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A novel approach for teaching electromagnetism concepts using programming exercises in algabra based physics[1] NASH BRECHT, CHRISTOPHER ORBAN , The Ohio State University, RICHELLE TEELING-SMITH, University of Mount Union, CHRIS PORTER, The Ohio State University — While many web interactives for introductory physics exist, students are rarely shown the computer code that generates the interactives even when the physics and code for these programs are relatively simple and may help students understanding of introductory electromagnetism. continuing off a similar set of exercises for introductory classical mechanics we present an approach that addresses many common concerns around using programming exercises in introductory electromagnetism, and increase conceptual gains. Our approach keeps the programming exercise simple and well commented, and only shows the code that influences the physics of the interactive.We present assessment results using questions similar to the Brief Electricity and Magnetism Assessment and comment on best practices. These exercises are part of the STEMcoding project that can be found at u.osu.edu/stemcoding which aims to reinvigorate introductory STEM courses with computer science in mind.

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No Company Provided

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