

Java Programming Lab Manual

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JAVA PROGRAMMING LAB MANUAL

Editors

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Chapter 14

Loop Pitfalls and Exercise

Agha Javad Phatan, Zeeshan Bhatti, Asadullah Shah

Abstract

In this chapter we will practice the use of loops in various situations by working with few examples. The use of loops and their complete understanding is absolutely essential in programming but at the same time there are few pitfalls in each loop and a programmer must be aware of these short comings which could lead a program to undesirable logical errors. Such types of situations and errors have been iterated in this chapter.

14.1 Pre-Test loops vs. Post-Test loops

The while() and for() loops are also known as pre-test loops as they test the condition before the execution of their body. Whereas the do-while() loop is known as post-test loop as it executes its body first and then tests the condition. Two main thing to remember about these types of loops are:

- Use a pre-test loop for something that may be done zero times
- Use a post-test for something that is always done at least once

14.2 Check list for Repetition control

Following are few key points to remember when using loops:

- Watch out for the off-by-one error (OBOE).
- Make sure the loop body contains a statement that will eventually cause the loop to terminate.