CodeVA Python SOL Development

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With the introduction of the Computer Science Standards of Learning to the Virginia education system in late 2017, there was an immediate need to adequately prepare Virginia's myriad K-12 educators for teaching these new SOL's. Our sponsor, CodeVA, is a non-profit whose goal is to bring equitable computer science education to all of Virginia's students. To achieve their goal, CodeVA offers a plethora of learning resources for both teachers and students, one of which is the Coaches Academy, a free teacher-training seminar for all Virginia public school teachers. The lesson plans utilized by the facilitators of the Coaches Academy to teach computer science fundamentals are two-fold: primarily to serve as an education tool for the facilitators themselves, but also to serve as an education tool for the teachers attending the seminar to use in their own classrooms. Initially, these lesson plans only covered the very basics of computer science fundamentals and did so with the help of programming exercises in a block-based language called Scratch. Our group's primary goal was to both improve these existing lesson plans and extend them to include additional CS fundamental principles. To further improve the resources available, our group's secondary goal was to provide similar lesson plans utilizing a text-based programming language (Python) for the higher grade-levels.

Keywords: Python, Scratch, Computer Science Standards of Learning, Coaches Academy

Python Lesson 4 – Conditionals, Example Slide