

# User Defined Functions in awk

**Spoken Tutorial Project**

<http://spoken-tutorial.org>

**National Mission on Education through ICT**

<http://sakshat.ac.in>

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# Learning Objectives



# Learning Objectives

- **Syntax of function definition**



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- **Function Call**



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- Syntax of function definition
- Function Call
- Return statement



# System Requirements



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- **Ubuntu Linux 16.04 OS**



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- **Ubuntu Linux 16.04 OS**
- **gedit text editor 3.20.1**





# Pre-requisites

- Please go through the earlier `awk` tutorials on <http://spoken-tutorial.org/>



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- Please go through the earlier awk tutorials on <http://spoken-tutorial.org/>
- Knowledge of any programming language like C or C++



# Code Files

- The files used in this tutorial are available in the [Code Files link](#) on this tutorial page



# Code Files

- The files used in this tutorial are available in the Code Files link on this tutorial page
- Please download and extract them



# User-Defined Functions



# User-Defined Functions

```
function function-name(arguments)
{
    body-of-function
}
```



# Function Call

- To call, write function name



# Function Call

- To call, write function name
- Followed by the arguments in parentheses





# Function Call

- To call, write function name
- Followed by the arguments in parentheses
- **Note:** Space is not allowed between the function name and ( of argument



# User-Defined Function Example



# User-Defined Function Example

- In `awkdemo.txt` file, the sixth field represents stipend



# User-Defined Function Example

- In `awkdemo.txt` file, the sixth field represents stipend
- Assume that stipend is either zero or consists of four digits



# User-Defined Function Example

**Suppose, stipend is 8900:**



# User-Defined Function Example

**Suppose, stipend is 8900:**

- **Print it as 8 thousand 9 hundred**



# User-Defined Function Example

**Suppose, stipend is 8900:**

- **Print it as 8 thousand 9 hundred**
- **If stipend is 0, print as zero**



# Return statement





# Return statement

- Returns control to the calling part of the awk program



# Return statement

- Returns control to the calling part of the awk program
- Used to return a value for use in the rest of the awk program



# Return statement

- `return [expression]`



# Return statement

- `return [expression]`
- `[expression]` **part is optional**



# Return statement Assignment

- **Use `rev()` to reverse the Roll number field in `awkdemo.txt`**



# Return statement Assignment

- **Use `rev()` to reverse the Roll number field in `awkdemo.txt`**
- **If the Roll number is A001, output should be 100A**



# Summary

**We learnt about**

- **Syntax of function definition**
- **Function Call**
- **Return statement**



# Assignment

- **Write a function to create transpose of a 2D matrix**
- **Write a function to return the minimum value element from an array**





# 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
- 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)



# Forum for specific questions

- Do you have questions in **THIS Spoken Tutorial?**
- Please visit  
<http://forums.spoken-tutorial.org>
- Choose the minute and second where you have the question
- Explain your question briefly
- Someone from our team will answer them



# 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>



# Thank You

Thanks for joining  
<http://spoken-tutorial.org>

