TCG 2018 HW. 1 Result

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Grading Policy: Overall

- The homework is composed of 3 parts. Suppose you get S_i points in part i and receive P penalties throughout the homework, your raw score S_0 is defined as

$$S_0 := \max\{S_1 + S_2 + S_3 - P, 0\}.$$

- Suppose you submit your homework D days late, your score S is given by

$$S := LS_0,$$

where $L := [\![D \leq 7]\!](0.9^{\lceil D \rceil})$ denotes the lateness coefficient.

Grading Policy: Part I

- Suppose your Sokoban solver solves a puzzle file F correctly within 1 minute. Let
  - ν_i denote the optimal number of moves of a solution to puzzle i, and
  - n_i denote the number of moves of your solution to puzzle i.

  Then the basic score is defined as

$$\sigma_1(F) := 1 + \frac{1}{1000} \sum_{i=1}^{10} \lfloor \frac{100\nu_i}{n_i} \rfloor$$

- Suppose it takes t_1 and t_2 seconds for your solver to solve `large.in` and `large2.in` respectively. Then the time bonus is given by

$$\tau_1 := [\![t_1 \leq 1]\!] + [\![t_2 \leq 1]\!].$$

- You get

$$S_1 := \min\{\sum_F \sigma_1(F) + \tau_1, 8\}$$

  points in this part.

Grading Policy: Part II

- You get

$$S_2 := 2[\![\text{your puzzle passes } \texttt{verifier}]\!] + [\![\text{your puzzle is considered complex}]\!]$$

points in this part.

