Java Programming Lab Manual

Asadullah Shah

Zeeshan Bhatti





IIUM PRESS

INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA

JAVA PROGRAMMING LAB MANUAL

Editors

Asadullah Shah Zeeshan Bhatti

Department of Kulliyyah of Information & Communication Technology International Islamic University Malaysia

January 2011





Published by: IIUM Press International Islamic University Malaysia

First Edition, 2011. ©IIUM Press, IIUM

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without any prior written permission of the publisher.

Perpustakaan Negara Malaysia

Cataloguing-in-Publication Data

Bibliography p. Includes Index ISBN

ISBN: 978-967-418-086-7

Member of Majlis Penerbitan Ilmiah Malaysia – MAPIM (Malaysian Scholarly Publishing Council)

Printed by:

HUM PRINTING SDN. BHD.

No. 1, Jalan Industri Batu Caves 1/3 Taman Perindustrian Batu Caves Batu Caves Centre Point 68100 Batu Caves Selangor Darul Ehsan

TABLE OF CONTENTS

Dedication Preface	V :
Acknowledgement	xi xiii
Chapter 1: Introduction to Java - Zeeshan Bhatti - Asadullah Shah	15
Chapter 2: Compiling and Executing Java Code - Zeeshan Bhatti - Asadullah Shah	21
Chapter 3: Introduction to Data Types in Java - Zeeshan Bhatti - Asadullah Shah	27
Chapter 4: Arithmetic and Relational Operators - Zeeshan Bhatti - Asadullah Shah	33
Chapter 5: Relational and Logical Operators - Zeeshan Bhatti - Asadullah Shah	39
Chapter 6: Bitwise Operators and Type Casting - Asadullah Shaikh - Zeeshan Bhatti - Asadullah Shah	45
Chapter 7: Conditional Statements - Asadullah Shaikh - Zeeshan Bhatti - Asadullah Shah	51
Chapter 8: If-Else Statements - Asadullah Shaikh - Zeeshan Bhatti - Asadullah Shah	55
Chapter 9: The If-Else-If Statements - Asadullah Shaikh - Zeeshan Bhatti - Asadullah Shah	61

Chapter 10: Switch Statement - Asadullah Shaikh - Zeeshan Bhatti - Asadullah Shah	67
Chapter 11: Loops - Agha Javed Phatan - Zeeshan Bhatti	73
 - Asadullah Shah Chapter 12: Do-While Loops - Agha Javed Phatan - Zeeshan Bhatti - Asadullah Shah 	79
Chapter 13: For Loops - Agha Javed Phatan - Zeeshan Bhatti - Asadullah Shah	85
Chapter 14: Loop Pitfalls and Exercise - Agha Javed Phatan - Zeeshan Bhatti - Asadullah Shah	93
Chapter 15: Nested Loops - Agha Javed Phatan - Zeeshan Bhatti - Asadullah Shah	99
Chapter 16: Arrays in Java - Wascem Javaid Soomro - Zeeshan Bhatti - Asadullah Shah	105
Chapter 17: Two Dimensional Arrays - Waseem Javaid Soomro - Zeeshan Bhatti - Asadullah Shah	111
Chapter 18: Strings - Waseem Javaid Soomro - Zeeshan Bhatti - Asadullah Shah	119

Chapter 19: Methods of String Class - Waseem Javaid Soomro - Zeeshan Bhatti - Asadullah Shah	127
Chapter 20: Object and Classes - Waseem Javaid Soomro - Zeeshan Bhatti - Asadullah Shah	135
Chapter 21: Constructors - Dil Nawaz Hakro - Zeeshan Bhatti - Asadullah Shah	141
Chapter 22: User defined Methods - Dil Nawaz Hakro - Zeeshan Bhatti - Asadullah Shah viii	147
Chapter 23: Arguments Passing - Dil Nawaz Hakro - Zeeshan Bhatti - Asadullah Shah	155
Chapter 24: Return Statement - Dil Nawaz Hakro - Zeeshan Bhatti - Asadullah Shah	163
Chapter 25: Working with Classes - Dil Nawaz Hakro - Zeeshan Bhatti - Asadullah Shah	169
Chapter 26: Multiple Classes - Muniba Shaikh - Zeeshan Bhatti - Asadullah Shah	177
Chapter 27: Method Overloading and Overriding - Muniba Shaikh - Zeeshan Bhatti - Asadullah Shah	185

Chapter 28: Modifires for class data	191
- Muniba Shaikh	
- Zeeshan Bhatti	
- Asadullah Shah	
Chapter 29: Inner Classes	199
- Muniba Shaikh	
- Zeeshan Bhatti	
- Asadullah Shah	
Chapter 30: Comparison between different class types	207
- Muniba Shaikh	
- Zeeshan Bhatti	
- Asadullah Shah	
Chapter 31: Exception Handling	215
- Kamran Khowaja	
- Zeeshan Bhatti	
- Asadullah Shah	
Chapter 32: Throw & Throws Keyword	223
- Kamran Khowaja	
- Zeeshan Bhatti	
- Asadullah Shah	
Chapter 33: Local Block and Static Block	231
- Kamran Khowaja	
- Zeeshan Bhatti	
- Asadullah Shah	
Chapter 34: Abstract Classes	237
- Dini Oktarina Dwi	
- Zeeshan Bhatti	
- Asadullah Shah	
Chapter 35: Interfaces	245
- Dini Oktarina Dwi	2.15
- Zeeshan Bhatti	
- Asadullah Shah	

Chapter 24

Return Statement

Dil Nawaz Hakro, Zeeshan Bhatti, Asadullah Shah

Abstract

Return statement are simply a way in Java where a method returns an answer after it has completed its execution. In this experiment the use of return statement inside a method is discussed. The students will learn how to use return statements in various situations and how to exit a method also with it.

24.1 Return Statement

A method, unless void, returns a value of the specified type to the calling method using the *return* statement. The key points to remember are:

• The return statement is used to immediately quit the method and return a value:

The type of the return value or expression must match the method's declared return type.

- So a return statement does two things: quits the method and (unless void) returns a value to the calling method.
- It is up to the calling method to decide whether it wants to use the returned value
 sometype x = someMethod(...);
- or ignore it:

someMethod(...);