**Homework lecture 1**

**Sort**

1. Given a list of integer numbers: 2, 1, 10, 6, 3, 8, 7, 13, 20. Draw the steps to sort (ascending sort) the list by following methods:

* Selection sort
* Insertion sort
* Bubble sort
* Merge sort
* Quick sort:
  + 2, 1, 10, 6, 3, 8, 7, 13, (20)
  + (2, 1, 10, 6, 3, 8, 7, (13) ) (20) ()
  + (2, 1, 10, 6, 3, 8, (7) ) (13)
  + (2, 1, 6, (3) ) (10, (8) )
  + (1, (2) ) (6) () (10)
  + (1)
  + 1, 2, 3, 6, 7, 8, 10, 13, 20
* Heap sort
* Radix sort

1. Same question for these lists:

* 1, 2, 3, 4, 5, 6, 7, 8, 9, 10
* 10, 9, 8, 7, 6, 5, 4, 3, 2, 1
* 9, 10, 1, 2, 3, 4, 5, 6, 7, 8
* 3, 4, 5, 6, 7, 8, 9, 10, 1, 2

1. Write a program to sort (ascending sort) the list by following methods:

* Selection sort
* Insertion sort
* Bubble sort
* Merge sort
* Quick sort
* Heap sort
* Radix sort