

Circuit Theory Project

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FROM WHERE TO START

/02

we have to consider cut set that cuts only one tree branch at a time.

consider node 2 to be grounded because it is not cut by any cut set.

to give this

Fundamental cut set

$$\begin{matrix} & a & b & c & d & e & f \\ \begin{matrix} a \\ b \\ c \end{matrix} & \begin{bmatrix} 1 & 0 & 0 & 0 & 1 & -1 \\ 0 & 1 & 0 & 1 & 0 & -1 \\ 0 & 0 & 1 & -1 & 1 & 0 \end{bmatrix} & \begin{bmatrix} i_a \\ i_b \\ i_c \\ i_d \\ i_e \\ i_f \end{bmatrix} & = & \begin{bmatrix} 0 \end{bmatrix} \end{matrix}$$

Transpose gives a relation b/w node 'v' & branch 'v'.

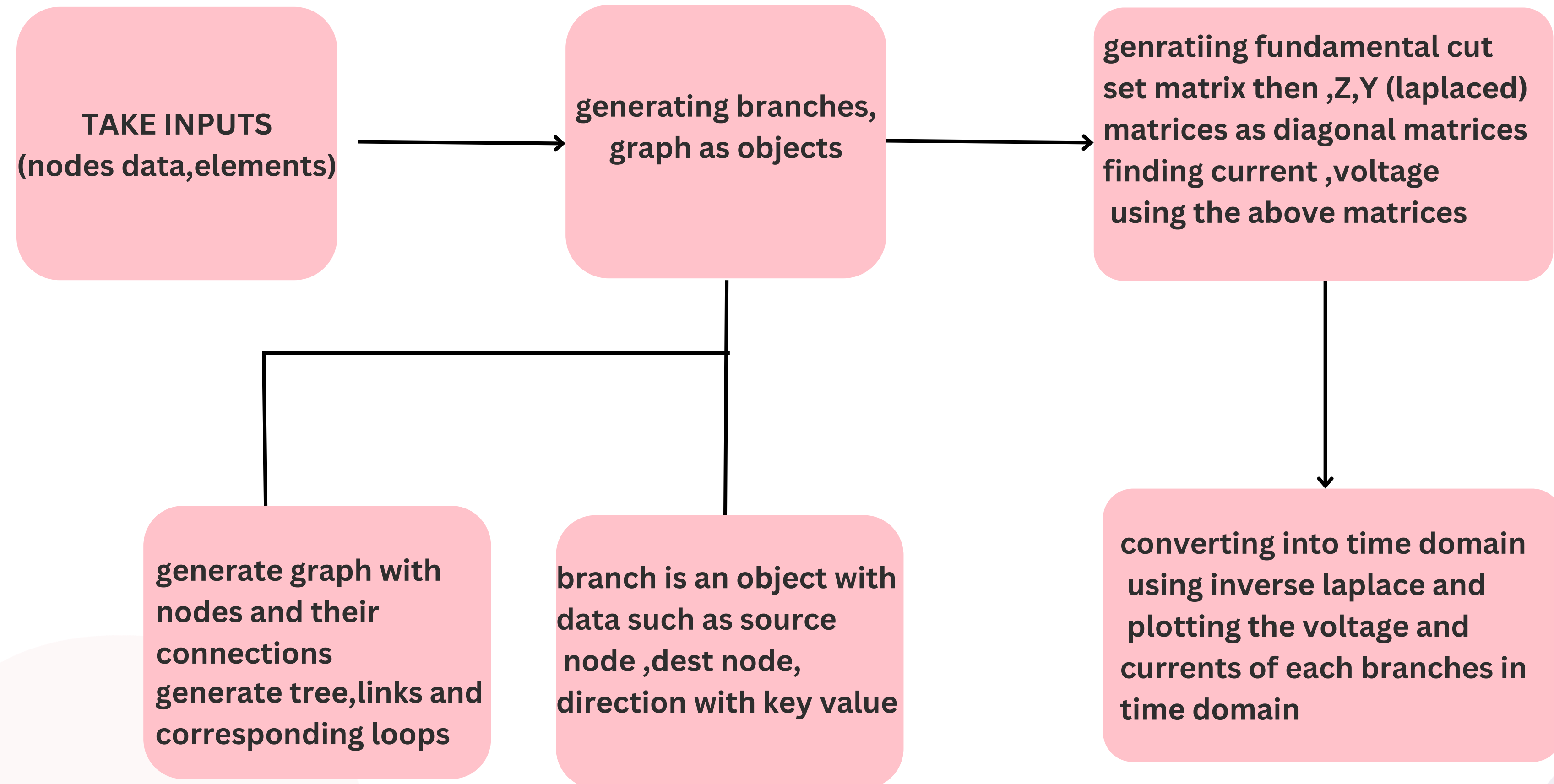
SIR NOTES

FIRST AIM>>WE NEED TO GET THE ABOVE FUNDAMENTAL CUT SET

