

BASH Shell Scripting

Talk to a Teacher Project

<http://spoken-tutorial.org>

National Mission on Education through ICT

<http://www.sakshat.ac.in>

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Learning Objectives



Learning Objectives

- **About different types of Shells**



Learning Objectives

- ▶ **About different types of Shells**
- ▶ **To write a Bash Shell script**



Learning Objectives

- ▶ **About different types of Shells**
- ▶ **To write a Bash Shell script**
- ▶ **To execute it**



Prerequisite



Prerequisite

- ▶ You should be familiar with Linux Operating System



Prerequisite

- ▶ You should be familiar with Linux Operating System
- ▶ If not, then for relevant Linux tutorials, please visit <http://spoken-tutorial.org>



System Requirements



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- ▶ **Ubuntu Linux 12.04 OS**



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- ▶ **GNU Bash version 4.1.10**



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- ▶ **Ubuntu Linux 12.04 OS**
- ▶ **GNU Bash version 4.1.10**
- ▶ **Bash version 4 or above is recommended for practice**



Bash Shell



Bash Shell

- ▶ **Bash Shell is a Command language interpreter, that executes commands**



Bash Shell

- ▶ Bash Shell is a Command language interpreter, that executes commands
- ▶ **Commands are read from the standard input device**



Bash Shell

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- ▶ Commands are read from the standard input device
- ▶ The input device can be:



Bash Shell

- ▶ Bash Shell is a Command language interpreter, that executes commands
- ▶ Commands are read from the standard input device
- ▶ The input device can be:
 - ▶ **Keyboard**



Bash Shell

- ▶ Bash Shell is a Command language interpreter, that executes commands
- ▶ Commands are read from the standard input device
- ▶ The input device can be:
 - ▶ Keyboard
 - ▶ **A simple text file**



Different Types of Shells



Different Types of Shells

Bourne Shell - `/bin/sh`



Different Types of Shells

Bourne Shell - `/bin/sh`

- Was written by Stephen Bourne



Different Types of Shells

Bourne Shell - `/bin/sh`

- ▶ Was written by Stephen Bourne
- ▶ Lacked interactivity



Different Types of Shells



Different Types of Shells

C Shell - /bin/csh



Different Types of Shells

C Shell - /bin/csh

- **Provides features lacking in Bourne Shell**



Different Types of Shells



Different Types of Shells

K Shell - `/bin/ksh`



Different Types of Shells

K Shell - /bin/ksh

- **Was created by David Korn**



Different Types of Shells

K Shell - `/bin/ksh`

- ▶ Was created by David Korn
- ▶ Has features of both B Shell and C Shell



Different Types of Shells

K Shell - `/bin/ksh`

- ▶ Was created by David Korn
- ▶ Has features of both B Shell and C Shell
- ▶ Along with some additional features



Different Types of Shells

Bash Shell - `/bin/bash`



Different Types of Shells

Bash Shell - `/bin/bash`

- ▶ Was developed by GNU project



Different Types of Shells

Bash Shell - `/bin/bash`

- ▶ Was developed by GNU project
- ▶ Is based on B Shell language



Different Types of Shells

Bash Shell - /bin/bash

- ▶ Was developed by GNU project
- ▶ Is based on B Shell language
- ▶ Has features of C and K Shells



Different Bash Shells



Different Bash Shells

TC Shell - `/bin/tcsh`



Different Bash Shells

TC Shell - `/bin/tcsh`

- ▶ **Is the default Shell of FreeBSD and its descendants**



Different Bash Shells



Different Bash Shells

Z Shell - `/bin/zsh`



Different Bash Shells

Z Shell - /bin/zsh

- ▶ **Is a Shell designed for interactive use**



Different Bash Shells

Z Shell - `/bin/zsh`

- ▶ Is a Shell designed for interactive use
- ▶ Has many useful features of ksh, bash and tcsh



Bash Shell Script



Bash Shell Script

- **Contains a series of Bash commands in plain text file**



Bash Shell Script

- ▶ Contains a series of Bash commands in plain text file
- ▶ Tells the Shell to execute this text file, instead of typing the commands



Summary

- ▶ **Types of Shells**
- ▶ **Bash Shell**
- ▶ **Bash Shell script**
- ▶ **Write a simple Shell script**
- ▶ **Execute the script**



Assignment

Write a simple script to display the message

- ▶ **“Welcome to Bash learning”**
- ▶ **and “*****”**
- ▶ **on separate lines**



About the Spoken Tutorial Project

- ▶ Watch the video available at http://spoken-tutorial.org/What_is_a_Spoken_Tutorial
- ▶ It summarises the Spoken Tutorial project



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- ▶ 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



Acknowledgements

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- ▶ 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>

