

In this lab, the 1D finite volume method was implemented to solve the advection equation, with the periodic boundary conditions. After successfully implemented the method, the stability and convergence of this method was discussed separately.

This folder contains:

This folder contains the following documents:

Makefile: which helps the compilation of the lab.

finitevolume.cpp: the implementation of this lab

README: the documentation

Report: the report of this lab

finitevolplot: the file used for plotting

Output: the folder store the output of the program

To compile and run the code, linux system with g++ compiler is required. The compiler should support the c++ 11 feature.

To compile the code, type make in the terminal.

To run the code, type ./finitevolume.x

Code test and output:

The output should be stored in files specified by the solver:

See output folder.