

# Hash In Perl

**Talk to a Teacher**

**<http://spoken-tutorial.org>**

**National Mission on Education through ICT**

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

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# Learning Objective

**In this tutorial, we will learn**

- ▶ **Hash in Perl**



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- ▶ Hash in Perl
- ▶ Accessing element of a hash



# System Requirements

- ▶ **Ubuntu Linux 12.04 OS**



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- ▶ **Perl 5.14.2**



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- ▶ **Perl 5.14.2**
- ▶ **gedit Text Editor**



# Pre-requisites

Basic knowledge of

- ▶ **Variables and Data Structures in Perl**



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## Basic knowledge of

- ▶ **Variables** and **Data Structures** in Perl
- ▶ **Comments, Loops, Conditional Statements** and **Array** will be an added advantage





# Pre-requisites

## Basic knowledge of

- ▶ **Variables** and **Data Structures** in Perl
- ▶ **Comments, Loops, Conditional Statements** and **Array** will be an added advantage
- ▶ For relevant tutorials, visit <http://spoken-tutorial.org>



# Hash

- ▶ Hash is an unordered collection of data



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- ▶ It's a key/value pair data structure



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- ▶ Hash keys are unique



# Hash

- ▶ Hash is an unordered collection of data
- ▶ It's a key/value pair data structure
- ▶ Hash keys are unique
- ▶ However, it can have duplicate values



# Declaring hash

```
%hash = (  
    'Name' => 'John',  
    'Department' => 'Finance'  
);
```



# Accessing value of a key

**Syntax:**



# Accessing value of a key

## Syntax:

```
$hashName{ 'KeyName' }
```





# Add, delete of a hash key

**Syntax:**



# Add, delete of a hash key

## Syntax:

Addition of a key

```
$hashName{ 'KeyName' } = $value;
```

Deletion of a key

```
delete $hashName{ 'KeyName' };
```



# Sort keys

**Syntax:**



# Sort keys

## Syntax:

```
sort(keys %hashName) ;
```



# Sort keys

## Syntax:

```
sort(keys %hashName) ;
```

**Similarly, we can sort hash values as;**



# Sort keys

## Syntax:

```
sort(keys %hashName);
```

**Similarly, we can sort hash values as;**

```
sort(values %hashName);
```



# Inbuilt Functions

**To fetch all the `hash` keys and values**



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**To fetch all the hash keys and values**

- ▶ **keys function: used to retrieve all the keys of a hash**





# Inbuilt Functions

**To fetch all the hash keys and values**

- ▶ **keys function: used to retrieve all the keys of a hash**
- ▶ **values function: returns values of all the keys**



# Inbuilt Functions

**To fetch all the hash keys and values**

- ▶ **keys function: used to retrieve all the keys of a hash**
- ▶ **values function: returns values of all the keys**
- ▶ **each function: iterates over hash and returns key/value pair from hash**



# Syntax-looping over a Hash

```
foreach $variable  
  (keys(%hashName)) {  
    # Action to be performed  
  }
```



# Syntax-looping over a Hash keys

```
foreach $variable  
  (values(%hashName)) {  
    # Action to be performed  
  }
```



# Note

- ▶ Hash is unordered collection of data



# Note

- ▶ Hash is unordered collection of data
- ▶ Keys returned will not be in the sequence defined



# Summary

In this tutorial we have learnt-

- ▶ Hash in Perl



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- ▶ Accessing element of a hash





# Summary

In this tutorial we have learnt-

- ▶ Hash in Perl
- ▶ Accessing element of a hash
- ▶ using sample programs



# Assignments

- ▶ **Declare** hash **having** student name as key
- ▶ **And** his/her percentage as the value
- ▶ **Loop** over a hash using keys, values **and** each function
- ▶ **Then** print the percentage of each student



# 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>

