

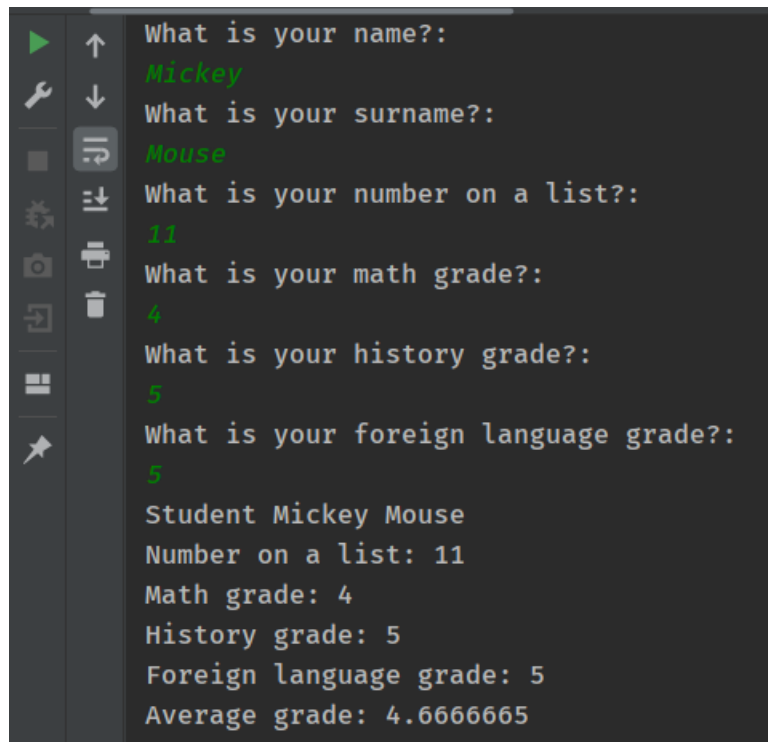
Java 17 for beginners

by TPC

Set of tasks 2

1. Write the program that takes standard input (by the Scanner class) data of the student, like name, surname, number on a list, grade from math, grade from history, grade from a foreign language, then calculates the average of grades and displays all details on the console.

Example console output:



```
What is your name?:  
Mickey  
What is your surname?:  
Mouse  
What is your number on a list?:  
11  
What is your math grade?:  
4  
What is your history grade?:  
5  
What is your foreign language grade?:  
5  
Student Mickey Mouse  
Number on a list: 11  
Math grade: 4  
History grade: 5  
Foreign language grade: 5  
Average grade: 4.6666665
```

2. Write a program that takes user information, such as age and cash balance, and checks whether the person is eligible to purchase a PC game and prints the result. The criteria are age and cash. You can use your own game or implement the one proposed below. The Witcher 3, age: 16+, price: \$49.99

Example console output:

```
↑ Welcome to my shop.  
↓ I've got the perfect game for you. The Witcher 3  
Please tell me, what is your age?:  
19  
ok, and your balance?:  
100  
Hmm....  
In that case....  
you can buy it. The Witcher 3 is yours. Have a fun!  
Process finished with exit code 0
```

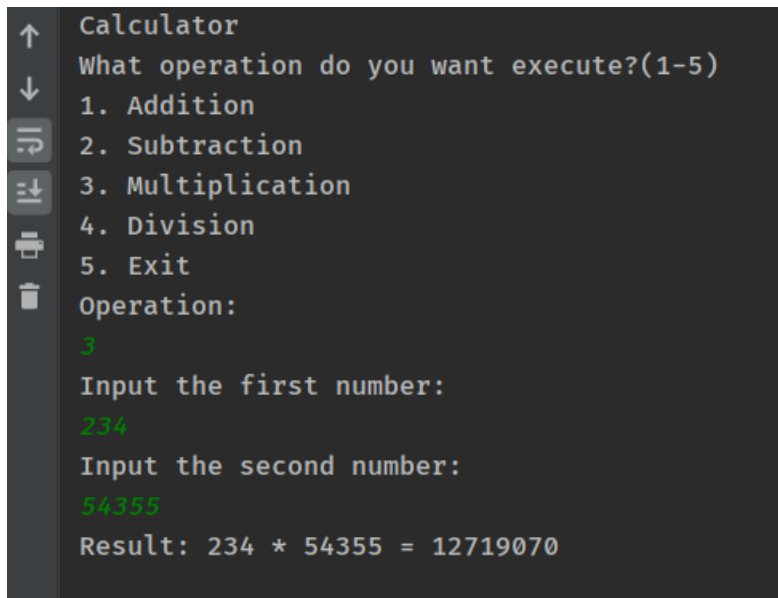
3. Write a simple multiplication table from 0 to 9. Make sure that the result is displayed on the console in square 10x10, where the first row and the first column are the headers. Try to align the results as they are in the example.

Example console output:

```
↑ Multiplication table  
↓ 0  1  2  3  4  5  6  7  8  9  
1  1  2  3  4  5  6  7  8  9  
2  2  4  6  8 10 12 14 16 18  
3  3  6  9 12 15 18 21 24 27  
4  4  8 12 16 20 24 28 32 36  
5  5 10 15 20 25 30 35 40 45  
6  6 12 18 24 30 36 42 48 54  
7  7 14 21 28 35 42 49 56 63  
8  8 16 24 32 40 48 56 64 72  
9  9 18 27 36 45 54 63 72 81  
Process finished with exit code 0
```

4. Write a simple calculator where the user chooses the operation (+-*\/) from the displayed menu, then inputs two numbers, and the program returns the correct result. After that, it asks for the next operation. For now, forget about floating-point numbers or problems related to dividing by zero. Base all calculations on the int type. There will be time for improvements.

Example console output:



```
Calculator
What operation do you want execute?(1-5)
1. Addition
2. Subtraction
3. Multiplication
4. Division
5. Exit
Operation:
3
Input the first number:
234
Input the second number:
54355
Result: 234 * 54355 = 12719070
```

5. Rewrite the task 2 from the Set of tasks 1 but this time add a menu with 3 choices: Display records, Add patient, Exit. Make sure that the medical clinic can dynamically input another patient and print them all. Also, implement a simple patient ID generator, like changing an integer for instance. As a challenge, wonder how it can be transformed into a regular table with bounds and aligned.