

Filename: comptia-itfunc0u61-3-1-1-programming\_concepts

Show Name: CompTIA IT Fundamentals (Exam FC0-U61)

Topic Name: Software Development

Episode Name: Programming Concepts

Show Description: In this episode, Don and Ronnie give the viewers an introduction to application development. They start out by covering basic programming concepts and then demonstrate basic application design.

## Programming Concepts

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- What is "code" and how is it written?
  - Source Code
  - Collections of "instructions"
  - Follows a particular style/format
  - Called a programming language
- What types of languages are there?
  - Interpreted
    - JavaScript
    - Perl
    - Python
    - PHP
  - Compiled
    - C
    - C++
    - Rust
  - Query languages
    - Structured Query Language (SQL)
    - Transact-SQL
    - XQuery
  - Assembly language
    - Corresponds to hardware
    - Machine code
- Which language should we use?
  - Very subjective
- How do languages work?
  - Like a flow-chart
  - Actions progress through a series of decisions

## MIT Scratch Example

<https://scratch.mit.edu/> (<https://scratch.mit.edu/>)

- Variables
- Containers
  - Arrays
- Functions
- Objects
  - Properties
  - Attributes
- Loops