TUTORIAL 1

Suggested order: Complete part 1 before completing part 2,3,4

Practical 2 Part 1

In this practical you will write a program which asks for your name using a JOptionPane. After reading your name your program should display (in a JOptionPane message dialog box) a personalised message using the name you entered in the JOptionPane to welcome you to Java. For example, if Nicola was the name you entered in the JOptionPane, your program should display :

Welcome, Nicola, to the world of Java.

in a JOptionPane message dialog box.

It is very important that this entire message is displayed in a single JOptionPane box: you can't use one box to display the first part of the message and another box to display the second part of the message. You will need to join the parts of your message together using + (as described at the beginning of the JOptionPane lecture linked above). Your program should consist of a single class with a single main part, just as in the first "Welcome" program. You should save your program in a file with the same name as the program's class name. In this case you should name your program 'WelcomeJOptionPane' and save it in a file called 'WelcomeJOptionPane.java'.

When you have written and saved your program, you should compile it and run it using the command prompt as in practical 1.

Practical 2 Part 2

In this test exercise you will write a program which asks for a word using a JOptionPane, and puts that word in a String variable called myWord. This program should get the length of the myWord String using the method .length(). You can find out about the length() method in the lecture about variables and methods . The program should then display (in a JOptionPane message dialog box) a message telling the user the length of the word they've entered. For example, if "Welcome" was the you entered in the JOptionPane, your program should display :

There are 7 letters in the word Welcome

in a JOptionPane message dialog box.

As before, it is very important that this entire message is displayed in a single JOptionPane box: you can't use one box to display the first part of the message and another box to display the second part of the message. You will need to join the parts of your message together using + (as described at the beginning of the JOptionPane lecture linked above). Your program should consist of a single class with a single main part, just as in the first "Welcome" program. You can give your program whatever class name you like. You should save your program in a file with the same name as the program's class name.

When you have written and saved your program, you should compile it and run it using the command prompt as in practical 1.

Practical 2 Part 3

Write a program which declares three int variables (make up your own names for the variables). Initialise the variables with the numbers 5 ,11 and 23, respectively. Remember, to declare an int variable called "a", for example, use the command

int a;

Add to your program a line which computes the sum of those three variables and stores the result in a variable called sum. Use the '+' operator to add the variables together. (You can find out more about adding, subtracting, and doing things with numbers from "Lecture 6: Fundamental Data Types").
What type should sum be? Make sure the variable is the right type.
Add to your program some System.out.print commands that together display the message
The variable sum contains the value XXX
(where instead of XXX your program displays the value of the variable sum.
Your program should consist of a single class with a single main part. You can give your program the class name "SumThreeVariables" and save the program in a file called "SumThreeVariables.java".
When you have written and saved your program, you should compile it and run it using the command prompt as in practical 1. Make sure your program compiles and runs correctly; if any errors are produced by your program, fix them, save the file again, and recompile. **It's important to make sure that the sum produced by your program is correct! Work out the sum yourself.**

Practical 2 Part 4

Write a program which declares three double variables (make up your own names for the variables). double variables are boxes designed to hold numbers with a decimal point (int variables, remember are boxes designed to hold integers: numbers with no decimal point). Into those variables put the numbers 3.1 ,6.2 and 7.0, respectively. To declare a double variable called "a", for example, use the command

double a;

Add to your program a line which computes the sum of those three variables and stores the result in a variable called sum.
What type should sum be? sum is going to hold a number with a decimal point (adding three numbers with decimal points will produce a number with a decimal point). Make sure the sum variable is the right type.
Add another line after these two which subtracts the sum of the three numbers from the multiplication of those three numbers, and stores the result in a variable called difference. Use '-' to subtract one variable from the other, and use '*' to multiply two variables.
Finally, add to your program some System.out.print commands that together display the messages
The variable sum contains the value XXX
The variable difference contains the value XXX
(where instead of XXX your program displays the value of the variable in question)
Your program should consist of a single class with a single main part. You should give your program the class name "VariableDifference" and save it in a file called "VariableDifference.java".
When you have written and saved your program, you should compile it and run it using the command prompt as in practical 1. **Make sure your program compiles and runs correctly; if any errors are produced by your program, fix them, save the file again, and recompile**