Homework 1

1. Please join the Google Classroom for this class at
    https://classroom.google.com/c/NzE5NDg4MzQ3MzMz

2. You can access the template for this homework at:
    https://colab.research.google.com/drive/1E6g-Ld60I1kzMfebQeCXjlo0AwpVjqEi?usp=sharing

3. This week, we discussed the workings of Linear Search, and Binary Search, and their
    time complexity. For homework, please use the pseudocode discussed in class to write
    a Python function that implements the binary search algorithm for a sorted array.

```
my_Binary_Search(array, target):
{
    low = first_index
    high = high_index
    WHILE (low <= high)
    {
        middle = floor((low + high) / 2)
        if(target = array[middle])
            return middle      #found!!
        else if(target < array[middle])
           high = middle - 1  #reset high to search lowe half
        else
            low = middle + 1   #reset low to search upper half
    }
    return -1
}
```

HW Policy:
As mentioned in class there are plenty of sites on the internet (including generative AI tools)
with descriptions of the algorithms, and in many cases, the solutions to this problem. To
maximize learning, feel free to use resources to review the material discussed in class, but
attempt to write the code on your own. The exercises will strengthen your understanding of the
material, and Python in general.