

Java module 1

Exercises Day 1

1 - Hello World	Create a new project and test the “println” function.
Instructions	Use “System.out.println” function to output “Hello World!”
Expected output	Hello World!
Solution	<pre>public class HelloWorld { public static void main(String[] args){ System.out.println("Hello World !"); } }</pre>

2.1 - Variables and operations	Print the total salaries
Instructions	<p>1 employee of the sales department gets 1000 dollars. There are 12 employees in the department.</p> <p>Write a program that displays the total salaries of all employees, with the note: "Amount of employee salaries:".</p> <p>Use a variable called “employeeSalary” to store the salary of one employee and another variable called “numberOfEmployees” to store the amount of employees.</p>
Expected output	Amount of employee salaries: 12000
Solution	<pre>public class Ex21 { public static void main(String[] args) { int employeeSalary = 1000; int numberOfEmployees = 12; System.out.println("Amount of employee salaries: " + employeeSalary*numberOfEmployees); } }</pre>

2.2 - Variables and operations	Print the total amount allocated
Instructions	There is a request for the purchase of computers and components for them:

	<ul style="list-style-type: none"> - 6 laptops for 55480 dollars each; - 3 monitors for 21830 dollars each; - 11 computer mice for 411 dollars each; - 5 keyboards for 290 dollars each. <p>Calculate how much to allocate from the company's budget.</p> <p>Use 4 variables to store the prices of each of the components.</p>
Expected output	Need to allocate: 404341
Solution	<pre> public class Ex22 { public static void main(String[] args) { //Prices of the components int laptopPrice = 55480; int monitorPrice = 21830; int micePrice = 411; int keyboardPrice = 290; //Calculation int total = laptopPrice*6 + monitorPrice*3 + micePrice*11 + keyboardPrice*5; System.out.println("Need to allocate: " + total); } } </pre>

2.3 - Variables and operations	Write a program that calculates storage capabilities
Instructions	<p>The company has a 5000 GB data storage.</p> <p>The company was handed over 20 files for placement. The volume of one file is 256 GB. Not all the data will fit in the storage. How many files can we put in the storage? How much free space will be left?</p> <p>Write a program that does the computations.</p>
Expected output	The storage will be able to fit 19 files 136 GB will remain
Solution	<pre> public class Ex23 { public static void main(String[] args) { int totalStorage = 5000; int fileSize = 256; </pre>

	<pre> int amountFilesInStorage = totalStorage / fileSize; int freeSpace = totalStorage - amountFilesInStorage * fileSize; System.out.println("The storage will be able to fit " + amountFilesInStorage + " files."); System.out.println(freeSpace + " GB will remain."); } } </pre>
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3.1 - The input function	Print the total price of the trip
Instructions	A program for a travel agency calculates the cost of staying at a hotel for the entered number of days. It should ask for the cost of one night at the hotel and for the total number of days
Expected output	Enter the cost of one night at the hotel: >>>2800 Enter the number of days of the trip: >>>5 Price of the trip: 14000
Solution	<pre> import java.util.Scanner; public class Ex31 { public static void main(String[] args) { Scanner scanner = new Scanner(System.in); System.out.print("Enter the cost of one night at the hotel: "); int nightCost = scanner.nextInt(); System.out.print("Enter the amount of days of the trip: "); int amountDays = scanner.nextInt(); int total = nightCost * amountDays; System.out.println("Price of the trip: " + total); scanner.close(); } } </pre>

3.2 - The input function	Write a program that composes an automatic email to a client
Instructions	<p>Write a program for the sales department. The employees want to automatically send a promotional offer by email.</p> <p>The program should ask for:</p> <ul style="list-style-type: none"> - the name of the client, - the number of previously purchased trips, - the proposed trip. <p>The program should compose an automatic email from the answers. The text for the email is: Hello, You have traveled with us ... times already! Do you want to again? Our travel agency is having a sale. Trips to ... are 50% off!</p>
Expected output	<p>Client name: >>>Anna Number of package tours bought: >>>4 Destination offered: >>>Hong Kong Hello Anna, You have traveled with us 4 times already! Do you want to again? Our travel agency is having a sale. Trips to Hong Kong are 50% off!</p>
Solution	<pre>import java.util.Scanner; public class Ex32 { public static void main(String[] args) { Scanner scanner = new Scanner(System.in); System.out.print("Client name: "); String clientName = scanner.nextLine(); System.out.print("Number of package tours bought: "); int packages = scanner.nextInt(); //Consume the new line scanner.nextLine(); System.out.print("Destination offered: "); String destination = scanner.nextLine(); //Print email } }</pre>

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        System.out.println("Hello " + clientName + ",");
        System.out.println("You have traveled with us " +
packages + " times already! Do you want to again?");
        System.out.println("Our travel agency is having a
sale. Trips to " + destination + " are 50% off!");

        scanner.close();
    }
}
```