

# Variables and Mutability

Spoken Tutorial Project

<https://spoken-tutorial.org>

National Mission on Education through ICT

<https://sakshat.ac.in>

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21 October 2020



# Learning Objectives

**In this tutorial, we will learn:**



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In this tutorial, we will learn:

- ▶ **How to create** `variables`



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In this tutorial, we will learn:

- ▶ **How to create** variables
- ▶ **About** mutability



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**In this tutorial, we will learn:**

- ▶ **How to create** variables
- ▶ **About** mutability
- ▶ **How to mutate** variables **in** Rust



# System Specifications

**This tutorial is recorded using:**



# System Specifications

**This tutorial is recorded using:**

- ▶ **Ubuntu Linux OS version 18.04**



# System Specifications

**This tutorial is recorded using:**

- ▶ **Ubuntu Linux OS version 18.04**
- ▶ **Rust version 1.47.0**



# System Specifications

**This tutorial is recorded using:**

- ▶ **Ubuntu Linux OS version 18.04**
- ▶ **Rust version 1.47.0**
- ▶ **Visual Studio Code version 1.45.0 (code editor)**



# Prerequisites



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- ▶ **You should be familiar with** `compiling and running Rust files`



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- ▶ **You should be familiar with** `compiling and running Rust files`
- ▶ **If not, please go through the prerequisite Rust tutorials on** <https://spoken-tutorial.org>



# Code Files

- ▶ **The file used in this tutorial is available in the Code files link on this tutorial page**



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- ▶ **Pls download and extract the file**



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- ▶ **Make a copy and then use it for practising**



# Mutability

- ▶ In Rust, variables **are** immutable **by default**



# Mutability

- ▶ **In** Rust, variables **are** immutable **by default**
- ▶ **That means, once the variable is declared we cannot change its value**



# Mutability

- ▶ **This is one of many advantages in Rust**



# Mutability

- ▶ **This is one of many advantages in Rust**
- ▶ **That encourages us to write our code in a way that**



# Mutability

- ▶ **This is one of many advantages in Rust**
- ▶ **That encourages us to write our code in a way that**
- ▶ **It takes advantage of the safety and concurrency that Rust offers**



# Summary

**In this tutorial, we have learnt:**

- ▶ **How to create** variables
- ▶ **About** mutability
- ▶ **How to mutate** variables



# Assignment

- ▶ **Go to the project folder** `rust-assignment`
- ▶ **In the `main.rs` file**
  - ▶ **Create a variable named `s` and make it mutable**
  - ▶ **Assign `13` as a value to `s`**
  - ▶ **Print the value of `s`**
  - ▶ **Reassign the value of `s` as `19`**
  - ▶ **Print the value of `s`**



# Assignment

- ▶ Compile **and** execute **the project**
- ▶ **Observe the output in the Terminal**



# About Spoken Tutorial project

- ▶ Watch the video available at [https://spoken-tutorial.org/What\\_is\\_a\\_Spoken\\_Tutorial](https://spoken-tutorial.org/What_is_a_Spoken_Tutorial)
- ▶ It summarises the Spoken Tutorial project
- ▶ If you do not have good bandwidth, you can download and watch it



# 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](mailto:contact@spoken-tutorial.org)



# Answers for THIS Spoken Tutorial

- ▶ **Questions in THIS Spoken Tutorial?**
- ▶ **Visit <https://forums.spoken-tutorial.org>**
- ▶ **Choose the minute and second where you have the question**
- ▶ **Explain your question briefly**
- ▶ **The Spoken Tutorial project will ensure an answer**
- ▶ **You will have to register to ask questions**



# Acknowledgements

- ▶ **Spoken Tutorial project is funded by Ministry of Education (MoE), Govt. of India**



# Thank you

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