Java module 1

Exercises Day 1

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

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

| 2.2 - Variables and operations | Print the total amount allocated |
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| Instructions | There is a request for the purchase of computers and components for them:  - 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.  Calculate how much to allocate from the company's budget.  Use 4 variables to store the prices of each of the components. |
| Expected output | Need to allocate: 404341 |
| Solution | 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);  }  } |

| 2.3 - Variables and operations | Write a program that calculates storage capabilities |
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| Instructions | The company has a 5000 GB data storage.  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?  Write a program that does the computations. |
| Expected output | The storage will be able to fit 19 files  136 GB will remain |
| Solution | public class Ex23 {  public static void main(String[] args) {  int totalStorage = 5000;  int fileSize = 256;    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.");  }  } |

| 3.1 - The input function | Print the total price of the trip |
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| 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 | 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();  }  } |

| 3.2 - The input function | Write a program that composes an automatic email to a client |
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| Instructions | Write a program for the sales department. The employees want to automatically send a promotional offer by email.  The program should ask for:  - the name of the client,  - the number of previously purchased trips,  - the proposed trip.  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! |
| Expected output | 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! |
| Solution | 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  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();  }  } |