



## Introduction to the Ruby Programming Language

4 days

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**Course Overview:** The Ruby programming language is an object oriented scripting language. It has a built-in interpreter for testing programming elements, as well as having a very thorough web enabled framework (Ruby on Rails). This course will focus on the programming language itself. This class is 90% hands-on labs, and 10% Lecture. The students will not only engage in exercises that reinforce individual concepts, but also participate in a class project wherein they write a full featured application.

**Duration:** 4 days (5 days with Optional Database Connectivity Module)

**Audience:** The students should have an understanding of how a text editor works, and a strong desire to learn the Ruby programming language. A general understanding of higher level programming languages is helpful, but not required.

### Course Topics:

- **How to put output to the screen**
- **How to take input from the user**
- **Variables**
- **Conditional Statements**
- **Flow Control**
- **Object Oriented Programming**
- **Database Connectivity (optional)**

### Class Project Exercise:

This exercise has the students creating a menu driven application. The approximate time for this exercise is about 15 hours of class work.



## Course Outline

### I. First Steps

- a. Hello World
- b. The puts command
- c. The gets command
- d. Variables
- e. Class Project Exercise

### II. Conditionals

- a. If statements
- b. If-else statements
- c. If-else if-else statements
- d. Conditional Logic
- e. Class Project Exercise

### III. Flow Control

- a. for loops -- each
- b. while loops
- c. break statements
- d. next statements
- e. methods (functions)
- f. case statements
- g. Class Project Exercise

### IV. Object Oriented Ruby

- a. Creating Object Oriented Programs
- b. Methods
- c. Using Objects
- d. Class Project Exercise

### V. Database Connectivity (Example code with MySQL) [Optional]

- a. Database connectivity overview
- b. Connecting to a MySQL database
- c. The Big Four (create,delete,update,insert) data

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