Practice 02:

Implementation of Binary Search in Python

Code:

**def** binarySearch(arr, l, r, x):

**while** l <**=** r:

        mid **=** l **+** (r **-** l) **//** 2

        # Check if x is present at mid

**if** arr[mid] **==** x:

**return** mid

        # If x is greater, ignore left half

**elif** arr[mid] < x:

            l **=** mid **+** 1

        # If x is smaller, ignore right half

**else**:

            r **=** mid **-** 1

**return** **-**1

# Main Function

arr **=** [2, 3, 4, 10, 40]

x **=** 10

result **=** binarySearch(arr, 0, len(arr)**-**1, x)

**if** result !**=** **-**1:

    print("Element is present at index % d" **%** result)

**else**:

    print("Element is not present in array")