### **Question 1 [15 Points]**

Write a function named *replace\_array* that would replace each element of a 2D array with the **magic number**. The **magic number** for an index (i, j) is the maximum between the minimum element in row i and minimum element in column j.

More formally: *max (min(row i), min(col j))*

**[You are not allowed to use any built-in functions like min() or max()]**

**[Hint. You can create separate function(s) for calculating row or col min and take help from them]**

| **Sample Input:** | **Sample Output:** | **Explanation:** |
| --- | --- | --- |
| | **5** | **7** | **6** | | --- | --- | --- | | **11** | **4** | **10** | | **3** | **4** | **5** | | **10** | **4** | **11** | | **8** | **5** | **9** | | | **5** | **5** | **5** | | --- | --- | --- | | **4** | **4** | **5** | | **3** | **4** | **5** | | **4** | **4** | **5** | | **5** | **5** | **5** | | | **5** | **7** | **6** | | --- | --- | --- | | **11** | **4** | **10** | | **3** | **4** | **5** | | **10** | **4** | **11** | | **8** | **5** | **9** |   **Consider index (2, 1). The minimum of row 2 is 3, the minimum of col 1 is 4. Max(3,4)=4, so index (2, 1) will take the value of 4. The process will be the same for all the indices.** |