

# ICDL Digital Student Thinking as a Coder / Computing



The Thinking as a Coder module sets out essential computational thinking and coding skills that support the creation of simple computer programs..

Computational thinking is useful in many contexts, not just programming and software development. Coding is becoming the new standard of literacy, with skills used in areas as varied as art and design, engineering, data analysis, and science. Thinking as a Coder develops related skills such as problem solving, pattern recognition, abstraction, and algorithms.

This module is suitable for a wide range of candidates, including students who would like to develop their IT skills. Computer science is a broad field, and its applications continue to grow.

**Develop  
computational  
thinking  
abilities and the  
skills needed  
to code simple  
computer  
programs.**

**ICDL Thinking as a Coder is part of ICDL Digital Student, a set of modules designed to meet the digital skills requirements of students.**

**Main learning outcomes**

Successful candidates will be able to plan and create simple programs. The computational thinking skills developed in this module are transferrable to other types of role. After passing this module, students will feel confident analysing problems and writing, testing, and modifying algorithms. They will be able to:

- understand key concepts in computing and the typical activities involved in creating programs
- recognise and use computation thinking techniques such as problem decomposition and pattern recognition
- identify problems and develop solutions
- write and build with code
- apply project management methodologies such as test, debug, and release

Module Overview	
Category	Skill Set
Computing Terms	• Key Concepts
Computational Thinking Methods	• Problem Analysis • Algorithms
Starting to Code	• Getting Started • Variables and Data Types
Building using Code	• Logic • Iteration • Conditionality • Procedures and Functions • Events and Commands
Test, Debug and Release	• Run, Test and Debug • Release

**Why certify with ICDL?**

- ICDL is the global leader in digital literacy learning and certification
- ICDL modules are designed and updated by global subject matter experts, providing a standardised certification of skills and knowledge
- ICDL is used by thousands of schools around the world
- ICDL has rigorous Quality Assurance Standards (QAS) and regular quality audits are conducted internally and externally

