ALTERNATE WAY TO FIND HQ IN DIRECT COMP.

PAPER USING SOURCE CONSTRAINTS (2D)

-> The constraints on Si can be written as

$$S_i^T B S_i = 0$$
, where $S_i = \begin{bmatrix} S_i^T S_i & -27i & -24i \end{bmatrix}$

$$B = \begin{bmatrix} 0 & 0 & 0 & -2 \\ 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 0 \\ -2 & 0 & 0 & 0 \end{bmatrix}$$

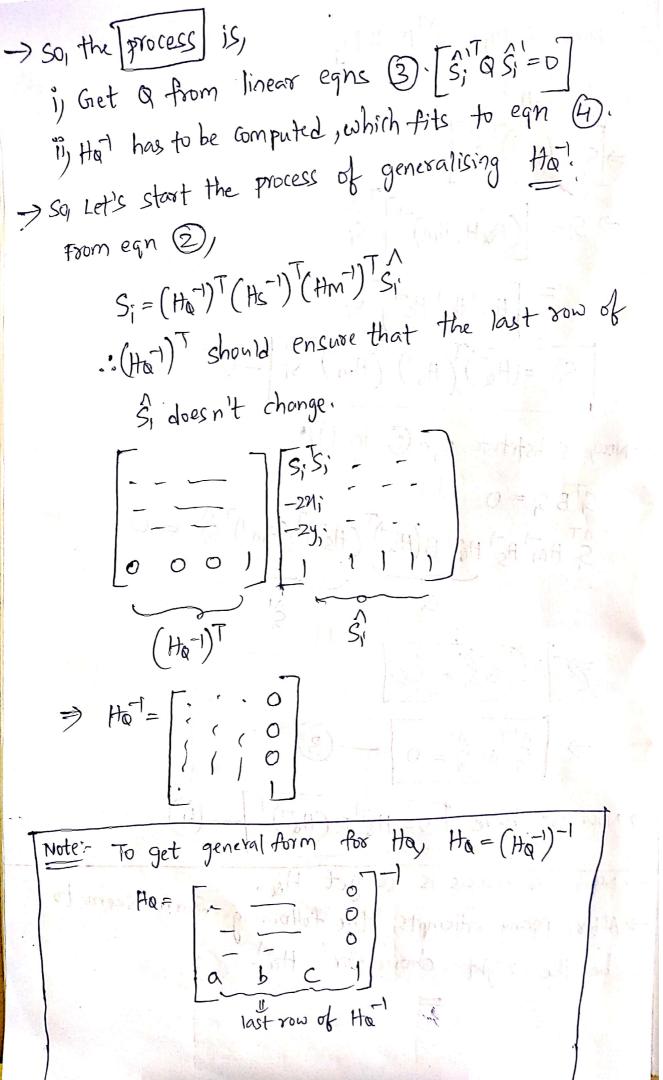
-> Justification:

$$S_{i}^{T}BS_{i} = \begin{bmatrix} S_{i}^{T}S_{i} & -2H_{i} & -2H_{i} \\ -2 & 0 & 0 & 0 \end{bmatrix} \begin{bmatrix} S_{i}^{T}S_{i}^{T} \\ -2H_{i}^{T} \\ -2 & 0 & 0 \end{bmatrix} \begin{bmatrix} S_{i}^{T}S_{i}^{T} \\ -2H_{i}^{T} \\ -2 & 0 & 0 \end{bmatrix}$$

= -25is; +47; +4y; -25is; = 4(1; +4); -45is;

-> Therefore, the sole constraints on si are:

$$\begin{bmatrix} S_i^T B S_i = 0 \end{bmatrix} - (1)$$



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$$Adj(Ha) = \begin{bmatrix} adj(A) \end{bmatrix}^{T}$$

