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Assignment 5-4

COP-2800 : JAVA-Programming

Technical Specifications

Code File(s) Link

https://github.com/Grantlw100/Java-Notes-HCC-02498/tree/main/module-5/assignment5.4/

PseudoCode

START PROGRAM

DECLARE decimal value

DECLARE integer roundTo

DECLARE String unit

DECLARE String output

DECLARE boolean validInput as false

CREATE scanner object for user input

DISPLAY "Enter the distance as a decimal number: "

WHILE (user input is NOT a valid decimal number)

DISPLAY "Invalid input. Please enter a valid decimal number"

CLEAR invalid input

END WHILE

SET value to user's valid decimal input

DISPLAY "You entered: " + value

DISPLAY "Enter an integer to round your conversion to: "

WHILE (user input is NOT a valid integer)

DISPLAY "Invalid input. Please enter a valid integer"

CLEAR invalid input

END WHILE

SET roundTo to user's valid integer input

DISPLAY "You entered: " + roundTo

SET validInput to false

WHILE (validInput is false)

DISPLAY "Enter unit (mi for Miles or km for Kilometers): "

SET unit to user's input in lowercase

IF (unit equals "mi")

SET value = value \* 1.60934

SET unit = "km"

SET output = "The Conversion from Miles to Kilometers is"

SET validInput to true

ELSE IF (unit equals "km")

SET value = value \* 0.621371

SET unit = "mi"

SET output = "The Conversion from Kilometers to Miles is"

SET validInput to true

ELSE

DISPLAY "Invalid input. Please enter mi or km."

CONTINUE LOOP

END IF

END WHILE

CREATE BigDecimal bd using converted value

ROUND bd to "roundTo" decimal places (rounding mode: HALF\_UP)

SET roundedNumber = bd converted back to double

DISPLAY output + roundedNumber + unit + "²"

END PROGRAM

A screen shot of a computer program

AI-generated content may be incorrect.

Screenshots