	Software Development KSAs for Curriculum Alignment					
	2. Fundamental Programming Concepts					
	KSA Description	**Knowledge, Skill, or Ability?**	**Bloom's Taxonomy Level?**	**Cross-cutting KSAs**	**Course Number/Name**	**Learning Outcome**
a	Describe uses of primitive data types.	Knowledge	1			
b	Write programs that use primitive data types.	Skill	3			
c	Demonstrate fundamental programming skills including the use of variables, loops, conditional branching, and program logic.	Skill	3	Cybersecurity 3a, Data Management 1m		
d	Design, implement, test, and debug a program that uses each of the following fundamental programming constructs: basic computation, simple I/O, standard conditional and iterative structures.	Skill	3	Cybersecurity 3b		
e	Analyze the behavior of simple programs involving the fundamental programming constructs variables, expressions, assignments, I/O, control constructs, functions, parameter passing, and recursion.	Knowledge	3			
f	Design and implement a program that defines functions and passes parameters.	Skill	3			
g	Write a program that uses file I/O to provide persistence across multiple executions.	Skill	2	Cybersecurity 3c		
h	Choose appropriate conditional and iteration constructs for a given programming task.	Skill	4			
i	Identify the base case and the general case of a recursively-defined problem.	Knowledge	2			
j	Describe the concept of recursion and give examples of its use.	Knowledge	1			