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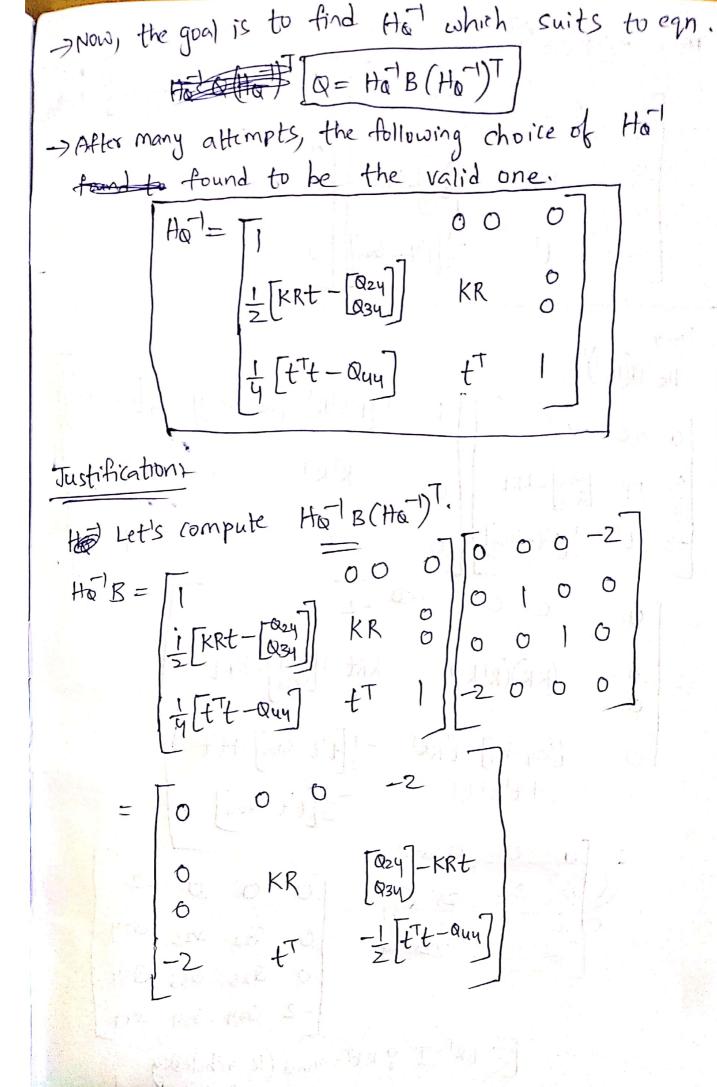
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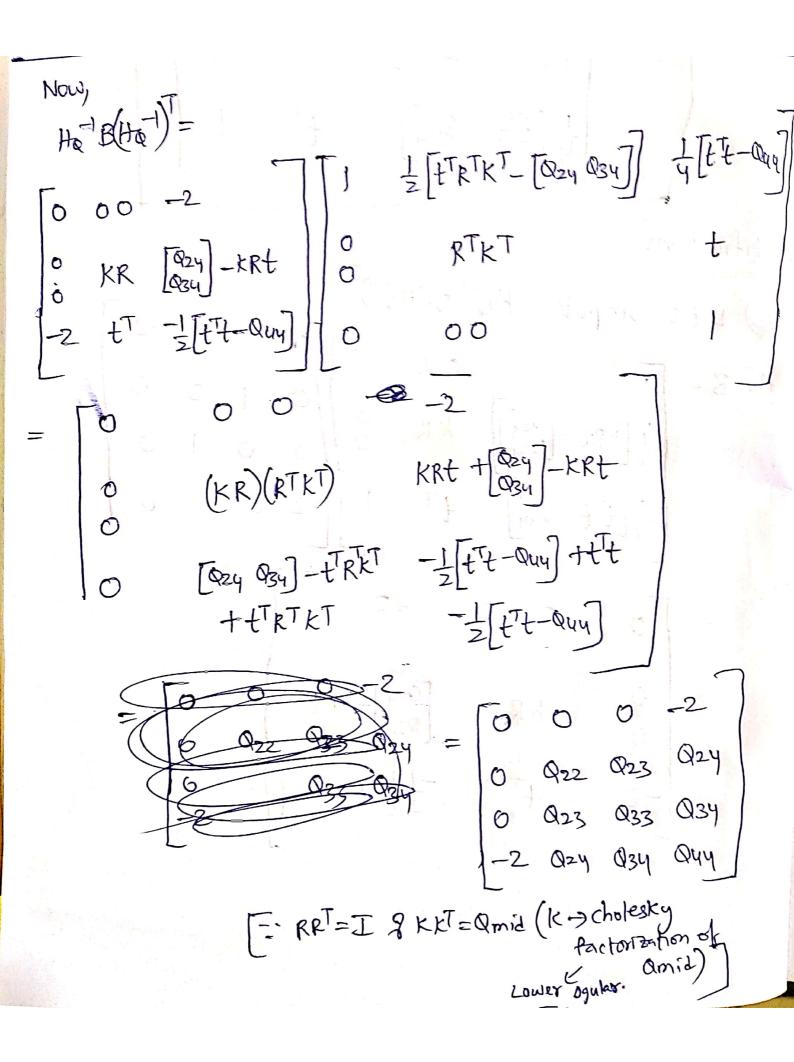
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$$Adj(Ha) = \begin{bmatrix} -1 & 0 \\$$





Now, we have have Hot, 2 linear egns S; QS; = 0.

General form

-> We compute Q.

-> We obtain K from amid, azy, azy, ay, auy

-> We also have R3 to

-> Thefore, we form Hot.

> Inverse of Ha gives us Ha.