

What is Ruby?

- Ruby is a dynamic, open source programming language with a focus on **simplicity** and **productivity**
- It is an ideal language for scripting and **rapid application development** in many areas on most platforms

Identikit

- First appeared in 1995
- Designed by Yukihiro “Matz” Matsumoto
- General purpose
- Object oriented
- High level
- Emphasis on human, rather than computer, needs
- Website
 - <http://www.ruby-lang.org>



About (programming) languages...

- High level vs. low level languages
- Interpreted vs. compiled languages

What is the difference?

High level languages

- Near to human-level abstraction
 - short, expressive, easy to read
- Portable
 - can be executed on different platform with few or none changes
- Must be translated into low-level code for actual execution

Low level languages

- **Directly executable**
 - no translation needed
- **Typically more efficient**
 - they are designed for very specific hardware
- **Platform dependent**
 - must be re-written for execution on different platforms
- **Difficult to write and read**
 - near to machine code

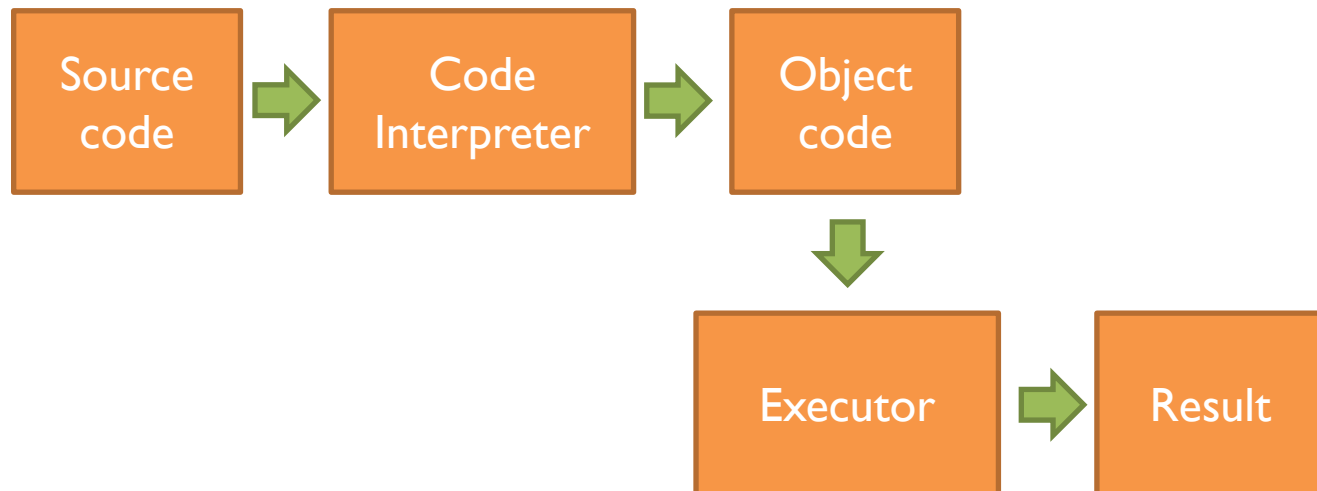
Interpreted languages

- Line by line translation and execution



Compiled languages

- Completely translated into low-level code before execution



Ruby is interpreted

- Two ways to use the interpreter
- Interactive mode
 - type the program and the interpreter displays the result

```
irb(main):001:0> 1+1  
=> 2
```

- Script mode
 - store the code in a file, and use the interpreter to execute the contents

```
ruby myscript.rb
```

Getting started



RUBY (AND RAILS) INSTALL



Ruby

A PROGRAMMER'S BEST
FRIEND



Ruby availability

- High level
 - available for all platforms
- Linux / Mac OS X
 - typically pre-installed (maybe not in the “right” version)
 - already used for some tasks
- Windows
 - should be explicitly installed

Installation (Ruby + Rails)

- We use Ruby 1.9.3
 - and Rails 3.2.x
- In Room 5T
 - everything is set up under Windows
- At home
 - feel free to use the operating system you prefer
 - we will try to give support for Linux, Mac OS X and Windows

Windows Installation

- Download RailsInstaller
 - <http://railsinstaller.org/>
 - link for Ruby 1.9.3 in the end of the page
 - version 2.2.5
 - follow the wizard throughout installation
- Check that everything goes ok
 - open a command prompt
 - Win(+R) > cmd
 - ruby -v



```
C:\Users\Luigi>ruby -v
ruby 1.9.3p484 (2013-11-22) [i386-mingw32]
```

