FundProg17 – Assignment 2

2.1 A first-grade problem

Mary, Peter, and Lisa want to buy a Java book. The book costs 29 Euros. Mary has 12 Euros, Peter has half as much as Mary, and Lisa has 5 Euros more than Mary. Write a program that prints whether they can afford the book together.

2.2 Going to the cinema

Peter wants to go to the cinema. However, he's a very picky person. He will only go if

1. it's a rainy day or his friend Paul is coming, too

2. the movie's rating on IMDb is at least 7 out of 10

Declare a variable for each of the four different values above. Pick an appropriate type for each. Write a program that prints whether Peter will go to the cinema. Hint: You need to use boolean operators for this. Try the following configurations:

```
a) isRainy = true;
   paulIsComing = false;
   ratingOnImdb = 8.2;
```

```
b) isRainy = false;
   paulIsComing = true;
   ratingOnImdb = 7.0;
```

Use `if` for the output. The output needs to be a sentence, either
`Peter will go to the cinema.`
or
`Peter will not go to the cinema.`

2.3 Loops

a) Declare a String variable containing `"Hi!"`. Use a loop to print this string 7 times, i.e.,

```
Hi!
Hi!
Hi!
...
```

b) Use a loop to print the square (x^2) for each number between 1 and 10

c) Use a loop to print the numbers from 11 to 18

d) Write a loop that prints a count-down from 5 to 0. After the countdown reaches 0, print `lift-off!`.

```
5
4
3
2
1
lift-off
```

2.4 Buzz

This is a simplified version of a popular game. We count from 1 to infinity. I say 1, you say 2, I say 3, etc. However, if the number you would say next is divisible by 5, you don't say the number, but instead, you say "buzz". Here's an example:

```
1
2
3
4
buzz
6
7
8
9
buzz
11
...
```

Write a program that plays buzz up to 100. I.e., write a loop that counts up to 100 that outputs `buzz` if the number is divisible by 5, and the number itself otherwise.