

Chapter 02

JAVA SYNTAX AND CLASS REVIEW

Exercise 01

John needs to write a program to calculate the total distance travelled by a vehicle. To calculate the distance, John can use the following formula:

$$\text{Distance} = ut + (at^2) / 2$$

Here, 'u' is the initial velocity (meters per second), 'a' is the acceleration (metres per second) and t is the time (Seconds).

Exercise 02

Mary needs to write a program to calculate the volume of a cylinder. To calculate the volume, Mary needs to use the following formula:

$$\text{Volume} = \pi r^2 h$$

Here 'r' is the radius of the cylinder, 'h' is the height of the cylinder, and the value of pi is 3.14.

Exercise 03

Arnold wants to write a program to convert the temperature from Celsius to Fahrenheit. To calculate the temperature, Arnold uses the following formula:

$$F = C \times 9/5 + 31$$

Here, C is the temperature in Celsius and 'F' is the temperature in Fahrenheit.

Exercise 04

Write a program to find out the number of illiterate men from the population of 80,000 people . From the total population, 52% are men, out of which only 35% are literate.

Exercise 05

Write a program to display the postfix and prefix values of the number 5, by using increment operators

Exercise 06

Write a program to create a class named EmployeeDetails and display a menu similar to the following menu.

-----MENU-----

1. Enter Data
2. Display Data
3. Exit

Choose an option:

Thereafter, invoke the respective method according to the given menu input. The method will contain appropriate messages, such as the displayData() method will contain the message displayData method is invoked

Exercise 07

Write a program to create a class that declares a member variable and a member method. The member method will display the value of the member variable.

Exercise 08

Write a program to create a class that stores the train reservation details. In addition, define a method that will display the stored details

Exercise 09

Write a program to create a class that stores the grocery details. In addition, define three methods that will add the weight, remove the weight, and display the current weight respectively.

Exercise 10

Write a program to display the following numeric pattern.

12345

1234

123

12

1

Exercise 11

Write a program to identify whether the given character is a vowel or a consonant.

Exercise 12

Write a program to display all the prime number from 1 to 20.

Exercise 13

Write a program to check if the first number is divisible by the second number or not. In addition, display appropriate messages according to the result.

Exercise 14

Write a program to print the table of five.

Exercise 15

Write a program that will store the employee records such as employee ID, employee name, department, designation, date of joining, data of birth and marital status, in an array. In addition, the stored record needs to be displayed.