

# Static Variables

Spoken Tutorial Project

<http://spoken-tutorial.org>

National Mission on Education through ICT

<http://sakshat.ac.in>

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# Learning Objectives

**We will learn about**



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We will learn about

- **What are static variables**



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- What are static variables
- **Creating static variables**



# Learning Objectives

We will learn about

- What are static variables
- Creating static variables
- **How to use static variables**



# Software Requirements



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- **Ubuntu 12.04**



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- **JDK 1.7**



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- **Ubuntu 12.04**
- **JDK 1.7**
- **Eclipse 4.3.1**



# Prerequisite



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- **Basic knowledge of Java and Eclipse IDE**



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- **Basic knowledge of Java and Eclipse IDE**
- **Knowledge of classes, objects and instance variables**



# Prerequisite

- **Basic knowledge of Java and Eclipse IDE**
- **Knowledge of classes, objects and instance variables**
- **For relevant tutorials, please visit <http://www.spoken-tutorial.org>**



# What is a static variable?

- **A static variable is a variable which is associated with the entire class**



# What is a static variable?

- A **static variable** is a variable which is associated with the entire **class**
- It is also called a **class variable**



# What is a static variable?

- A **static variable** is a variable which is associated with the entire **class**
- It is also called a **class variable**
- It is declared using the **static keyword**



# Static Variable-Example



# Static Variable-Example

Object	Name	ID	Branch	TOTAL COUNT
				0



# Static Variable-Example

Object	Name	ID	Branch	TOTAL COUNT
				0



# Static Variable-Example

Object	Name	ID	Branch	TOTAL COUNT
	<b>ADIL</b>			<b>0</b>



# Static Variable-Example

Object	Name	ID	Branch	TOTAL COUNT
	ADIL	IT101		0



# Static Variable-Example

Object	Name	ID	Branch	TOTAL COUNT
	ADIL	IT101	IT	0



# Static Variable-Example

Object	Name	ID	Branch	TOTAL COUNT
	ADIL	IT101	IT	<b>1</b>



# Static Variable-Example

Object	Name	ID	Branch	TOTAL COUNT
	ADIL	IT101	IT	1
				



# Static Variable-Example

Object	Name	ID	Branch	TOTAL COUNT
	ADIL	IT101	IT	1
	AMAL			



# Static Variable-Example

Object	Name	ID	Branch	TOTAL COUNT
	ADIL	IT101	IT	1
	AMAL	EC101		



# Static Variable-Example

Object	Name	ID	Branch	TOTAL COUNT
	ADIL	IT101	IT	1
	AMAL	EC101	EC	



# Static Variable-Example

Object	Name	ID	Branch	TOTAL COUNT
	ADIL	IT101	IT	2
	AMAL	EC101	EC	



# Static Variable-Example

Object	Name	ID	Branch	TOTAL COUNT
	ADIL	IT101	IT	2
	AMAL	EC101	EC	
				



# Static Variable-Example

Object	Name	ID	Branch	TOTAL COUNT
	ADIL	IT101	IT	2
	AMAL	EC101	EC	
	CAROL			



# Static Variable-Example

Object	Name	ID	Branch	TOTAL COUNT
	ADIL	IT101	IT	2
	AMAL	EC101	EC	
	CAROL	CS101		



# Static Variable-Example

Object	Name	ID	Branch	TOTAL COUNT
	ADIL	IT101	IT	2
	AMAL	EC101	EC	
	CAROL	CS101	CS	



# Static Variable-Example

Object	Name	ID	Branch	TOTAL COUNT
	ADIL	IT101	IT	3
	AMAL	EC101	EC	
	CAROL	CS101	CS	



# Instance Vs Static Variable

**When a class is loaded**



# Instance Vs Static Variable

When a class is loaded

- **A static variable in a class occupies a single fixed memory location**



# Instance Vs Static Variable

When a class is loaded

- A **static variable** in a **class** occupies a single fixed memory location
- **Instance variables of each object occupy separate memory locations**



# Static Variable - As Constants

- **The static modifier is also used along with the final modifier**



# Static Variable - As Constants

- The **static** modifier is also used along with the **final** modifier
- It is done to define a constant which is common to the entire class



# Static Variable - As Constants

- The **static** modifier is also used along with the **final** modifier
- It is done to define a constant which is common to the entire class
- **Conventionally, the names of constant variables are spelled in upper-case letters**



# Summary

- What is a **static variable** and when it is used
- How to create and invoke **static variables**



# Assignment



# Assignment

- Design a class **CarService** to represent a Car Service Station
- This class should contain variables to represent the following
  - **Name** of the Service Station
  - Car **make, model** and **regno** - Which are in for service
  - **No of Cars in** for Service



# Assignment (continued...)

- Identify the **instance variables** and **static variables**
- Declare them using suitable keywords
- Define a **constructor** to initialise the values for Car **make**, **model** and **regno**
- Define a method **show( )** to print the values of all variables



# Assignment (continued...)

- Also create a **Demo** class containing the **main** method to verify the results
  - Create a few **objects** of **CarService**
  - Invoke the **show( )** method using these objects
  - Also access the **static variables** directly using the class name



# 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)



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- More information on this Mission is available at <http://spoken-tutorial.org>



[/NMEICT-Intro](http://spoken-tutorial.org/NMEICT-Intro)



# About the contributor

- This script has been contributed by:  
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- Thanks for joining

