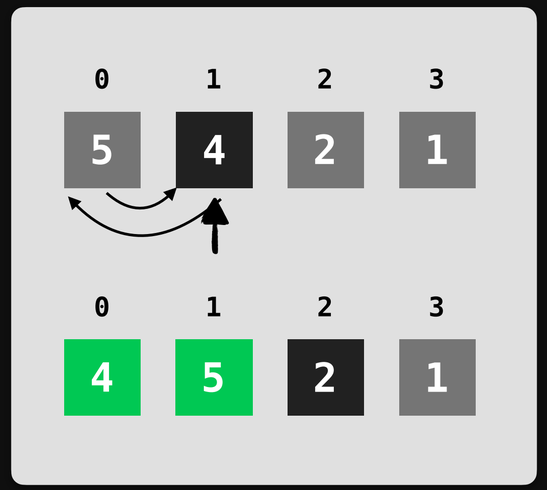
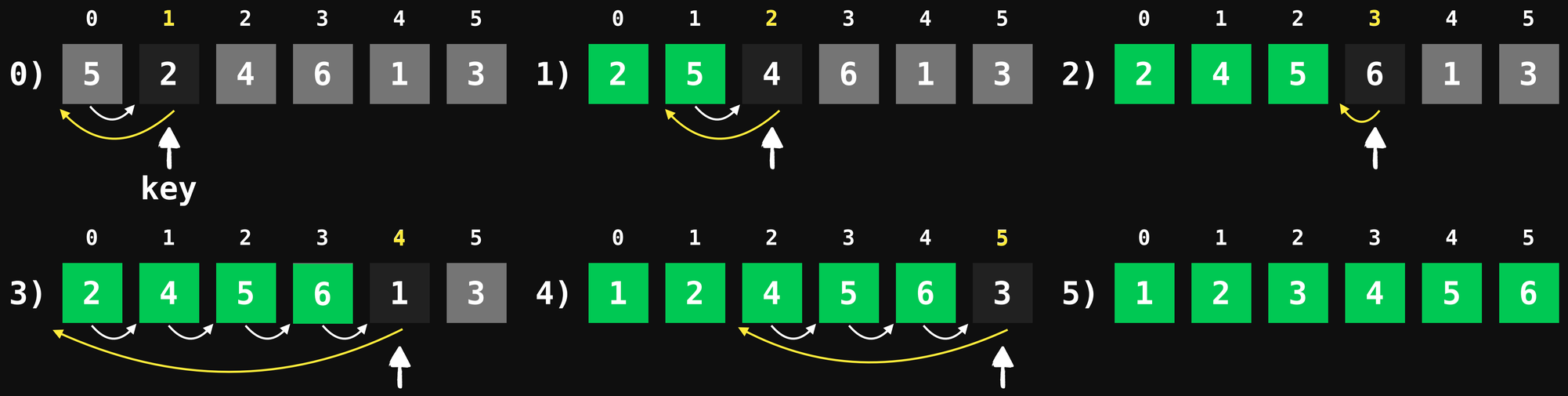
# OVERVIEW

- Iterate from **LEFT** to **RIGHT**
- **INSERT** each element into its **CORRECT POSITION**
- The **LEFT** side (before the key) is always **SORTED**



# THE ALGORITHM



# PSEUDOCODE

```
for j = 1 to A.length
  key = A[j]
  i = j-1
  while i>-1 and A[i]>key
    A[i+1] = A[i]
    i = i-1
  A[i+1] = key
```

# FACTS

- **Simple** to implement
- **Efficient** & **Fastest** for **small data** sets
- Time Complexity: O(**k**n)
- Best: data is sorted -> O(n)
- Worst: data is sorted in reverse order -> O(n*n)