

EXERCISES

1. Use a string builder to construct a sentence that describes your personal details, including your name, academic year, field of study and the university.
2. Write a Java program that takes an integer input from the user and checks if it's even or odd using an if-else statement. If the number is even, print "The number is even." Otherwise, print "The number is odd."
3. Write a program that calculates and prints the product of three integers.
4. Write a program that converts a Fahrenheit degree to Celsius using the formula:
$$\text{Celsius} = (5/9)(\text{Fahrenheit} - 32)$$
5. Write an application that ask the user to enter two integers, obtains them from the user and print their sum, product, difference and quotient (division)
6. The process of finding the largest value (i.e., the maximum of a group of values) is used frequently in computer applications. For example, a program that determines the winner of a sales contest would input the number of units sold by each sales person. The sales person who sells the most units wins the contest. Write a Java application that inputs a series of 10 integers and determines and prints the largest integer. Your program should use at least the following three variables:
 - a. **counter**: A counter to count to 10 (i.e., to keep track of how many numbers have been input and to determine when all 10 numbers have been processed).
 - b. **number**: The integer most recently input by the user.
 - c. **largest**: The largest number found so far
7. Write a Java application that allows the user to enter up to 20 integer grades into an array. Stop the loop by typing in -1. Your main method should call an Average method that returns the average of the grades. Use the DecimalFormat class to format the average to 2 decimal places.
8. Write a complete Java application to prompt the user for the double radius of a sphere, and call method sphereVolume to calculate and display the volume of the sphere. Use the following statement to calculate the volume: $\text{double volume} =$

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(4.0 / 3.0)*Math.PI*Math.pow(radius,3).
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