

# Ruby Basics

## Introduction:

Ruby is a “dynamic, open source programming language with a focus on simplicity and productivity. It has an elegant syntax that is natural to read and easy to write.”

1. Variables
2. Control Flow
3. Looping/Iterator
  - a. While
  - b. Each do
  - c. For
4. Arrays
5. Hashes

## Object-oriented Concepts:

Object-oriented programming (OOP) is a programming paradigm that uses objects and their interactions to design applications and computer programs.

The basic programming concepts in OOP are:

Abstraction

Polymorphism

Encapsulation

Inheritance

## Resources:

1. <https://hackhands.com/beginners-guide-ruby/>
2. <https://medium.com/the-renaissance-developer/ruby-101-object-oriented-programming-part-1-af734f87f481>
3. [https://launchschool.com/books/oo\\_ruby](https://launchschool.com/books/oo_ruby)

Additional:

4. <https://web.stanford.edu/~ouster/cgi-bin/cs142-spring12/slides/ruby.pdf>
5. [https://www.tutorialspoint.com/ruby/ruby\\_quick\\_guide.htm](https://www.tutorialspoint.com/ruby/ruby_quick_guide.htm)
6. <https://www.rubyguides.com/ruby-tutorial/>

## Assignment:

Implement following sorting algorithms in Ruby:

1. Bubble Sort
2. Selection Sort
3. Quick Sort
4. Heap Sort

PS: Hardcode the inputs in your code, no need to ask from user

Complete any 3 of the above implementations and send a zip file of code to Pavan Vachhani/Mishal Shah on Slack in personal chat. **Include a README file** with commands to run your code.

**Deadline: 7th December**