Ruby is a scripting language. It runs on a variety of platforms, such as Windows, Mac OS, and the various versions of UNIX. Ruby is a pure object-oriented programming language. It was created in 1993 by Yukihiro Matsumoto of Japan.

Features of Ruby

- Ruby is an open-source and is freely available on the Web, but it is subject to a license.
- Ruby is a general-purpose, interpreted programming language.
- Ruby is a true object-oriented programming language.
- Ruby is a server-side scripting language similar to Python and PERL.
- Ruby can be used to write Common Gateway Interface (CGI) scripts.
- Ruby can be embedded into Hypertext Markup Language (HTML).
- Ruby has a clean and easy syntax that allows a new developer to learn very quickly and easily.
- Ruby has similar syntax to that of many programming languages such as C++ and Perl.
- Ruby can be used for developing Internet and intranet applications.
- Ruby can easily be connected to DB2, MySQL, Oracle, and Sybase.
- Ruby has a rich set of built-in functions, which can be used directly

Advantages of Ruby:

- The code written in Ruby is small, elegant and powerful as it has fewer number of lines of code.
- Ruby allows simple and fast creation of Web application which results in less hard work.
- As Ruby is free of charge that is Ruby is free to copy, use, modify, it allow programmers to make necessary changes as and when required.
- Ruby is a dynamic programming language due to which there is no tough rules on how to built in features and it is very close to spoken languages.

Disadvantages of Ruby:

- Ruby is fairly new and has its own unique coding language which makes it difficult for the programmers to code in it right away but after some practice its easy to use. Many programmers prefer to stick to what they already know and can develop.
- The code written in Ruby is harder to debug, since most of the time it generates at runtime, so it becomes difficult to read while debugging.
- Ruby does not have a plenty of informational resources as compared to other programming languages.
- Ruby is an interpreted scripting language, the scripting languages are usually slower than compiled languages therefore, Ruby is slower than many other languages.

Applications:

- Ruby is used to create web applications of different sorts. It is one of the hot technology at present to create web applications.
- Ruby offers a great feature called Ruby on Rails (RoR). It is a web framework that is used by programmers to speed up the development process and save time.

A good first program

puts is used to print something on the console in Ruby.For eg. A string puts "Hello Again"

Simple mathematical functions can be carried out within the puts statements. Just as we use '%d' or '%f' and '&' in C, we will use '#{ } in Ruby to get our work done.

puts "Alok has #{25+30/6} Rupees in his
pocket"

Output: Alok has 30 Rupees in his pocket

Variables and Names: Variables in ruby are the same as that of any other dynamic programming language. You just don't need to mention its type and ruby will know its type automatically. Example:

cars = 100 drivers = 30 puts "There are
#{cars} cars and #{drivers} drivers."
Output: There are 100 cars and 30 drivers.

Prompting people for numbers

- •gets.chomp.to_i is used to get integer input from user.
- •gets.chomp.to_f is used to get float(decimal) input from user.

Example:

```
print "Give a number" number =
gets.chomp.to_i puts "You just entered
#{number}"
```

- 'gets.chomp' is used to take input from user.
- 'print' can be used instead for 'puts'to
 print without a new line.
 print "How old are you ? "
 age = gets.chomp
 print "How tall are you ?"
 height = gets.chomp
 puts " You are #{age} year old and your
 height is #{height} cms"

- irb(main):020:0> puts "fname"
- fname
- => nil
- irb(main):021:0> f1=gets.chomp
- chhaya
- => "chhaya"
- irb(main):022:0> puts"last name"
- last name
- => nil
- irb(main):023:0> f2=gets.chomp
- nayak
- => "nayak"
- irb(main):024:0> puts "Hello #{f2} #{f1}"
- Hello nayak chhaya
- => nil
- irb(main):025:0>

Ruby on Rails :

Ruby on Rails is a web app development framework based on MVC system and it is known as a framework for data base driven web app. It was programmed in Ruby programming language. It is considered as more secure than Ruby language and its syntax is similar to Phoenix in Elixir, Python. It was developed on the principle of DRY (Don't Repeat Yourself) and COC (Convention Over Configuration) and it is mainly used to develop web applications. While developing applications mainly HTML, CSS, JavaScript and XML are used.

 Some of the top companies which are using Ruby on Rails are Bloomberg, Crunchbase, zendesk, PIXLR, etc.



- Secure Tool
- Versatile
- Cost-Effective
- Cons of Ruby on Rails:
- Runtime Speed and Performance.
- Absence of Flexibility.
- High Expense in the Development.

Difference between Ruby and Ruby on Rails:

S.N	ORUBY	RUBY ON RAILS
01.	Ruby is an object oriented scripting language launched in 1995.	Ruby on Rails is a web app development framework based on MVC system.
02.	It is known as a general purpose programming language.	Where as it is known as a framework for data base driven web app.
03.	It was programmed in C programming language.	It was programmed in Ruby programming language.
04.	It is considered as a secure programming language.	While it is considered as more secure than Ruby language.
05.	It is not a framework.	While it is a web development framework.
06.	Ruby is commonly used in static website development.	Ruby on Rails is not generally recommended when creating static website.

07.	Ruby programming language is considered as taking inspiration from Perl and Smalltalk.	Ruby on Rails is considered as taking inspiration from Django, Python's Laravel, and PHP, respectively.
08.	Ruby programming language is used to develop desktop applications.	While it is used to develop web applications.
09.	It was developed on the principle of user interface design.	It was developed on the principle of DRY and COC.
10.	Its syntax is similar to Perl and Python.	Its syntax is similar to Phoenix in Elixir, Python.
11.	While developing applications mainly C++, Java, VB.net are used.	While developing applications mainly HTML, CSS, JavaScript and XML are used.