

Lesson 1 Exercise

Write the following Java program:

1. Read in three integers; print the three integers in ascending order.
2. Read in a visitor age to a theme park and determine if the visitor needs to buy a ticket. Kids 5 years old and below, senior citizen age 65 and above are not required to purchase a ticket.
3. Read in two Strings from keyboard, print if the content of the two Strings are equals with case not taken into consideration.
4. Read in two Strings from keyboard, print which String comes before the other String in Lexicographic order with case not taken into consideration.
5. Write a Java program to check and display if a person is allowed to join a basketball match based on the person's gender and VO2max according to the table below

Gender	Allowed	Not Allowed
Male	VO2max between 40 to 60 (inclusive)	VO2max below 40 and above 60
Female	VO2max between 45 to 60 (inclusive)	VO2max below 45 and above 60

6. Read in the weight and height of a person, calculate the BMI and display the BMI status.
 - Underweight = <18.5
 - Normal weight = 18.5–24.9
 - Overweight = 25–29.9
 - Overweight = 25–29.9
 - Obesity = BMI of 30 or greater
7. Read in a month number display the month using a switch statement.

Month	month number
1	January
2	February
3	March
....
12	December
Others	Invalid month

8. Implement the above using an array.

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9. Get a score from user and validate that the score is between 1 and 100. If it is not ask the user to enter again. Implement this using a while loop.
10. Write a Java program to get a char (y,n,Y,N) from the user. If the input is not (y,n,Y,N), ask again. Implement this using a while loop.
11. Write a Java program to sum up all the odd and even int entered by the user. Exit the program when the user enter -1 and display the add and even sum.
12. Write a Java program to keep getting a code (String) from the user. The user terminates the program by entering "q". Print all the numbers entered by the user that is more than 3 characters.
13. Write a Java program to get an int num from the user and print from 1 to that int num. Skip number that is divisible by 3.
14. Fibonacci numbers are the numbers in the following integer sequence.
0,1,1,2,3,5,8,13,21,34,55....
 $F_n = F_{n-1} + F_{n-2}$
 $F_0 = 0, F_1 = 1$
Write a program to get the number n, and compute the Fibonacci of n.
15. Ask the user to input 10 integers and store them in the array **tenIntegers**. Sum up all the even numbers into the variable **evenSum**. Sum up all the odd numbers into the variable **oddSum**. Output one of the following
 - Sum of Odd is larger than Sum of Even
 - Sum of Even is larger than Sum of Odd
 - Sum of Even is equal to Sum of Odd
16. Declare the following two parallel arrays.

Item	X120	V343	F867	A543	G543	S654
Price	45.7	43.9	34.5	67.4	27.4	34.8

Write a Java program to:

- a. Display the average price.
- b. Display the most expensive items.
- c. Display the items that is below the average price.
- d. Get the items code from the keyboard and display the item's price.
- e. Create a new array **gstPrice**, update the array with an addition 8% to each item price.
- f. Sort the parallel arrays by Price.