Learning Objectives

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Demonstrate problem solving skills by developing and implementing algorithms to solve problems.

1. Derive problem specifications from problem statements.
2. Develop algorithms using modular design principles to meet stated specifications.
3. Create code to provide a solution to problem statements ranging from simple to complex.
4. Test and debug programs and program modules to meet specifications and standards.
5. Create programs that contain clear and concise program documentation.
6. Implement programs that use data types and demonstrate an understanding of numbering systems.
7. Incorporate both basic and advanced control structures appropriately into algorithms.
8. Demonstrate an understanding of structured design by implementing programs with functions, including parameter passing and value returning.
9. Implement programs using classes, including strings and files.
10. Implement algorithms using one-dimensional and indexed data structures.
11. Demonstrate an understanding of array searching and sorting algorithms by desk checking and/or modifying algorithm implementations.