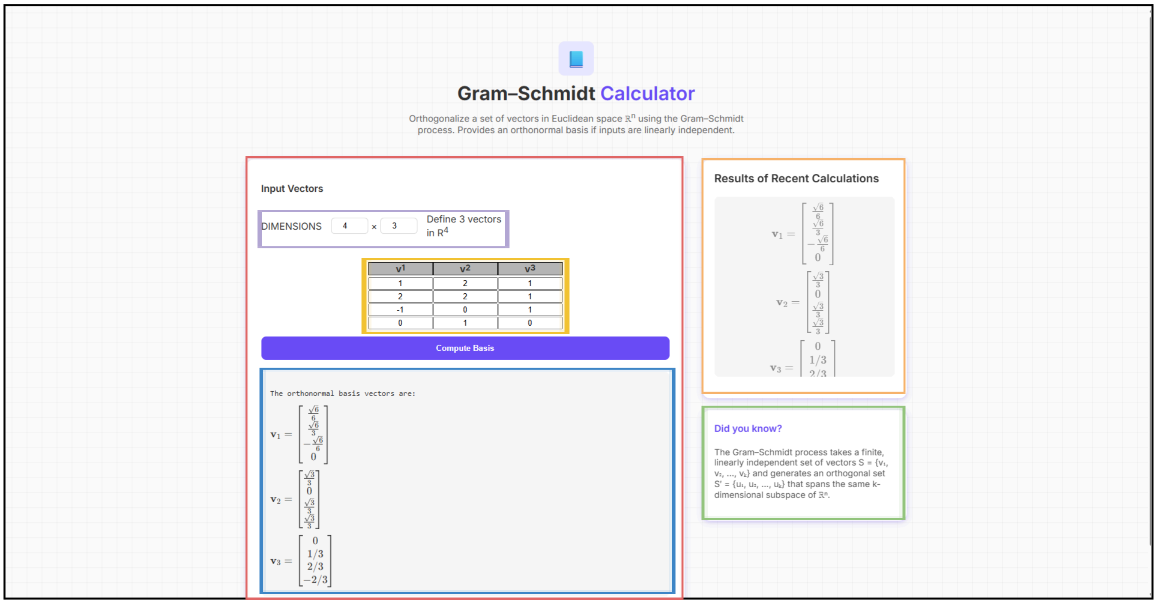
Interface Navigation

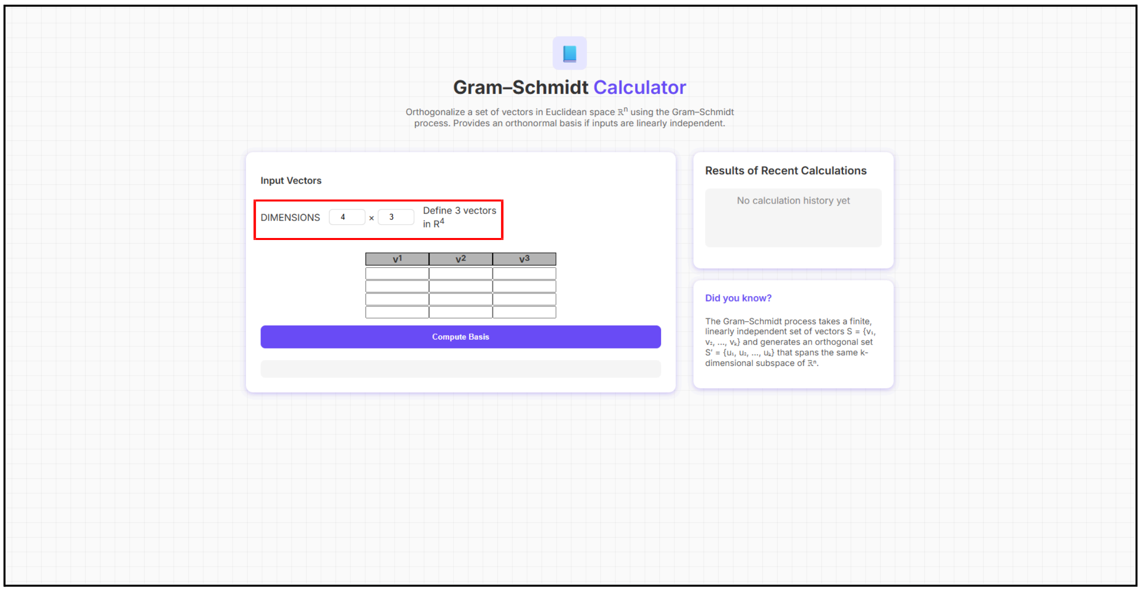


- Divided into *three primary zones*
  - **A. Input Vectors (Left side)**
    - This is the primary workspace where we put the mathematical constraints of the problem
      - **Dimensions:** n (rows) the dimension of each vector and k (columns) the number of vectors.
      - **Table:** Table where components are entered.
      - **Output:** Panel where results will appear
  - **B. Recent Calculation (Top Right Side)**
