QUEEN’S UNIVERSITY OF BELFAST COMPUTER SCIENCE

Minute of Project Supervision Meeting

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Student Attendee Names: Debdal Chowdhury

Chelsea De Marseilla

Project Module Code: CSC3002

Project Supervisor: Pantelis Sopasakis

Meeting Number: 05

Date of Meeting: 29/10/2024

Progress since last meeting, and decisions arrived at during meeting:

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* CM:
* DC:
  + Presented the rough implementation of the Numerical Simulation of 1D Heat Equation using Crank-Nicolson method which was erroneous
* Prof. Sopasakis explained the Crank-Nicolson method and the 6-point stencil we need to plot to achieve an accurate simulation
* Recommended plotting the simulation using 3d surface plot from matplotlib.py

Action Points:

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* Go through the Notes on PDEs and Numerical methods provided by Prof. Sopasakis
* Implement the Crank-Nicolson method in 1D Heat Equation
* Prepare a presentation with your simulations: you can
  + experiment with different initial/boundary conditions,
  + assess whether the method has converged based on what we discussed (i.e., by comparing the solutions you obtain with different δt and δx),
  + your plan: Assuming you will have completed the implementation of the Crank-Nicolson method, what’s the next step?
* As discussed last week: please look into the ADI method.

Date of next meeting:

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Friday, 05th of November 2024, 11:00pm

Agreed minute should be initialled by the supervisor.

Supervisor's Initials: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Supervisor's Comments:

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