

Variables in Ruby

Talk to a Teacher

<http://spoken-tutorial.org>

National Mission on Education through ICT

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Learning Objectives



Learning Objectives

- **What is a Variable?**



Learning Objectives

- **What is a Variable?**
- **Dynamic typing in Ruby**



Learning Objectives

- What is a Variable?
- Dynamic typing in Ruby
- **Declaring a variable**



Learning Objectives

- What is a Variable?
- Dynamic typing in Ruby
- Declaring a variable
- **Converting variable types**



Learning Objectives

- What is a Variable?
- Dynamic typing in Ruby
- Declaring a variable
- Converting variable types
- **What is variable's scope?**



Learning Objectives

- What is a Variable?
- Dynamic typing in Ruby
- Declaring a variable
- Converting variable types
- What is variable's scope?
- **Types of variables**



System Requirement



System Requirement

- **Ubuntu Linux version 12.04**



System Requirement

- **Ubuntu Linux version 12.04**
- **Ruby 1.9.3**



Pre-requisites



Pre-requisites

- Knowledge of Terminal



Pre-requisites

- Knowledge of **Terminal**
- **Familiar with irb**



Pre-requisites

- Knowledge of **Terminal**
- Familiar with **irb**
- **For relevant tutorials, please visit our website**
<http://spoken-tutorial.org>



Variable



Variable

- **Variable is used to store a value**



Variable

- **Variable is used to store a value**
- **Variable is a reference that can be assigned**



Variable

- **Variable is used to store a value**
- **Variable is a reference that can be assigned**
- **Ruby variables are case sensitive**



Variable



Variable

- **Variable name should be meaningful**



Variable

- Variable name should be meaningful
- **Variable name may only contain**



Variable

- Variable name should be meaningful
- Variable name may only contain
 - lowercase letters



Variable

- Variable name should be meaningful
- Variable name may only contain
 - lowercase letters
 - **numbers**



Variable

- **Variable name should be meaningful**
- **Variable name may only contain**
 - lowercase letters
 - numbers
 - **underscores**



Variable

- Variable name should be meaningful
- Variable name may only contain
 - lowercase letters
 - numbers
 - underscores
- Ex: `first_name`



Dynamic Typing



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Dynamic Typing

- **Ruby is dynamic typed language**



Dynamic Typing

- Ruby is dynamic typed language
- Don't need to declare datatype while creating a variable



Dynamic Typing

- Ruby is dynamic typed language
- Don't need to declare **datatype** while creating a variable
- **Ruby interpreter determines the datatype at the time of the assignment**



Converting variable types



Converting variable types

Ruby variable classes have methods to convert their value to a different type



Converting variable types

Ruby variable classes have methods to convert their value to a different type

- `to_i` converts variable to integer



Converting variable types

Ruby variable classes have methods to convert their value to a different type

- `to_i` converts variable to integer
- `to_f` converts variable to float



Converting variable types

Ruby variable classes have methods to convert their value to a different type

- `to_i` converts variable to integer
- `to_f` converts variable to float
- `to_s` converts variable to string



Variable scope



Variable scope

- **Scope defines where in a program a variable is accessible**



Variable scope

- Scope defines where in a program a variable is accessible
- **Ruby has four types of variable scope**



Variable scope

- Scope defines where in a program a variable is accessible
- Ruby has four types of variable scope
 - Local



Variable scope

- Scope defines where in a program a variable is accessible
- Ruby has four types of variable scope
 - Local
 - **Global**



Variable scope

- Scope defines where in a program a variable is accessible
- Ruby has four types of variable scope
 - Local
 - Global
 - **Instance**



Variable scope

- Scope defines where in a program a variable is accessible
- Ruby has four types of variable scope
 - Local
 - Global
 - Instance
 - **Class**



Naming Convention

Name beginning with	Variable Scope
\$	A global variable
[a-z] or _	A local variable
@	An instance variable
@@	A class variable
[A-Z]	A constant



Summary



Summary

- To declare a variable
eg. `var1=10`
- Changing variable type using `to_f`, `to_s` methods
- Different Variable scope



Assignment



Assignment

- **Declare a variable and convert it to octal and hexadecimal form**



About the Spoken Tutorial Project

- Watch the video available at http://spoken-tutorial.org/What_is_a_Spoken_Tutorial
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Spoken Tutorial Workshops

The Spoken Tutorial Project Team

- Conducts workshops using spoken tutorials
- Gives certificates to those who pass an online test
- For more details, please write to contact@spoken-tutorial.org



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- More information on this Mission is available at <http://spoken-tutorial.org/NMEICT-Intro>

