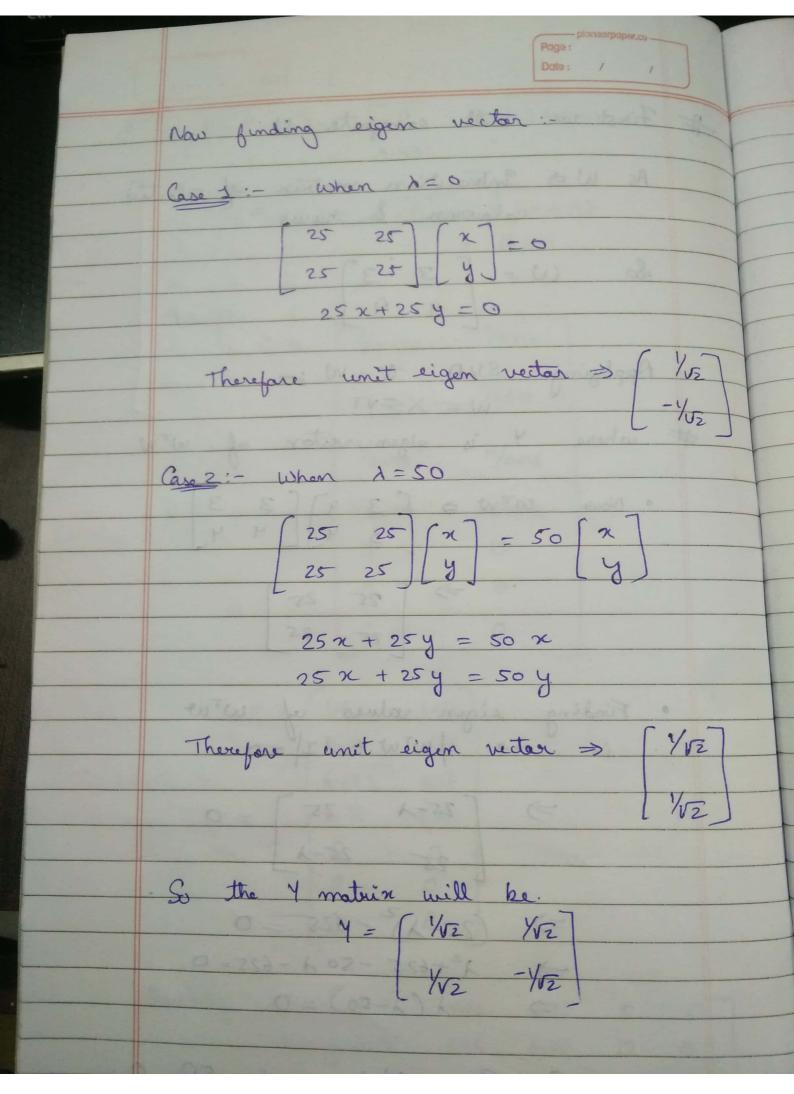


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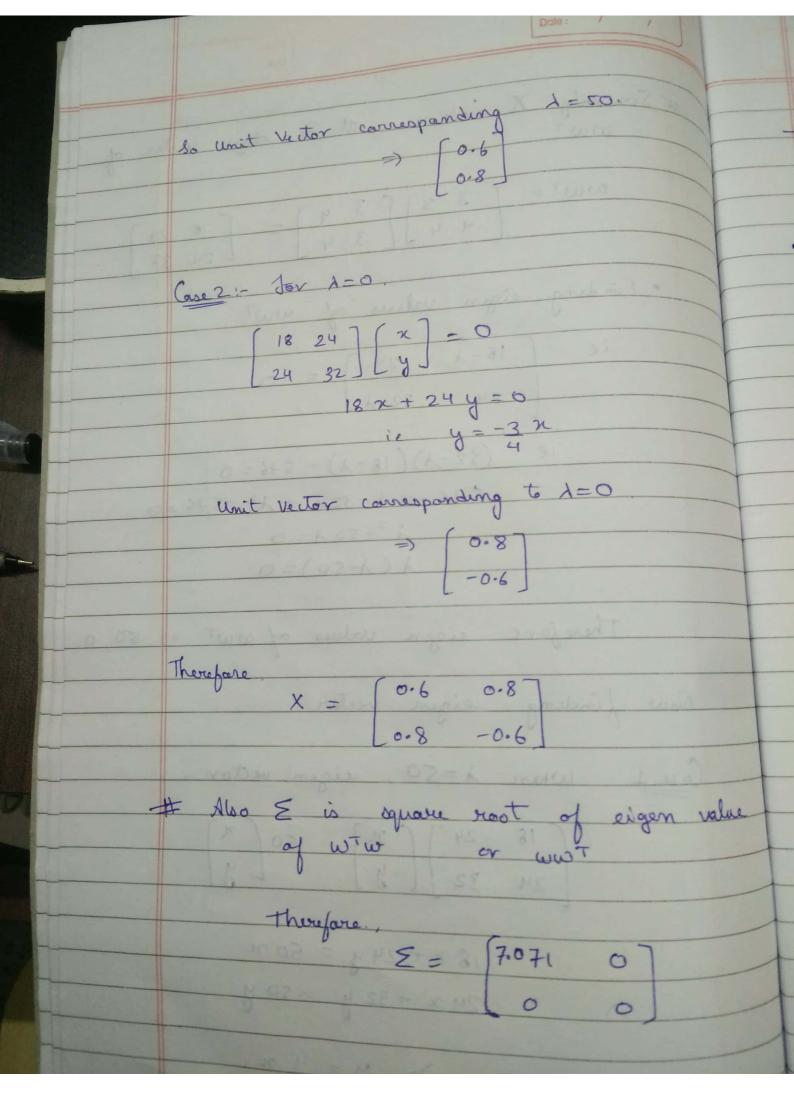
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|       | Date: / /  |
|-------|--|
|       |  |
|       | # Similarly X matrin will be eigen vector of   |
|       | $\omega \omega^{T} = \begin{bmatrix} 3 & 3 \end{bmatrix} \begin{bmatrix} 3 & 4 \\ 4 & 4 \end{bmatrix} \begin{bmatrix} 3 & 4 \\ 3 & 4 \end{bmatrix} = \begin{bmatrix} 18 & 24 \\ 24 & 32 \end{bmatrix}$ |
|       | Finding eigen values of WWT.   |
|       | 24 32-1  |
|       | ie $(32-\lambda)(18-\lambda)-576=0$<br>$576-18\lambda-32\lambda+\lambda^2-576=0$<br>$\lambda^2-50\lambda=0$<br>$\lambda(\lambda-50)=0$   |
|       | Therefore eigen values of WWT => 50,0.   |
|       | Nour jinding eigen vector:   |
| S all | Case 1:- When $\lambda = 50$ , eigen vector.   |
|       | $\begin{bmatrix} 18 & 24 \\ 24 & 32 \end{bmatrix} \begin{bmatrix} n \\ y \end{bmatrix} = 50 \begin{bmatrix} n \\ y \end{bmatrix}$  |
|       | 18x+24y=50x  |
|       | =) 24 x + 32 y = 50 y  |
|       | $\Rightarrow y = \frac{4}{3}\pi.$  |

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