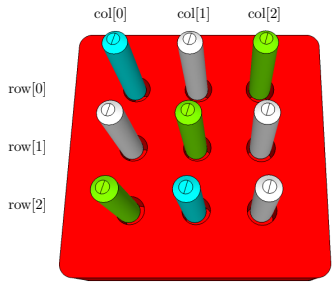
# Assignment | Array and Vector

- Consider the peg dispositions in the tray



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1 – Create a 2D array of `std::string` with 3 rows and 2 columns
2 – Initialize the array to have the following elements
   - First row: `blue, white`
   - Second row: `green, white`
   - Third row: `green, white`
3 – Create 3 `std::string` vectors (`color_vec1`, `color_vec2`, and `color_vec3`), each representing a row of pegs
4 – Read the 2D array and store values of each row in a vector
   - `color_vec1`: First row of the array
   - `color_vec2`: Second row of the array
   - `color_vec3`: Third row of the array

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5 – Prompt the user to enter the color for the missing peg using the picture of the tray
- Only 1 `cout`: The user should enter the three colors on the same line
- The user should enter: `green white blue`

6 – Appropriately insert the first, second, and third input in `color_vec1`, `color_vec2`, and `color_vec3`, respectively
- Make sure to insert these inputs at the right place in each vector

7 – Display the elements of each vector in the console ($1^{st}$ element, $2^{nd}$ element, and $3^{rd}$ element). Output should be:

```
Vector 1: blue white green
Vector 2: white green white
Vector 3: green blue white
```

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8 – Create a 2D vector (3 rows and 3 columns) of `std::string` named `color_vec_2d`

9 – Use `color_vec1`, `color_vec2`, and `color_vec3` to build `color_vec_2d`

- First row of `color_vec_2d` consists of elements of `color_vec1`
- Second row of `color_vec_2d` consists of elements of `color_vec2`
- Third row of `color_vec_2d` consists of elements of `color_vec3`

10 – Display the size of `color_vec_2d`

11 – Read and display `color_vec_2d` in the console. The output should be:

```
blue    white   green
white   green   white
green   blue    white
```