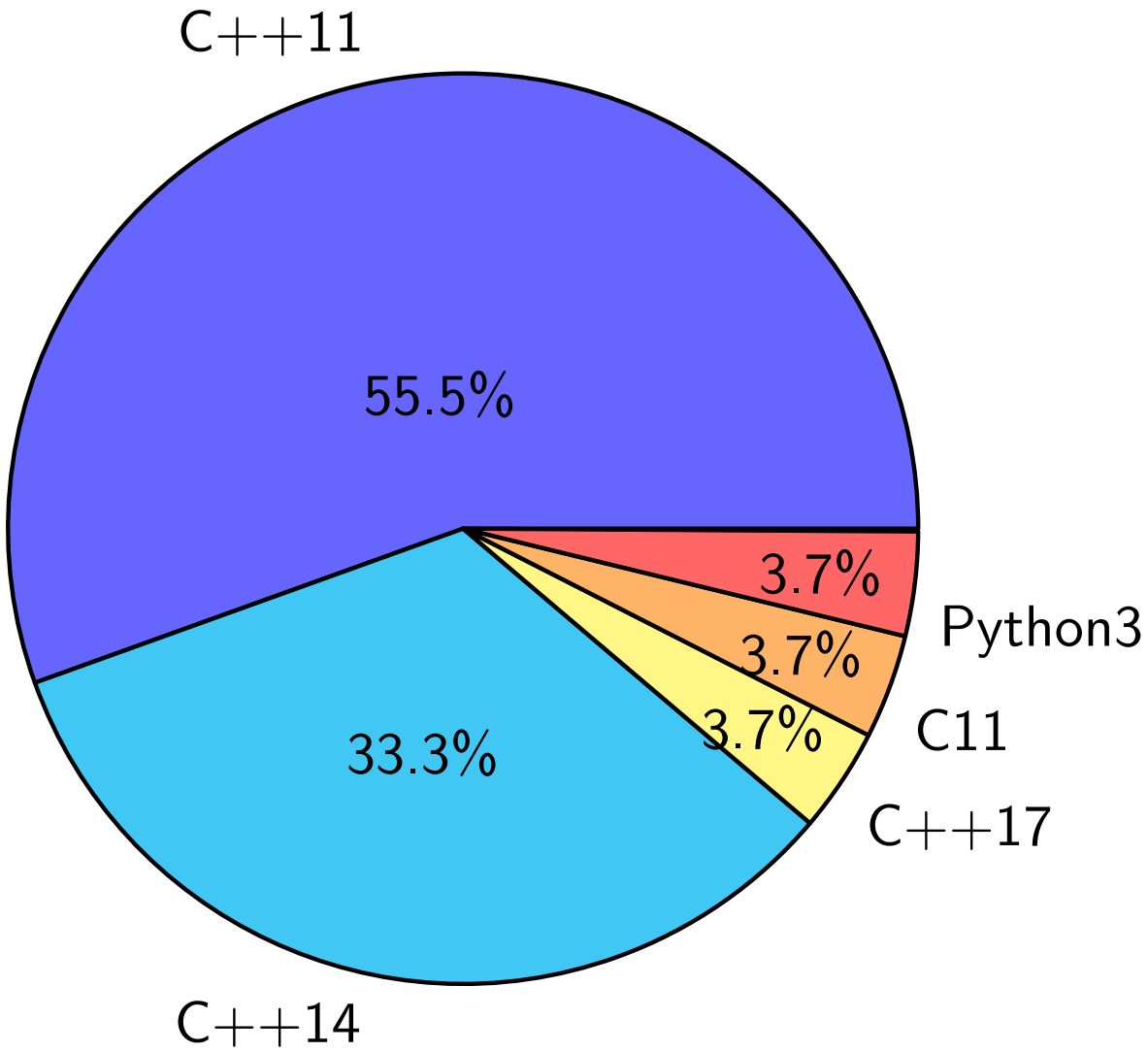
Grading Policy: Part III

- To get the full score, your report should contain
  - how to compile/run your code,
  - your algorithm,
  - your experiment, and
  - complexity analysis of both Sokoban and your algorithms.

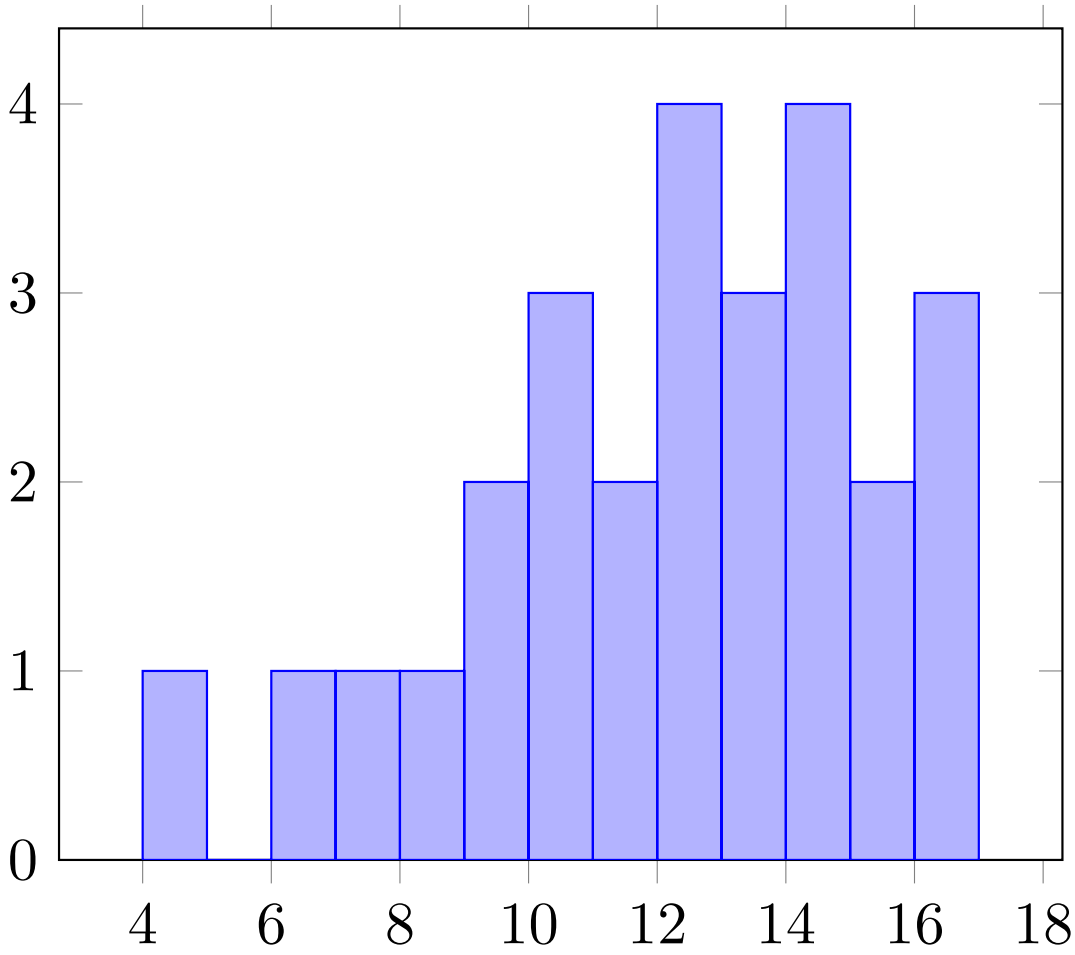
Grading Policy: Penalty

- You'll receive some penalties if you don't follow `hw1_spec.pdf`.
  - Your solver doesn't read from `stdin`.
  - Your solver doesn't read until the EOF.
  - The EOL of your puzzle is "`\r\n`" instead of "`\n`".
- If your directory hierarchy is wrong, you won't receive any penalty in this homework.

