Lab 5 – Group A

1. Write a to read a one-dimensional array using runtime initialization, sort the number in ascending order and display sorted numbers.

*Hint.*

1. *initialize integer array by getting elements from user*
2. *Print original array using loop*
3. *Use nested loop to control number of passes*
   1. *first loop counts the number of passes that should be less than size.*
   2. *second loop control number of comparisons per pass.*
   3. *in second loop, compare adjacent elements and swap them if first element is greater than second element.*
4. *Output sorted array.*

*5 8 1 9 2 6*

*5 8 1 9 2 6*

*5 1 8 9 2 6*

*5 1 8 9 2 6*

*5 1 8 2 9 6*

*5 1 8 2 6 9*

*5 1 8 2 6 9*

*1 5 8 2 6 9*

*1 5 8 2 6 9*

*1 5 2 8 6 9*

*1 5 2 6 8 9*

1. Write a program to read a matrix and find the sum of all the digits in its main diagonal.

|  |  |  |
| --- | --- | --- |
| **5** | 6 | 9 |
| 2 | **5** | 9 |
| 2 | 3 | **4** |

5 + 5 + 4 = 14