

**PROBLEM**

```

graph TD
    Start([START]) --> PowerSupply[POWER SUPPLY]
    PowerSupply --> IsItSystemWorking[Is the system working properly?]
    IsItSystemWorking -- Yes --> ReadyToGo[Ready to go out]
    IsItSystemWorking -- No --> TryAgain[Try again]
    TryAgain --> Start
    ReadyToGo --> MeasureStrength[Measuring strength system]
    MeasureStrength --> SendData[Send the data to Microcontroller]
    SendData --> IsDataValid[Is the data valid and within the range?]
    IsDataValid -- Yes --> End([End])
    IsDataValid -- No --> SendData
    SendData --> SendData
    SendData --> End
  
```

The flowchart illustrates the Design Process. It begins with a 'START' terminal, leading to a 'POWER SUPPLY' process. A decision diamond asks 'Is the system working properly?'. If 'Yes', the process continues to 'Ready to go out'. If 'No', it loops back to 'Try again', which then returns to 'START'. From 'Ready to go out', the process flows through 'Measuring strength system' and 'Send the data to Microcontroller'. Another decision diamond asks 'Is the data valid and within the range?'. If 'Yes', it leads to the final 'End' terminal. If 'No', it loops back to 'Send the data to Microcontroller'.

The diagram illustrates the mapping of a 2D array to a 1D array. The top part shows a 2D array with 4 rows and 4 columns. The bottom part shows a 1D array with 16 elements, which is a row-major traversal of the 2D array. An upward arrow indicates the mapping from the 1D array to the 2D array.

