

# Topics for second partial - problems list

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9. "Higher order functions" - function can take other function as an argument; `lambda` expression to create an unnamed function in-line.
  - Practice problems 2, problem 3
  - Practice problems 3, problem 2
10.
  - QuickSort (Practice problems 2, problem 1)
  - Basic classes; creation of a class, `__init__` method, fields and method, an object of a class. (Practice problems 4, problem 1)
11. Interaction:
  - Plotting things using `matplotlib.pyplot` library (Practice problems 1, problem 2)
  - Opening files and reading/writing data from/to files. (Practice problems 4, problem 1)
12.
  - Backtracking technique: Sudoku solver.
    - Practice problems 1, problem 3
    - Practice problems 2, problem 3
    - Practice problems 3, problem 3
  - Implementation of a graph algorithm: DFS.
    - Practice problems 1, problem 1
    - Practice problems 2, problem 2
    - Practice problems 3, problem 1
13. Graph algorithms:
  - Kruskal's algorithm for minimum spanning tree (Practice problems 4, problem 2)
  - Dijkstra's algorithm.
14. Hash map implementation. Built-in python data structures: `dict` for dictionary, `set` for set. (Practice problem 3, problem 3)