

41391 High Performance Computing - Week 1 - Exercises 1-5

Brandon Parks¹ (bmapa@dtu.dk)

¹ Department of Mechanical Engineering, Technical University of Denmark, DK-2800 Kgs. Lyngby, Denmark

In addition to the attached .zip file containing all source code, the development history and final state can be see here: [Exercise 1 Git repository](#).

The final output plot in [Figure 1](#) was created using a Matlab script auto-generated from the "matlab_io" Fortran module.

An additional GIF containing the temperature evolution of the domain can be seen in the output folder at the following location in the .zip file (only one output present in the /41391_Day5/ folder): ./41391_Day5/output/*/time_temp.gif

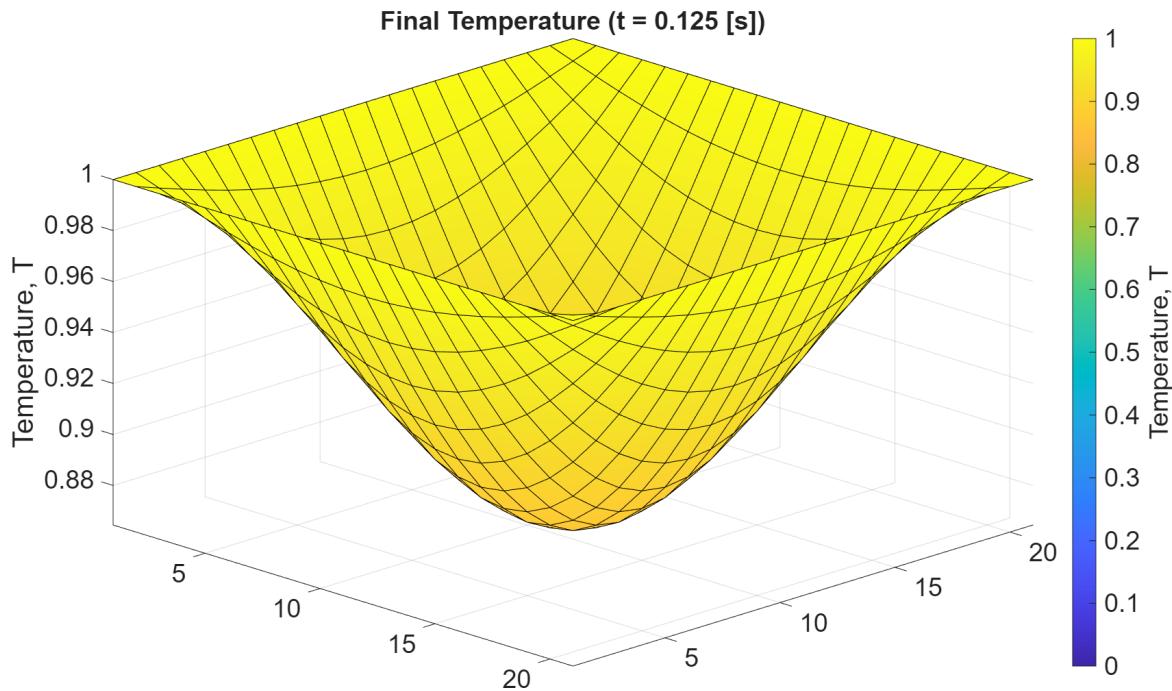


Figure 1: Final state at $t = 0.125$ s for the diffusion problem defined in (1).

References

- [1] J. H. Walther. Exercise 1, January 2026. Course handout for 41391 *High performance computing*.