THE STATEMENT TRANSPOSE OF CUT SET MATRIX GIVES
RELATION BETWEEN BRANCH VOLTAGE AND CURRENT
VOLTAGE IS VERY IMPORTANT

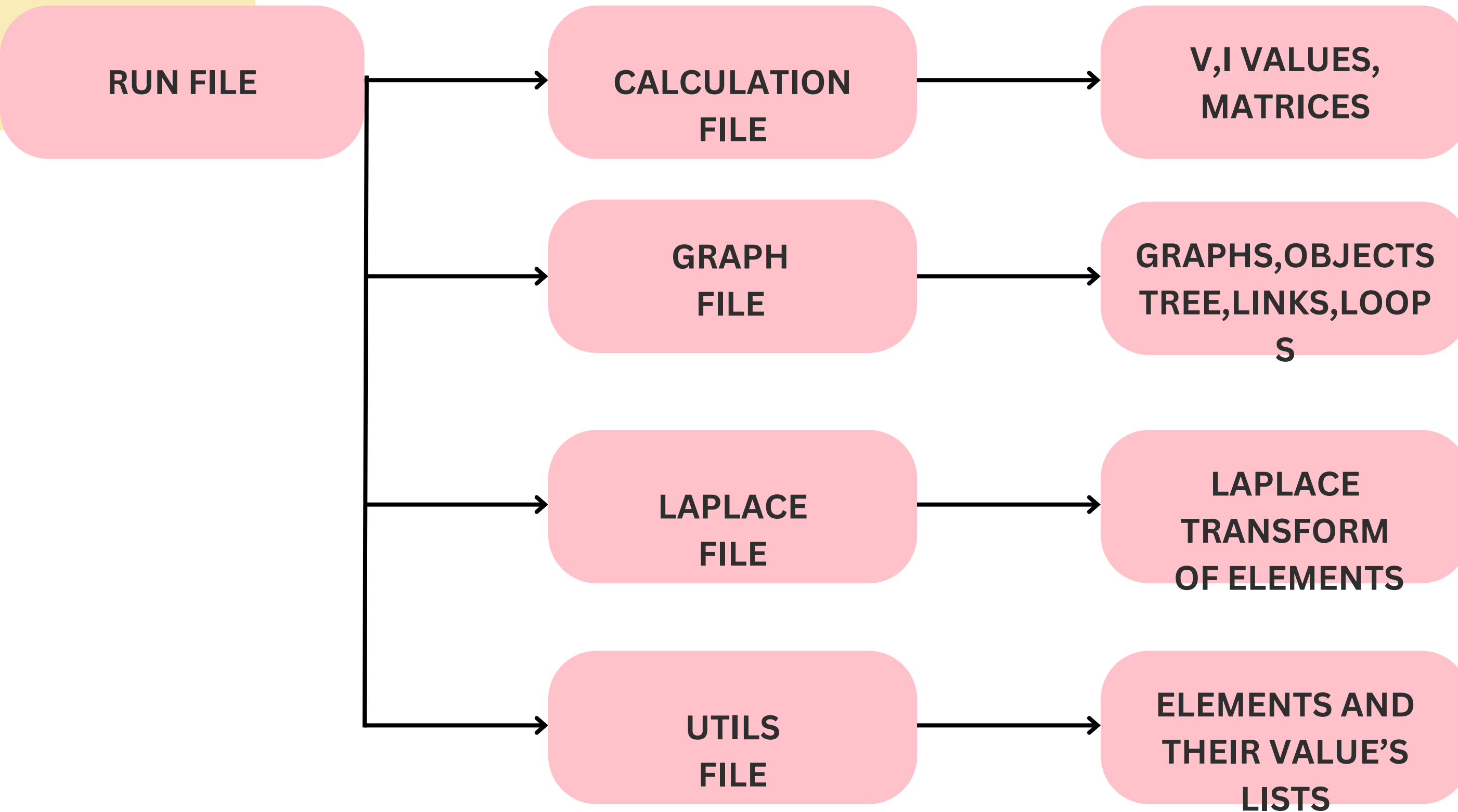
METHOD OF APPROACH

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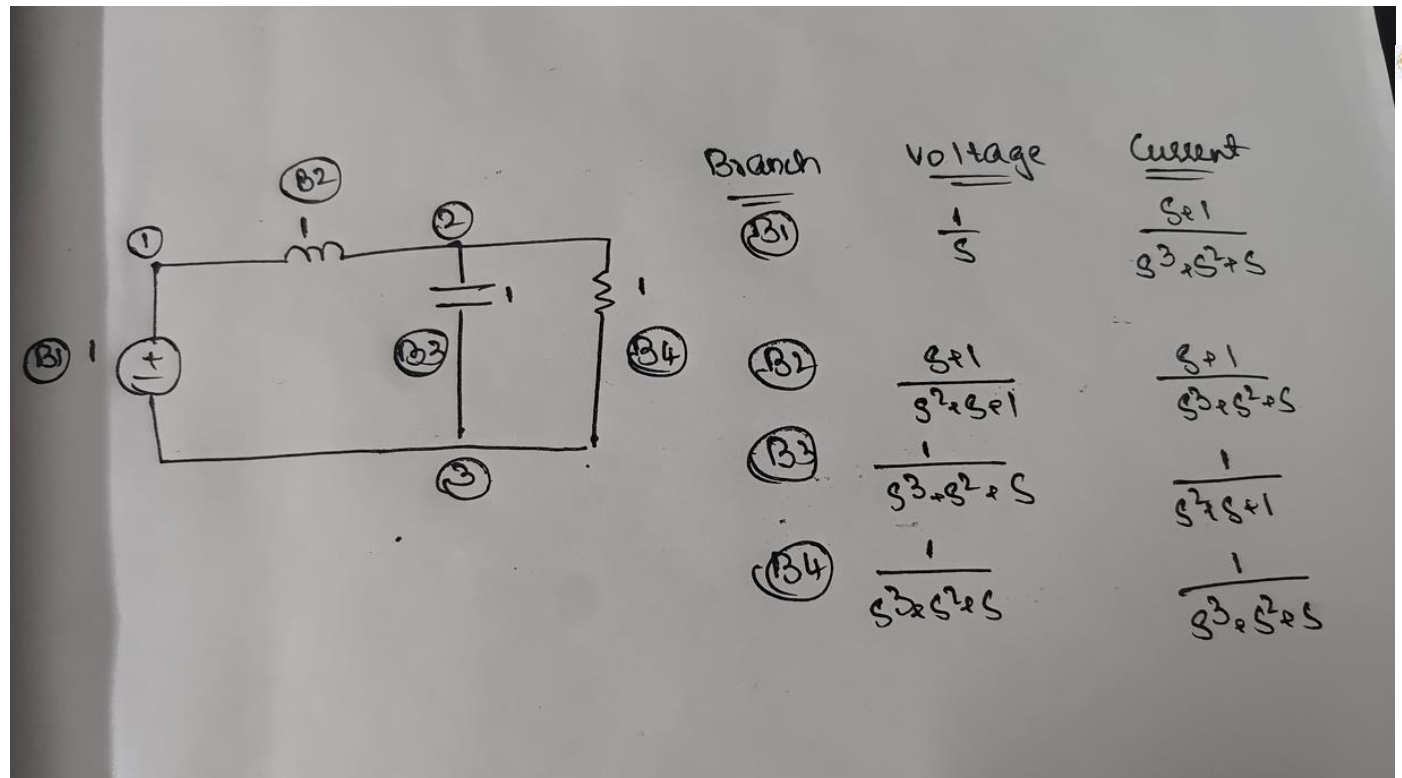
CODE EXECUTION STREAM FLOW

/04



TEST CIRCUIT

/05



1-2 : B2 → Code B-1
1-3 : B1 → Code B-2
2-3 : B3 → Code B-3
2-4 : B4 → Code B-4

