SCS1: A validated pseudocode-based assessment for introductory computer science

What is SCS1?
SCS1 is an assessment that can be used to measure CS1 learning. It has 27 questions written in a pseudocode language that has been validated with Java, Python, and MATLAB. It has three types of questions: definitional, tracing, and code completion. It covers nine content areas:
- fundamentals
- logical operators
- conditionals
- definite loops
- indefinite loops
- arrays
- function/method parameters
- function/method return values
- recursion
- object oriented basics

Who can use it?
Researchers:
- Create a new assessment and validate it against SCS1
- Test interventions with pre- and post- testing with SCS1

Teachers:
- Test new activities or curricula with pre- and post- testing with SCS1

How can I use it?
We'd like to welcome you to use the SCS1 assessment as a replication tool and for validation in your research endeavors.

We've created a Google Group to share knowledge and experiences in this collaboration. We hope it can be used to share replication intentions, foster connections, and answer any questions. The SCS1 assessment files can be found in that group. You may request to join the Google group here: https://goo.gl/MiYOFk

We invite you to create your survey in Qualtrics (qualtrics.com), where we can begin to create a library of these assessments. Your institution may have a membership to Qualtrics, and I invite you to explore the site to see how you can use it for your research. If your institution does not have memberships to Qualtrics, we also have text versions of SCS1 available for use.

A formal write-up of the process of creating SCS1 can be found in: Parker, M. C., Guzdial, M., & Engleman, S. (2016, August). Replication, validation, and use of a language independent CS1 knowledge assessment. In *Proceedings of the 2016 ACM conference on international computing education research*(pp. 93-101). ACM.

Need more information? Have questions? Contact: scs1assessment@gmail.com. Please allow for 1 week for a reply.