Project 1: 2-D Thermal Analysis

**<Your name here>**

**<Your email here>**

##### Abstract

Insert a very brief paragraph describing the content of your project. Keep in mind that the entire report **CANNOT BE LONGER THAN 4 PAGES** **IN THIS FORMAT**!

# 1. Mathematical Formulation

Describe how you formulate the system of linear equations based on the thermal PDE. You can list multiple sub-sections, if it helps you to organize this project report.

**2. Linear System Solver**

Describe how you implement the Gaussian elimination and Cholesky factorization algorithm and how you use them to solve the system of linear equations.

# 3. Experimental Results

Attach the thermal plots for each test case. Please also show the simulation time of your program for each test case.

# 4. Discussion

Please try to interpret your experimental results. Topics may include, but not limited to:

* Accuracy and efficiency your program can achieve
* Size of problem your program can handle
* Possible improvements that can be done
* Anything unique you have done to improve/validate your program’s accuracy/efficiency

# References

1. Use an enumerated list here for any references, such as books or journal/conference papers.