

# Intro to Ruby Programming

GoSkills online course syllabus

Tuesday, November 30, 2021

**Skill level**

Beginner

**Lessons**

41

**Accredited by**

CPD

**Pre-requisites**

None

**Video duration**

2h 39m

**Estimated study time**

21h for all materials

**Instructor**

John Elder

## Introduction

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- 1** **Course Introduction**  
What to expect from this course.
- 2** **Install Sublime and Git Bash**  
How to install Sublime Text and Git Bash Terminal for your development environment.
- 3** **Install Ruby**  
Installing Ruby is easy with RubyInstaller.org
- 4** **Hello World and c9 Transition**  
In this lesson we'll create our first Ruby program!

## Ruby Programming Basics

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- 5** **Comments and Errors**  
How to comment code and deal with errors.
- 6** **Arithmetic Operators**  
How to do basic math with Ruby.
- 7** **Floats and Integers**  
Understanding the difference between floats and integers and when to use each.

**8** Comparison Operators  
How to compare two or more items with Ruby.

**9** Variables  
Storing information in variables is easy!

**10** Assignment Operators  
How to assign items to variables (and other things).

**11** Getting User Input with Gets  
Allowing the user to interact with your program.

**12** Conditional Statements  
How to use if/else/elsif statements in Ruby.

**13** Multiple Conditional Comparison Operators  
Sometimes you need to compare more than two things, here's how.

**14** String Manipulation  
Modifying a string is simple with these string manipulation tips.

## Intermediate Ruby Concepts

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**15** Arrays  
What are arrays and how do we create and use them?

**16** Multi-Dimensional Arrays  
An array of other arrays is multi-dimensional.

**17** While Loops  
Using while loops in Ruby.

**18** Until Loops  
Looping until a condition is met using until loops.

**19** For and Each Loops  
Understanding for and each loops, and when to use them.

20 FizzBuzz!  
Fizzbuzz! is a popular interview question/quiz. Let's build it!

21 Hashes  
What is a hash, and how do you create and use it?

22 Hash Manipulation  
Adding and removing items from a hash.

23 Methods  
Understanding methods in Ruby.

24 Methods Part 2  
More on methods...

25 Random Numbers  
How to generate random numbers with Ruby.

## Advanced Ruby Concepts

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26 Classes  
What is a class and how do we use them?

27 Classes Part 2  
More on classes and how to use them.

28 Instance Variables  
What is an instance variable and how is it different from a regular variable?

29 Class Getters  
What is a getter and how do we use it?

30 Class Setters  
How to create a class setter and why you should.

31 Understanding Attr\_accessor  
Let Ruby create your getters and setters automatically with attr\_accessor.

- 32** **Class Inheritance**  
Inheriting information from other classes.
- 33** **Opening a File**  
How to open another file in your Ruby file.
- 34** **Open a File into an Array**  
We'll learn to output the contents of a file into an array.
- 35** **Open File Modes**  
There are several "modes" for opening files. Learn them all here.
- 36** **Write to a File**  
We'll learn to write and append data to a file.
- 37** **Adding Third-party Functionality with Gems**  
How to install and use a third-party gem in your program.

## Fun with Ruby - Build a Math Flashcard Game!

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- 38** **Building a Flashcard Game**  
Let's use what we've learned to build a math flashcard game!
- 39** **Flashcard Addition Method**  
How to handle the addition flashcards.
- 40** **Flashcard Subtraction, Multiplication, Division Methods**  
How to handle subtraction, multiplication and division flashcards.
- 41** **Creating a Menu**  
Allow the user to choose which type of flashcard game to play with a menu.

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