Kelompok 5:

* Feri Andrika – 32200007
* Lorne Jovan Rustiadi – 32200034
* Janice Claresta Lingga – 32200041
* Andrew Virya Victorio – 32200091

**Tugas 1:**

* **Bubble Sort**

def opt\_bubble\_sort(arr, size):

    size = len(arr)

    for i in range(size - 1):

        isSorted = 0

        for j in range(size - i - 1):

            if arr[j] > arr[j+1]:

                arr[j], arr[j+1] = arr[j+1], arr[j]

                isSorted = 1

        if isSorted == 0:

            break

def print\_arr(arr, size):

    size = len(arr)

    print('Sorted array: ', end=' ')

    for i in range(size):

        print(arr[i], end=', ')

def main():

*# arr = [5, 9, 1, 3, 7, 2, 4, 8, 6, -1, 0, -100, -99, 88, 30]*

    arr = ['lemon tea', 'asian green', 'mojito']

    opt\_bubble\_sort(arr, len(arr))

    print\_arr(arr, len(arr))

main()



* **Insertion Sort**

def insertion\_sort(arr, size):

    for i in range(size):

        temp = arr[i]

        hole = i

        while hole > 0 and arr[hole-1] > temp:

            arr[hole] = arr[hole-1]

            hole -= 1

        arr[hole] = temp

def print\_arr(arr, size):

    size = len(arr)

    print('Sorted array: ', end=' ')

    for i in range(size):

        print(arr[i], end=', ')

def main():

*# arr = [5, 9, 1, 3, 7, 2, 4, 8, 6, -1, 0, -100, -99, 88, 30]*

    arr = ['lemon tea', 'asian green', 'mojito']

    size = len(arr)

    insertion\_sort(arr, size)

    print\_arr(arr, size)

main()