    - Recent Calculation panels keep track of your output history, which allows you to verify and double check previously entered data
  - **C. Did You Know? (Bottom Right Side)**
    - Contains definition and the mathematical theory underlying the Gram-Schmidt process.

Step-by-Step Operation:

1. Setting Dimensions

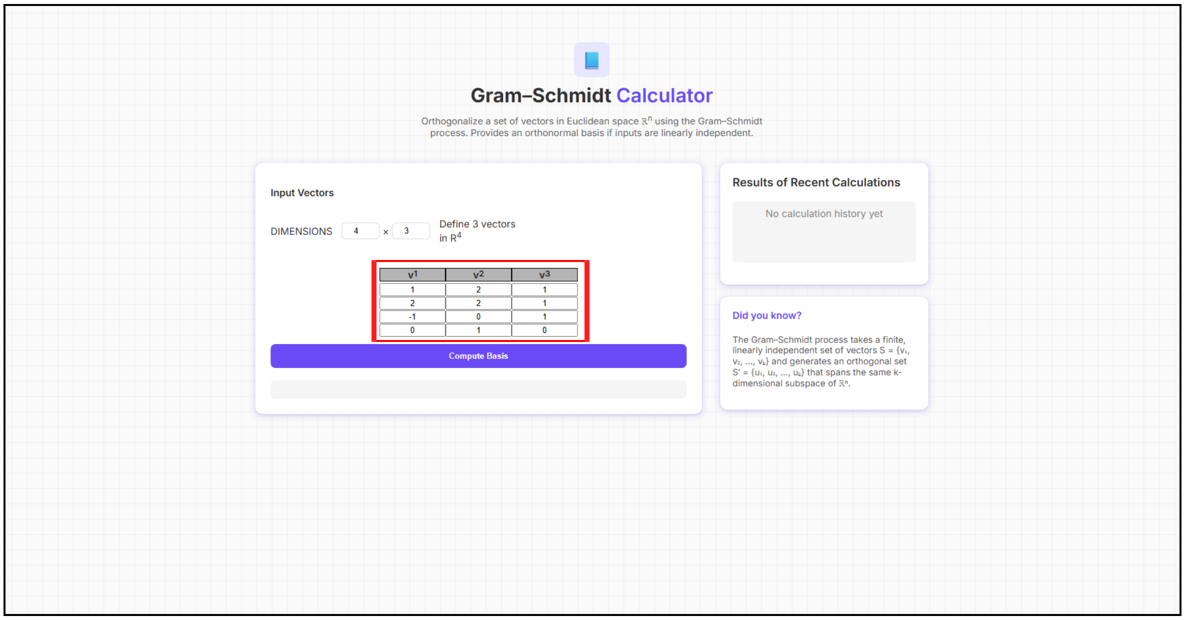
- Define the size of your vector space in the dimensions input fields.
- As the grid automatically generates. Enter the number of components per vector and the vectors you wish to input.



