

Exercise Sheet 5: Project

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At the end of the practical course, a more advanced question is to be investigated in greater depth. The results of this work are to be presented in a written report as well as in a presentation. To this end, it is recommended to formulate a research question (e.g., *How does the phase of the moon affect the running time of the considered algorithm?*) and then to investigate it systematically using experiments in order to arrive at an answer (e.g., *During a waning moon, bidirectional breadth-first search has logarithmic running time*). The primary focus should be on the approach and methodology used to investigate the question, rather than on the results themselves.

The report should be self-contained. This means that all necessary details—such as the research question, the algorithms used, the methodology, or similar aspects—should be explained in the text. In addition, a short introduction and, if appropriate, a brief discussion placing the results in the context of existing work would be desirable. In the given format (socg-LIPICs), the report should be **approximately 300 lines** long. This may require carefully considering, which content (experiments, plots, etc.) is sufficiently informative to be included.