Languages

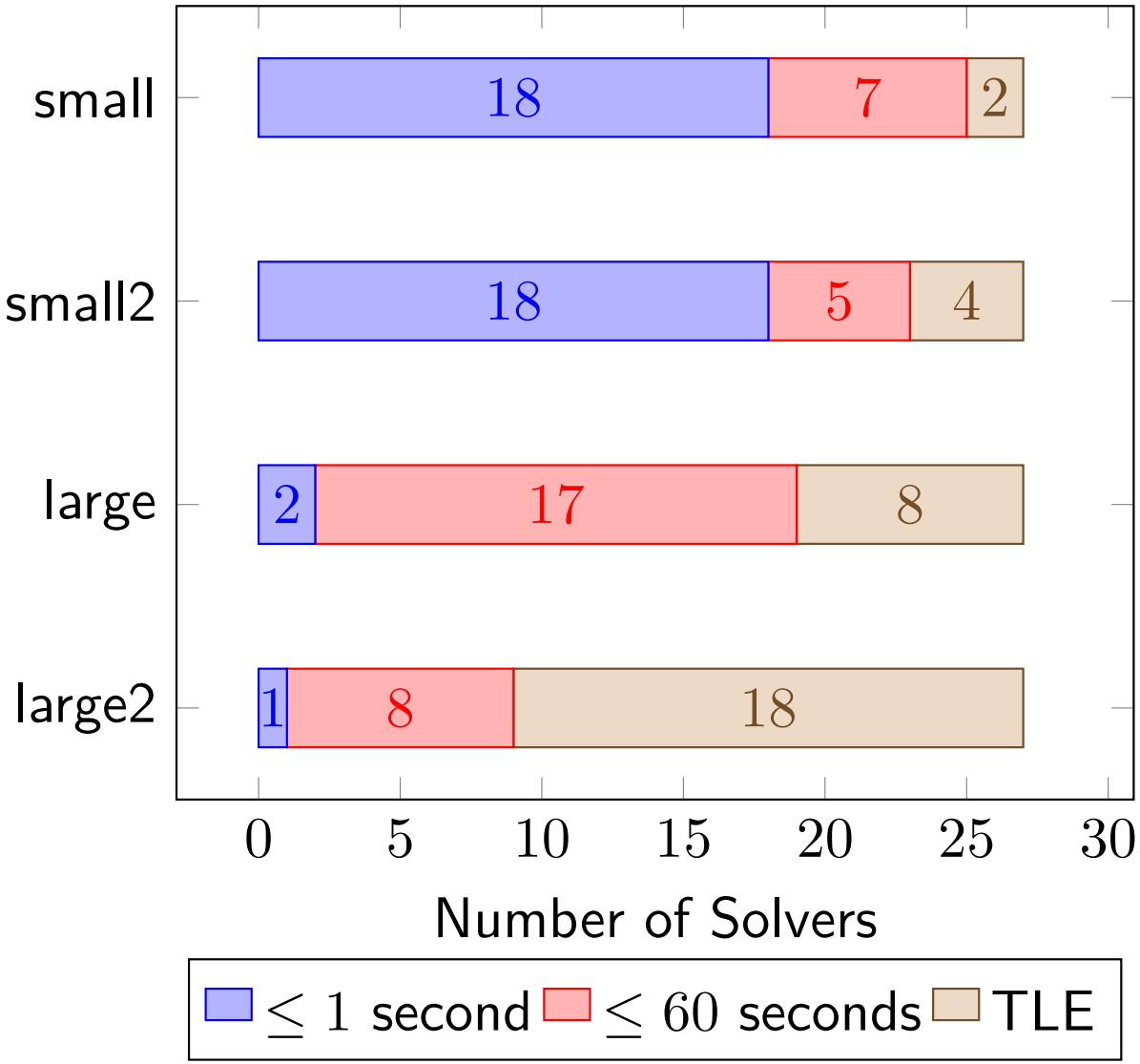


Score Distribution



Min: 4.8, Max: 16, Avg: 12.22, Median: 12.97, Stdev: 3.03

Part I Execution Times



Part I Solution Optimality