

Week 4 Workshop

In this workshop, you will implement the algorithm from DPV 2.4 for finding the k 'th smallest item in an array, and explore its average case efficiency for different sizes of inputs. (This complements the analysis of best and worst case efficiency that is covered in this week's tutorial.)

1. Download `week4.zip` from the LMS, and unzip it, and inspect the files.
2. (You can try making it – type `make` – but you'll see an error: `cannot link...`)
3. Implement `ksmallest.c`.
4. With the help of the `Makefile`, create test data files of various sizes.
5. Run your algorithm and plot the average case efficiency as input size increases; what does this curve correspond to?

SB

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