Numerical Solution of the Boundary Problem for 2D Laplace Equation for Electrostatic Potential in Given Geometry JARED LAND, JEREMY LAND, SHEHARYAR KHAN, McMurry University — This work has been performed as a student project for the upper division Electricity & Magnetism course. The objective was to numerically model the potential grid and the electric field of 2-dimensional capacitors of various geometries and compare them to the experimental data. This has been accomplished by the implementation of finite difference Gauss-Seidel iteration method through the use of the C programming language. Numeric results were then compared to experimental data. The expectations for this project were to successfully simulate the mapping of the experimental potential grid and electric field through the program code. The final results were satisfying since they closely resemble measured potentials.

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