Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Ruby Programming Language

Background:

Ruby originated in Japan during the mid 1990s. Yukihiro “Matz” Matsumoto designed the language. Matz was looking for a language with simple syntax, object oriented, iteration, exception handling, garbage collection, and portability.

Genealogy:

* Birth – February 23, 1993
* Ruby .95- object oriented, inheritance, iterators, exception handling, garbage collection
* Ruby 1.0
* Ruby 1.3
* Ruby on Rails
* Ruby 1.9.1-speed improvements, new methods, new syntax, random number generators, string formatting
* Ruby 1.93
* Ruby 2.0
* Ruby 2.1.2
* Ruby 2.1.3 – better speed, refinements, regular expressions engine, better garbage collection, built in syntax

General Overview:

Ruby is a dynamic and object oriented programming language. It gained inspiration from LISP, Smalltalk, and Perl.

Programming Design:

Ruby is object oriented which means it contains objects that have attributes and procedures or methods and the objects are instances of a class. Ruby allows the user to create objects and act upon the objects and define the relationships between them.

Namespacing:

Modules in Ruby prevent name conflicts by providing namespaces that contain any number of classes, methods, and constants. The user can use classes as namespaces as well.

Operators and Operands:

Ruby has the normal addition, subtraction, multiplication and division operators. The operators allow the user to combine the operands into larger expressions. Ruby also contains number comparison operators. Unary operators expect one operand while binary and ternary expect two and three operands.

Data Types:

Ruby contains classes, which are the data types.

|  |  |
| --- | --- |
| Numeric | Integer, float, complex, BigDecimal, rational |
| Strings | Enclosed in single or double quotes |
| Arrays | Comma-seperated list of values enclosed in square brackets |
| Hash | Contains keys and values, comma-seperated list of key/value pairs enclosed in curly braces |