



Computer Fundamentals

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Lecture 24



Loop

- Loop causes a section of program to be repeated
 - ❑ Repetition for a certain number of times
- Repetition continues when a condition is true
 - ❑ When condition becomes false, loop ends
 - ❑ Control passes to statements following loop
- Three kinds of loops
 - ❑ for loop
 - ❑ while loop
 - ❑ do-while loop

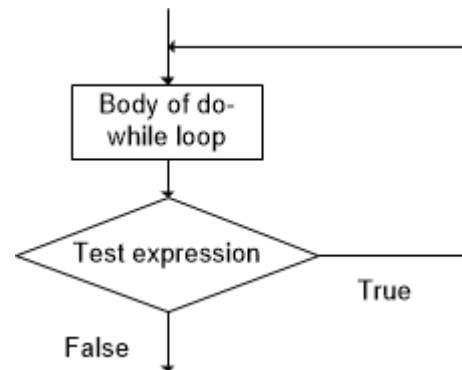
Source: R. Lafore, *Object-Oriented Programming in C++*, Fourth Edition, 2002



do-while Loop

- Similar to while loop with one very important difference
 - ❑ In while loop, test expression is checked before body of loop
 - ❑ In do-while loop, body of loop executed then test expression checked
 - ❑ Body of do-while loop is executed at least once
- Also called repeat-until loop

DO
sequence
WHILE condition



Source: <http://www.programiz.com/cpp-programming/do-while-loop>



do-while Loop (cont.)

- A bank ATM program to prompt user to enter the PIN code. In case of wrong entry, prompt again for PIN code. In case, correct PIN is entered, display "Access granted!". Assume that the correct PIN is 5678.

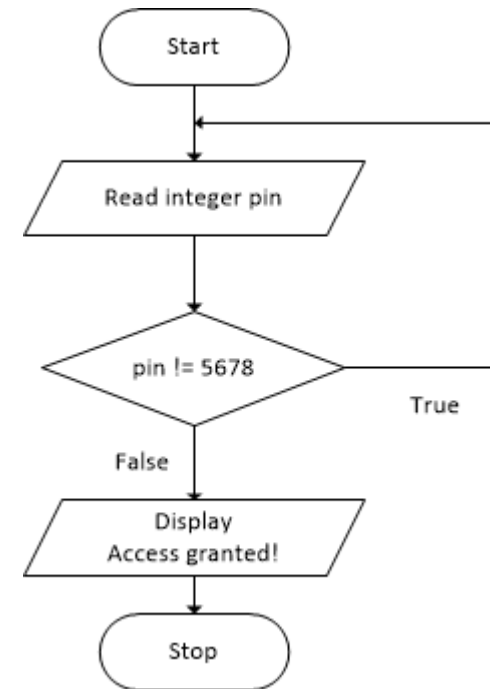
DO

Prompt the user to enter an integer pin

READ pin

WHILE pin is not equal to 5678

DISPLAY Access granted!





Class Tasks (cont.)

- Write pseudocode and draw flowchart for program that invites the user to enter two numbers: a dividend (the top number in a division) and a divisor (the bottom number). It then calculates the quotient (the answer) and the remainder, using the / and % operators, and prints out the result. Then it asks the user to choose whether he wants to do another division. If 'n' is entered, the `do-while` loop body is not executed anymore.