Linux / Mac OS X

- On the course website (**Link** section)
 - instructions in PDF
 - scripts tested in Ubuntu and Mavericks
- We recommend to use:
 - rbenv for installing Ruby
 - <https://github.com/sstephenson/rbenv>
 - plus homebrew (Mac only)
 - <http://brew.sh/>

Integrated Development Environment (IDE)

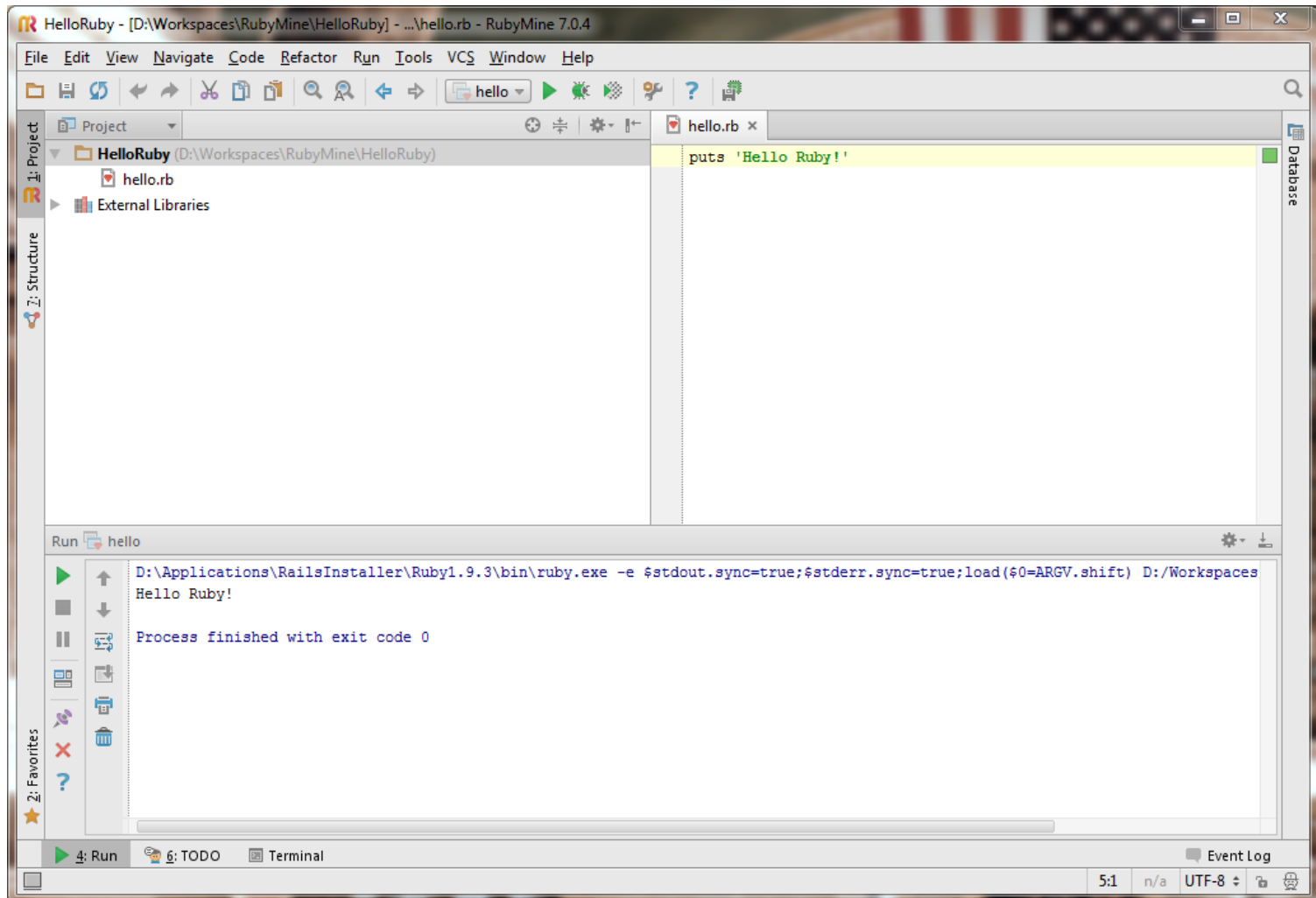
A **software application** that provides comprehensive facilities to computer programmers for software development. An IDE normally consists of **source code editor**, build automation tools and a **debugger**. Most modern IDEs offer Intelligent code completion features.

Ruby/Rails IDE

- Some choices available
- We use JetBrains RubyMine
 - <http://jetbrains.com/ruby>
- RubyMine is a **commercial** product
- JetBrains gives us an **educational license** for this course
 - available on the teaching portal
 - it will expire on January 26, 2016






Hello world!



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