

Question 1 - Java fundamentals and user input

Write an application that asks the user to input three values of type `int`, obtains them from the user and prints the product and sum of the first two integers and the quotient (division) and difference of the second and third integer.

Running the program could look like this (bold values are keyboard input):

```
Type an integer: 42
Type a second integer: 23
Type a third integer: 4
The product of (42 * 23) is 966
The sum of (42 + 23) is 65
The quotient of (23 / 4) is 5.75
The difference of (23 - 4) is 19
```

Question 2 - Classes and Objects, part I

Create a class called `Course` representing a university course. The class should have:

- Three instance variables; `name` (of type `String`), `numberOfStudents` (of type `int`), and `electiveCourse` (of type `boolean`).
- A 3-argument constructor with a `name`, a `numberOfStudents`, and an `electiveCourse` as parameters.
- A 2-argument constructor with only a `name`, and an `electiveCourse` as parameters. The `numberOfStudents` should then be set to 0.
- A no-argument constructor, setting `name` to some initial value of your choice, setting `numberOfStudents` to 0, and setting `electiveCourse` to `false`.
- Get methods for `name`, `numberOfStudents`, and `electiveCourse`.
- Set methods for `name`, `numberOfStudents` and `electiveCourse`.
- A method `toString()` that returns a string with information of a course, i.e. a string with `name`, `numberOfStudents` and `electiveCourse`.

Question 3 - Classes and objects, part II

Create a test class (`CourseTest`) with a main method and test the class `Course` from the previous question in the following way:

- Create three `Course`-objects. Use at least two of the different available constructors.
- Change `name` and `numberOfStudents` of the first `Course`-object you created.
- Change `electiveCourse` of the second `Course`-object you created.
- Print out all information of the three `Course`-objects using the `toString()`-method.