

# Sorting

May 26, 2021

## 0.0.1 insertion sort

```
[1]: def insertion_sort(unsorted_list):  
      for index in range(1, len(unsorted_list)):  
          search_index = index  
          insert_value = unsorted_list[index]  
          while search_index > 0 and unsorted_list[search_index-1] > insert_value:  
              ↪:  
                  unsorted_list[search_index] = unsorted_list[search_index-1]  
                  search_index -= 1  
          unsorted_list[search_index] = insert_value
```

```
[2]: my_list = [10, 11, 12, 1, 2, 3]  
      print(my_list)
```

[10, 11, 12, 1, 2, 3]

```
[3]: insertion_sort(my_list)  
      print(my_list)
```

[1, 2, 3, 10, 11, 12]

## 0.0.2 Selection sort

```
[5]: def selection_sort(unsorted_list):  
      size_of_list = len(unsorted_list)  
      for i in range(size_of_list):  
          for j in range(i+1, size_of_list):  
              if unsorted_list[j] < unsorted_list[i]:  
                  temp = unsorted_list[i]  
                  unsorted_list[i] = unsorted_list[j]  
                  unsorted_list[j] = temp
```

```
[6]: a_list = [3, 2, 35, 4, 32, 94, 5, 7]  
      selection_sort(a_list)  
      print(a_list)
```

[2, 3, 4, 5, 7, 32, 35, 94]

```
[ ]:
```