2. Entering Vector Data

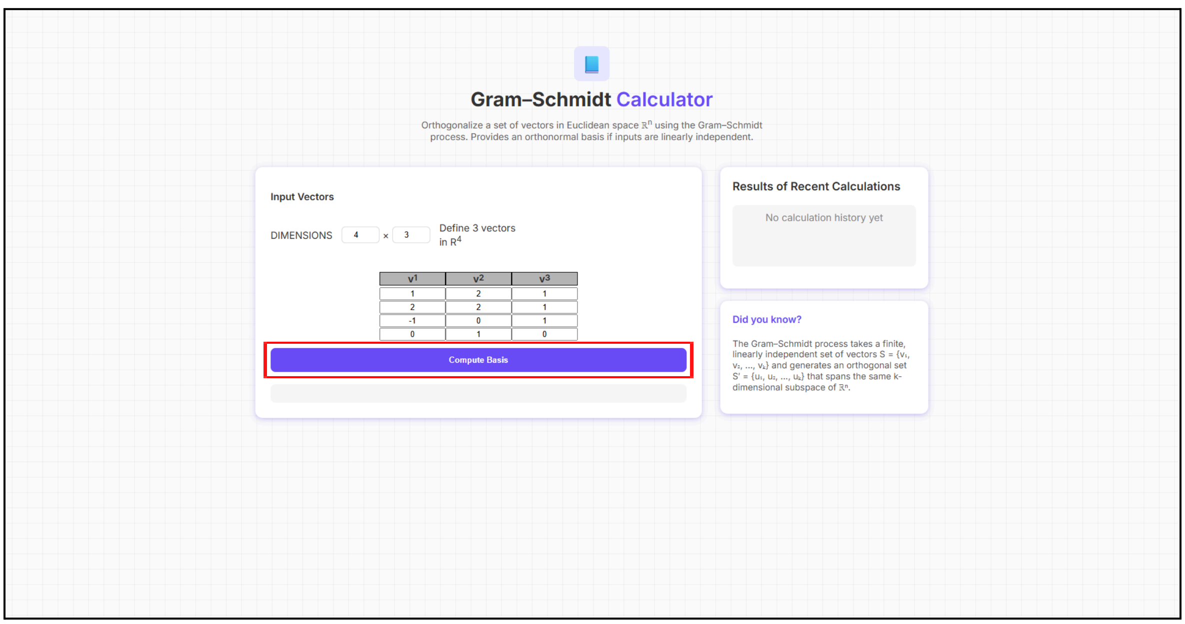
- Once the dimensions are set, you could input your vector data into the table generated
- Click into each cell under the column labels v^1, v^2, ..., v^n and type the numerical value for that vector.

  Note: A single vector is presented by a column and labeled as v^1, v^2,and so on... Ensure you are entering data vertically.



3. Computing the Basis

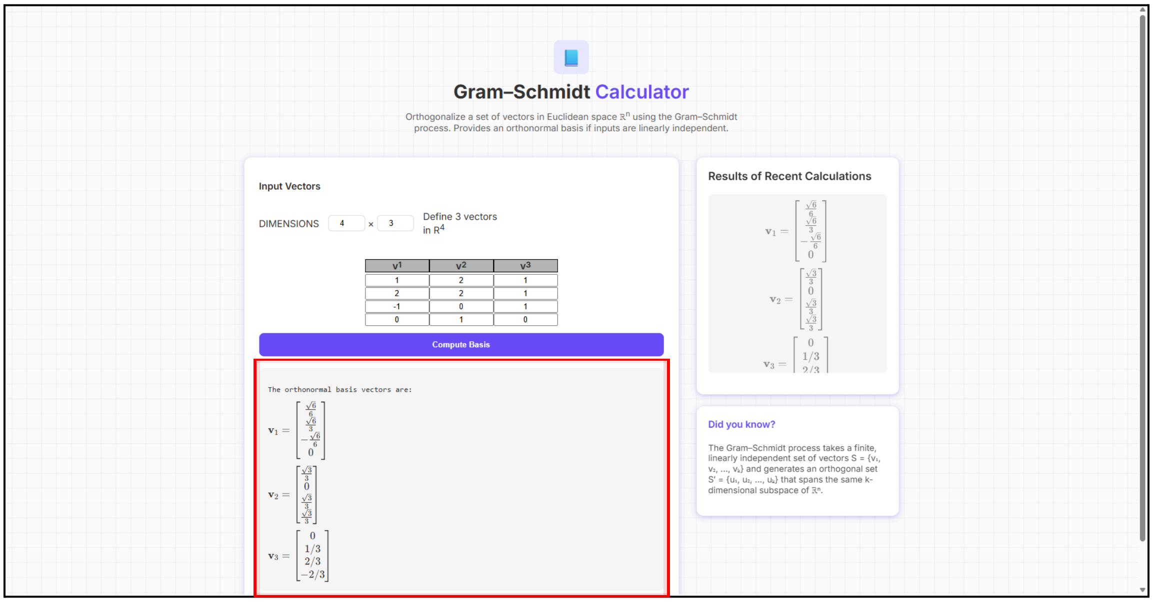
- Once all vector components are entered, click Compute Basis to start the calculation.



4. Output

- After the computation, the result will appear on the bottom of the input area and one of the following results will appear.

  Success ✅: If the vectors are linearly independent, it will display the orthonormal basis of each given vector.



  Error ⚠️: If the vectors are linearly dependent, it will display that the vectors are linearly dependent no orthonormal basis exists.