**Solve (Set#A)**

| **Python** | |
| --- | --- |
| def toSymLowerTri(matrix):  if len(matrix) != len(matrix[0]):  return matrix    n = len(matrix)  for i in range(n):  for j in range(i + 1, n):  matrix[j][i] += matrix[i][j]  matrix[i][j] = 0    return matrix | |
| **Java** | |
| **public static int[][] toSymLowerTri(int[][] matrix) {**  **if (matrix.length != matrix[0].length) {**  **return matrix;**  **}**    **int n = matrix.length;**  **for (int i = 0; i < n; i++) {**  **for (int j = i + 1; j < n; j++) {**  **matrix[j][i] += matrix[i][j];**  **matrix[i][j] = 0;**  **}**  **}**    **return matrix;**  **}** | |

**Rubric (Set#A)**

| **SI** | **Category** | **Marks** |
| --- | --- | --- |
| 1 | Handle non square matrix | 2 |
| 2 | Loop through the matrix above or below the diagonal | 5 |
| 3 | Add the value above the diagonal to its symmetric counterpart | 3 |
| 4 | Set the element above the diagonal to zero | 2 |
| 5 | Return the modified matrix [Not creating new matrix] | 3 |
| **Total = 15** | | |

**Solve (Set # B)**

| **Python** | |
| --- | --- |
| def toSymUpperTri(matrix):  if len(matrix) != len(matrix[0]):  return matrix    n = len(matrix)  for i in range(n):  for j in range(i + 1, n):  matrix[i][j] += matrix[j][i]  matrix[j][i] = 0    return matrix | |
| **Java** | |
| **public static int[][] toSymUpperTri(int[][] matrix) {**  **if (matrix.length != matrix[0].length) {**  **return matrix;**  **}**    **int n = matrix.length;**  **for (int i = 0; i < n; i++) {**  **for (int j = i + 1; j < n; j++) {**  **matrix[i][j] += matrix[j][i];**  **matrix[j][i] = 0;**  **}**  **}**    **return matrix;**  **}** | |

**Rubric (Set#B)**

| **SI** | **Category** | **Marks** |
| --- | --- | --- |
| 1 | Handle non square matrix | 2 |
| 2 | Loop through the matrix above or below the diagonal | 5 |
| 3 | Add the value above the diagonal to its symmetric counterpart | 3 |
| 4 | Set the element below the diagonal to zero | 2 |
| 5 | Return the modified matrix [Not creating new matrix] | 3 |
| **Total = 15** | | |