

# Grammar of TurtleScript

**Talk to a Teacher**

<http://spoken-tutorial.org>

**National Mission on Education through ICT**

<http://sakshat.ac.in>

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**Narration: Madhuri G, IIT Bombay**

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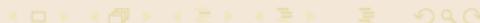


# Learning Objectives



# Learning Objectives

**We will learn about**



# Learning Objectives

**We will learn about**

- ▶ **Grammar of Turtlescript**



# Learning Objectives

**We will learn about**

- ▶ **Grammar of Turtlescript**
- ▶ **if-else condition**



# System Requirement



# System Requirement

- ▶ **Ubuntu Linux OS v 12.04**



# System Requirement

- ▶ **Ubuntu Linux OS v 12.04**
- ▶ **KTurtle v 0.8.1 beta**



# Pre-requisites



# Pre-requisites

- ▶ **Basic working knowledge of K Turtle**



# Pre-requisites

- ▶ **Basic working knowledge of K Turtle**
- ▶ **for relevant tutorials, please visit our website**  
<http://spoken-tutorial.org>



# Turtle Script



# Turtle Script

- ▶ TurtleScript is a **programming language**



# Turtle Script

- ▶ **TurtleScript** is a **programming language**
- ▶ It has different types of **words and symbols** used for **various purposes**



# Turtle Script

- ▶ TurtleScript is a **programming language**
- ▶ It has different types of **words and symbols** used for **various purposes**
- ▶ It **instructs Turtle** what to do



# Grammar of Turtlescript



# Grammar of Turtlescript

**Grammar of TurtleScript includes-**



# Grammar of Turtlescript

## Grammar of TurtleScript includes-

- ▶ **Comments**



# Grammar of Turtlescript

## Grammar of TurtleScript includes-

- ▶ **Comments**
- ▶ **Commands**



# Grammar of Turtlescript

## Grammar of TurtleScript includes-

- ▶ **Comments**
- ▶ **Commands**
- ▶ **Numbers**



# Grammar of Turtlescript

## Grammar of TurtleScript includes-

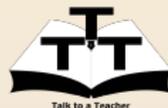
- ▶ **Comments**
- ▶ **Commands**
- ▶ **Numbers**
- ▶ **Strings**



# Grammar of Turtlescript

## Grammar of TurtleScript includes-

- ▶ **Comments**
- ▶ **Commands**
- ▶ **Numbers**
- ▶ **Strings**
- ▶ **Variables**



# Grammar of Turtlescript

## Grammar of TurtleScript includes-

- ▶ **Comments**
- ▶ **Commands**
- ▶ **Numbers**
- ▶ **Strings**
- ▶ **Variables**
- ▶ **Boolean values**



# Numbers



# Numbers

**Numbers can be stored in**



# Numbers

Numbers can be stored in

- ▶ **Mathematical** operators



# Numbers

Numbers can be stored in

- ▶ **Mathematical** operators
- ▶ **Comparison** operators



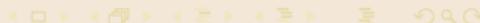
# Numbers

Numbers can be stored in

- ▶ **Mathematical** operators
- ▶ **Comparison** operators
- ▶ **Variables**



# Mathematical Operators



# Mathematical Operators

**Mathematical operators include**



# Mathematical Operators

**Mathematical operators include**

- ▶ **+** **Addition**



# Mathematical Operators

**Mathematical operators include**

- ▶ **+** Addition
- ▶ **-** Subtraction



# Mathematical Operators

**Mathematical operators include**

- ▶ **+** Addition
- ▶ **-** Subtraction
- ▶ **\*** Multiplication



# Mathematical Operators

**Mathematical operators include**

- ▶ **+** Addition
- ▶ **-** Subtraction
- ▶ **\*** Multiplication
- ▶ **/** Division



# Strings



# Strings

- ▶ Strings can be put in **variables** like **numbers**



# Strings

- ▶ **Strings can be put in variables like numbers**
- ▶ **Strings cannot be used in mathematical or comparison operators**



# Strings

- ▶ Strings can be put in **variables** like **numbers**
- ▶ Strings cannot be used in **mathematical** or **comparison operators**
- ▶ Strings are **highlighted in red color**

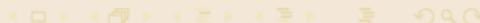


# Strings

- ▶ Strings can be put in **variables** like **numbers**
- ▶ Strings cannot be used in **mathematical** or **comparison operators**
- ▶ Strings are **highlighted in red color**
- ▶ Kturtle identifies a **line in double quotes** as a string



# 'if-else' Condition



# 'if-else' Condition

- ▶ 'if' condition is executed only **if the boolean value evaluates 'true'**



# 'if-else' Condition

- ▶ 'if' condition is executed only **if the boolean value evaluates 'true'**
- ▶ 'else' is **executed only if the 'if' condition is 'false'**



# Summary



# Summary

**We have learnt about**



# Summary

**We have learnt about**

- ▶ **Grammar of TurtleScript**



# Summary

**We have learnt about**

- ▶ **Grammar of TurtleScript**
- ▶ **'if-else' condition**



# Assignment



# Assignment

**Solve an equation using**



# Assignment

**Solve an equation using**

- ▶ **'if-else' conditions**



# Assignment

**Solve an equation using**

- ▶ **'if-else' conditions**
- ▶ **Mathematical and comparison operators**



# Assignment

**Solve an equation using**

- ▶ **'if-else' conditions**
- ▶ **Mathematical and comparison operators**
- ▶ **Display the results using “print” and “go” commands**



# Assignment



# Assignment

**To solve the assignment**



# Assignment

**To solve the assignment**

- ▶ **Choose any four random numbers**



# Assignment

**To solve the assignment**

- ▶ **Choose any four random numbers**
- ▶ **Multiply two sets of random numbers**



# Assignment

## To solve the assignment

- ▶ Choose any four random numbers
- ▶ Multiply two sets of random numbers
- ▶ Compare the results using comparison operators



# Assignment

## To solve the assignment

- ▶ Choose any four random numbers
- ▶ Multiply two sets of random numbers
- ▶ Compare the results using comparison operators
- ▶ Display both the results



# Assignment

## To solve the assignment

- ▶ Choose any four random numbers
- ▶ Multiply two sets of random numbers
- ▶ Compare the results using comparison operators
- ▶ Display both the results
- ▶ Display greater result at the center of canvas



# About the Spoken Tutorial Project

- ▶ Watch the video available at [http://spoken-tutorial.org/What\\_is\\_a\\_Spoken\\_Tutorial](http://spoken-tutorial.org/What_is_a_Spoken_Tutorial)
- ▶ It summarises the Spoken Tutorial project



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- ▶ 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)



# Acknowledgements

- ▶ Spoken Tutorial Project is a part of the Talk to a Teacher project
- ▶ It is supported by the National Mission on Education through ICT, MHRD, Government of India
- ▶ More information on this Mission is available at <http://spoken-tutorial.org/NMEICT-Intro>

