Interpolation Search

```
def interpolationSearch(arr, n, x):
    # Find indexs of two corners
    lo = 0
    hi = (n - 1)

    # Since array is sorted, an element present
    # in array must be in range defined by corner
    while lo <= hi and x >= arr[lo] and x <= arr[hi]:
        if lo == hi:
            if arr[lo] == x:
                return lo;
            return -1;

        pos = lo + int(((float(hi - lo) / ( arr[hi] - arr[lo])) * ( x -
arr[lo])))

        # Condition of target found
        if arr[pos] == x:
            return pos

        # If x is larger, x is in upper part
        if arr[pos] < x:
            lo = pos + 1;

        # If x is smaller, x is in lower part
        else:
            hi = pos - 1;

    return -1

arr = [10, 12, 13, 16, 18, 19, 20, 21, 22, 23, 24, 33, 35, 42, 47]
n = len(arr)

x = 18 # Element to be searched
index = interpolationSearch(arr, n, x)
```

```
if index != -1:
   print("Element found at index",index)
else:
   print("Element not found")
```